# 4. Six tools for scenario-based strategic planning and their application

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*Scenario planning has often been criticized for the complexity that arises when it is grafted into a company's overall strategic planning process. To overcome this deficiency, we introduced the scenario-based approach to strategic planning in the previous chapter. This chapter explains each tool in detail, evaluates its practicability and demonstrates how executives can immediately apply the entire toolkit within their overall strategic planning process. To facilitate the application of the tools, each step is explained using a practical example from the European airline industry. Taken together, the detailed explanations that follow present a scenario-based strategic planning framework that can help companies cope with an uncertain, complex and volatile business environment.*

# 4.1 INTRODUCING TOOLS ONE AND TWO: THE FRAMING CHECKLIST AND 360° STAKEHOLDER FEEDBACK

In the previous chapter, we introduced an approach to scenario-based strategic planning that gives managers a set of tools with which to integrate scenario planning into strategic planning. This chapter now goes on to introduce and explain the first two tools: the framing checklist and 360° stakeholder feedback.

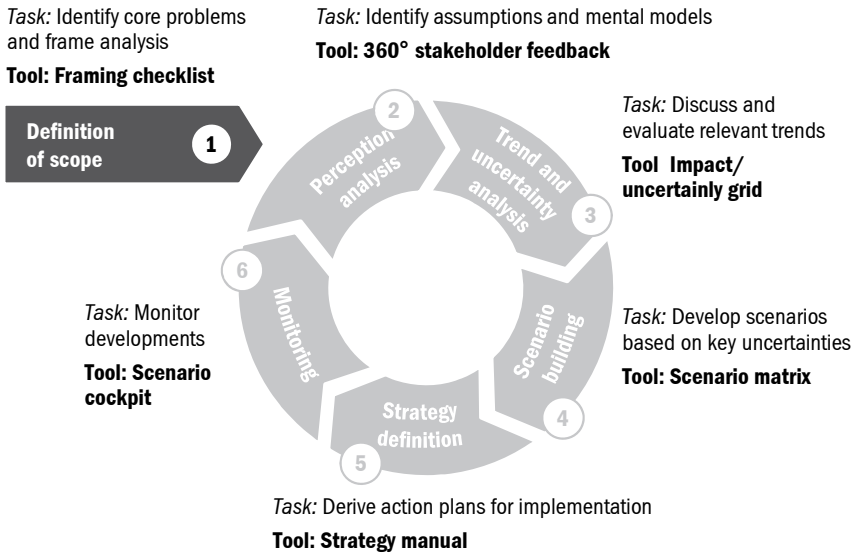
## 4.1.1 THE FRAMING CHECKLIST

The first tool – the framing checklist – defines the scope of the scenario-based strategic planning project (Figure 4.1). Before plausible scenarios can be derived for a company, industry or region, analysis must first be placed within a frame of reference that stakes out the scope of the scenario development process. The overall goal of this first step is thus to create a common understanding of the scope of the relevant scenario project. To do so, five items must be defined as part of the tool: the goal of the scenario project; the strategic level of analysis; the participants in the scenario development process; the participants in the 360° stakeholder process; and the time horizon for the scenarios. Each of these items is clarified in detail in the course of this section. Reference to a scenario study regarding the future of the



B. Schwenker, T. Wulf (eds.), *Scenario-based Strategic Planning,* Roland Berger School of Strategy and Economics, DOI 10.1007/ 978-3-658-02875-6_4, © Springer Fachmedien Wiesbaden 2013

# **FIGURE 4.1:** SIX-STEP SCENARIO-BASED APPROACH TO STRATEGIC PLANNING




European airline industry (see section 4.2) then illustrates how the tools can be applied in practice. Before explaining the tools themselves, however, let us briefly examine why it is important for strategists to engage in adequate planning for scenario projects in order to develop precise scenarios and realistic strategic recommendations.

Each scenario-based strategic planning activity begins with the question: "Why are scenarios developed and what should be the final outcome of the process?" If the basic intention of the overall scenario development process is not specified from the outset, the overall planning activity is destined to end in disaster (Lindgren/Bandhold, 2009). Management will not understand the scenarios if they do not agree with their intended purpose. Nor will they support the implementation

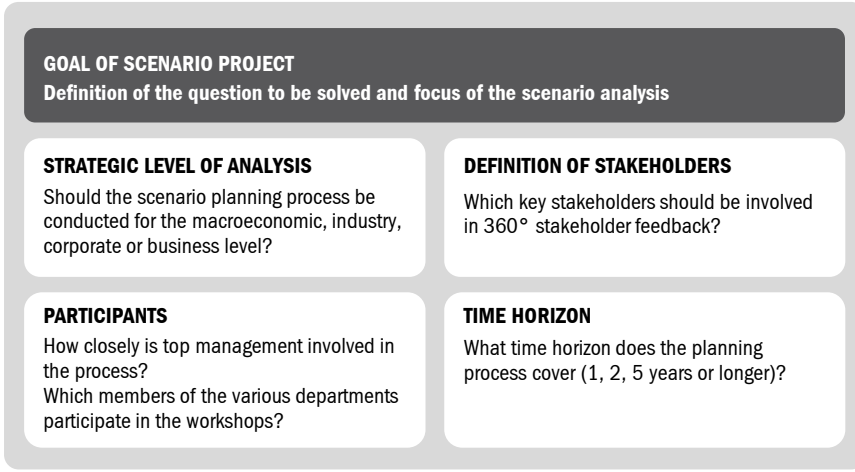
of strategic actions based on a scenario planning activity in whose development they had no part. Moreover, scenarios will be unrealistic if the wrong future time horizon is chosen. Hence, it is critical to start the scenario-based strategic planning activity by exhaustively defining the scope and intent of the project.

Existing scenario planning techniques often start by identifying knowledge gaps in an organization (van der Heijden et al, 2002), preparing for a project (Chermack, 2011) or tracking changes in the external environment that will have an impact on the future development of a company (Lindgren/Bandhold, 2009). Of course, all these different ways to start a scenario-based strategic planning process define the purpose of and question to be answered by a scenario project in one form or another. However, they do so in a rather vague and unstructured manner. Often, the participants in a scenario planning process are given an extensive list of the topics the scenario planning activity is attempting to cover. However, such a detailed or over-engineered document tends to confuse participants rather than clarifying the scope of the project. If participants do not understand the purpose and scope of a scenario planning activity from the outset, the project will take up too much time and too many resources and is bound to fail. It is more important to structure the discussion surrounding the scope, goal and process for the scenario planning activity than to develop an extensive, predefined project description. What the participants in scenario planning activity really need, therefore, is a brief document – ideally no more than a page – that summarizes the most important points of the scenario-based strategic planning process. We believe that the framing checklist described in the next section is capable of fulfilling these needs by providing extensive practical support from the very earliest days of a scenario planning project.

### 4.1.2 DESCRIPTION OF THE FRAMING CHECKLIST

The framing checklist is a comprehensive list defining the scope of a scenario project. It allows the participants in a scenario-based strategic planning activity to exhaustively consider all aspects that are necessary to make the project successful. The tool is based on the 'Problem Identification Checklist' defined by Hungenberg (2010). We took Hungenberg's initial approach and expanded it to fit the purpose

# FIGURE 4.2: THE FRAMING CHECKLIST




and context of a scenario-based strategic planning exercise. Overall, five different items must be checked in order to structurally define the purpose of a scenario-based strategic planning activity. These items are: the goal of the scenario project; the strategic level of analysis; the participants in the scenario development process; the participants in the 360° stakeholder process; and the time horizon for the scenarios (Figure 4.2).

## GOAL OF THE SCENARIO PROJECT

The first step is to define the goal of the scenario-based strategic planning activity. This step basically describes the underlying question that the whole scenario development process is trying to solve. Essentially, the overall purpose of the scenario planning activity is defined at this stage.

Efforts to define the goal of a scenario project should thus concentrate on one principal element that sums up the purpose of the scenario project. What should be the outcome of the scenario planning activity and what should be accomplished by this outcome? In essence, to define the goal is to summarize all the items on the framing checklist.

The definition of the goal of a scenario-based strategic planning activity should conclude with a precise statement describing the overall aim of the activity. When reading the statement, both participants and outsiders to the scenario development process should immediately understand what the scope of the scenario activity is. An example of such a statement might be this: "The goal of the project is to develop scenarios for European airline network carriers between now and 2020." Participants who read this will immediately know that the purpose of the activity is to develop scenarios. They will know the scope of the scenario development exercise, i.e. the European network carrier industry. And they will also know the time frame, i.e. 2015. To summarize: Formulation of the goal of the scenario project is the core purpose of the framing checklist. To identify this overall goal, however, further analysis and coordination is necessary in collaboration with the client for the scenario planning activity.

## STRATEGIC LEVEL OF ANALYSIS

Having agreed the goal of the scenario-based strategic planning activity, the next step is to define the strategic level of analysis for the project. Scenarios can be developed for various levels. From a corporate perspective, the first level is to develop scenarios for a business unit. Here, the focus of scenario development activity is to assess how future developments will affect the business unit concerned. Clearly, the scenarios thus developed will be highly specific and will take into account the specific circumstances of the unit. An example of such a focused level of analysis would be to develop scenarios for each of Lufthansa AG's different operations. Lufthansa, a German airline, has a broad range of business units such as passenger operations, cargo flights, ground handling services, technical aircraft services, and so on. Moreover, Lufthansa operates flights to various regions around the world, offering intercontinental flights under its Lufthansa brand and regional flights using the Lufthansa Regional and Germanwings brands. These activities are complemented by sharply focused operations, such as those of Austrian Airlines (a wholly owned subsidiary), which has a strong presence in Eastern Europe. Taking the business unit as the level of analysis for Lufthansa would thus mean developing scenarios for its German passenger flight operations under the Lufthansa brand, for example.

The next strategic level of analysis is the corporate level. The focus here is to assess how external developments will affect a company overall. Staying with

the example of Lufthansa, this would mean developing scenarios for the entire group, including all its business units.

Another possible level of analysis is to develop future scenarios for a whole industry. In this case, the focus may vary depending on how the scenario development participants define an industry. Moreover, in a scenario development project, external influences often come from outside the industry in question. When conducting analysis on this level, it is therefore important to choose the scope of the industry wisely. For Lufthansa, this would, for example, mean creating scenarios for the global airline industry with a focus on intercontinental flights. Regional and short-distance flights would then be outside the scope of this scenario development exercise.

The highest strategic level of analysis is the macro-level. Here, a scenario development team identifies several macroeconomic indicators that could influence the economic conditions a company will face. Once again, the focus of a macro-level analysis should be chosen carefully, as teams can develop scenarios on this level not only for a company, but also for different geographic regions. A decision must therefore be taken about whether scenarios are to be developed on a global, regional or country level. Here, industry experts should be consulted as to which regional focus is most relevant given the goal of the scenario project. Where the macro-level of analysis is adopted, the final outcome of the scenarios will be to examine how various economic developments could impact a company's future performance.

One crucial difference between the various levels is the degree to which a business unit or company plays a part in the scenarios. In our experience, where a business unit or corporate level perspective is adopted, the business unit or company is itself part of the scenario description. The company thus appears in both the scenarios and the strategic recommendations derived from the scenarios. However, when an industry perspective is adopted, the company itself is not necessarily part of the scenario description and may only become relevant when strategic recommendations are developed. An industry perspective is thus also the right strategic level if the aim is to assess the impact of external developments such as technological advancements on a whole company.

Clearly, the outcome of a scenario development activity will vary greatly depending on the strategic level of analysis chosen. Scenarios for Lufthansa's German operations, where the firm faces a vast range of competitors, will be very different to scenarios for the company's intercontinental operations, a market in which it often faces little competition. When examining the various possible levels of strategic analysis, a company should therefore first return to the goal of the scenario exercise. Next, it should consider the different industries and geographic regions in which the company has a presence. Finally, it should combine both to identify the overall level that is best suited to strategic analysis. This process should be performed with care: Adopting the wrong focus can run the risk of developing scenarios that overlook important external developments.

## PARTICIPANTS

The third step is to define who is in charge and who will take part in the scenario planning process. It is usually the executive management of a company that initiates the scenario-based strategic planning process in conjunction with a company's corporate development team. In our experience, each scenario project is assigned a project leader from either a firm's corporate development team or a specific business unit, such as sales. The project leader assesses when and to what degree senior management should be involved in the scenario planning process. He or she is also responsible for steering the entire project, defining key items such as duration, deadlines, workshops and the resources to be committed to the activity.

When developing scenarios, it is often not necessary to add new resources to the process. Rather, existing resources simply need to be leveraged in a more structured manner (Schwartz, 1996). Hence, the project leader must identify the relevant internal departments and individuals who should represent the organization and participate in scenario development from start to finish. If the wrong individuals are identified, the organization will not accept the outcome of the scenario-based strategic planning exercise.

## DEFINITION OF STAKEHOLDERS

Once the project leader and the participants have been identified, the next step is to decide which internal and external stakeholders should be involved in 360°

stakeholder feedback. The purpose of 360° stakeholder feedback, which is explained in more detail in the next section, is to identify and challenge existing perceptions and the mental models evidenced by all participants in the planning process. This step is crucial, since it adds an external perspective to the scenario development process. To this end, internal stakeholders (such as the senior management, heads of department, etc.) and external stakeholders (such as politicians, industry associations, competitors, industry experts, etc.) are asked to participate in a two-step survey process. The aim here is to identify a comprehensive list of factors of influence that could drive and shape future developments. These stakeholders should be identified and listed right from the beginning of the scenario development process.

Looking for internal stakeholders is usually not a problem once senior management support has been given. Internal participants should hold a senior position in which they have a general overview of a company's strategy and of external influencing factors. External stakeholders can be more difficult to identify. Here, is it advisable to engage in in-depth consultations with a company's business partners, alumni and expert networks, corporate directories and the press.

Why is it important to define the external stakeholders at such an early stage? A scenario-based strategic planning process will only be successful if the appropriate external views are integrated into the scenario development process. As pointed out in the introduction, the purpose of scenarios is to engage in a structured strategic dialog about a company's future developments – many of which will often arise outside a company's internal perspective. Defining who the relevant stakeholders are helps bring these external developments into view for the company. That is why it is so important to identify the right stakeholders at the very beginning of a scenario project.

## TIME HORIZON

The final step is to stake out the time horizon for the scenarios to be developed. We usually recommend a horizon of five years from the present. That is long enough to allow major external developments to materialize, but short enough for the individuals involved in the scenario development process to cope with. Moreover, most companies' regular strategic planning cycle extends five years into the future.

Having said that, the time horizon too can be influenced by the industry or geographic region in which an organization operates. Industries such as online retailing, say, are highly volatile, exposed to considerable uncertainties and prone to very rapid changes. In such a context, it would therefore make sense to adopt a shorter time horizon. Five years would probably be too vague for individuals to accept the scenarios as realistic. At the other end of the scale, investments with a payback period of 20 to 30 years are common in the oil and gas industry, for example. Here, it is advisable to work with a longer time horizon, as little of significance is likely to change within a five-year period.

The outcome of applying the framing checklist is a precise list of items to be accomplished by the scenario-based strategic planning activity. Once the checklist has been completed, it is time to start identifying relevant factors of influence by eliciting 360° stakeholder feedback.

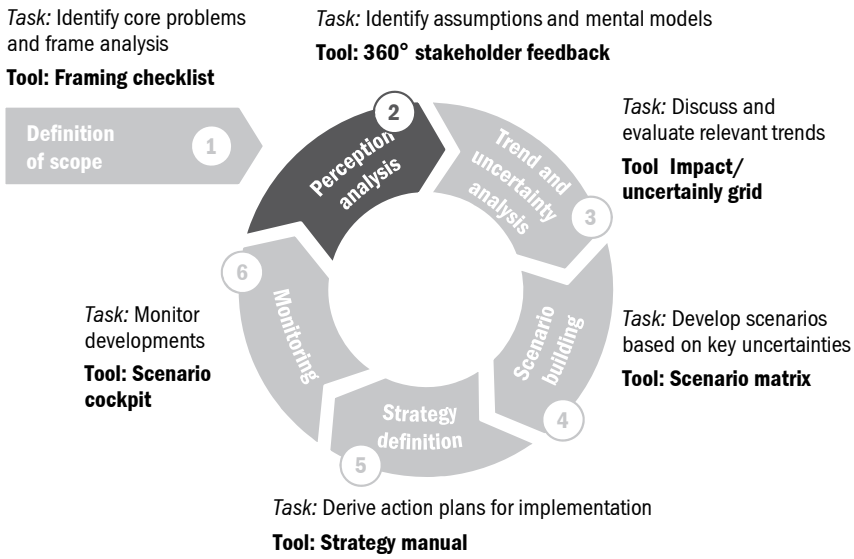
## 4.1.3 360° STAKEHOLDER FEEDBACK

Having defined the scope of and overall framework for the scenario-based strategic planning project using the framing checklist in the first step, 360° stakeholder feedback now identifies and challenges the existing perceptions and mental models of all participants involved in the planning process (Figure 4.3). The overall goal of perception analysis is to identify a comprehensive list of factors of influence that could drive and shape future developments. Of particular interest in this context are what are known as 'blind spots' and 'weak signals'. Before explaining the tool itself it is therefore important to examine what factors of influence, blind spots and weak signals actually are and how they can help a company to improve scenario-based strategic planning processes.

### 4.1.3.1 EXISTING PERCEPTIONS, BLIND SPOTS AND WEAK SIGNALS

Companies find it hard to identify and include basic signals about future developments and challenges in their existing, often static strategic planning processes. Even the identification and processing of clearly visible future developments is often

# **FIGURE 4.3:** SIX-STEP SCENARIO-BASED APPROACH TO STRATEGIC PLANNING




hindered by a company's ingrained mental models and perceptions (Welsch, 2010). One example could be a competitor's public announcement of plans to construct a new factory that will significantly increase an industry's production capacity and could possibly trigger a future price war. Blind spots are developments that a company knowingly or unknowingly overlooks. Weak signals can be described as initial indicators of future changes in the environment (Wulf et al., 2010).

A major task in any strategic planning process is thus to challenge existing perceptions and identify both blind spots and weak signals in order to effectively and efficiently detect future opportunities and risks at an early stage. Existing tools that identify the changes a company might face in the future, such as operational forecasting and strategic forecasting, do not tend to cope well with this task (Krystek/Moldenhauer, 2007).

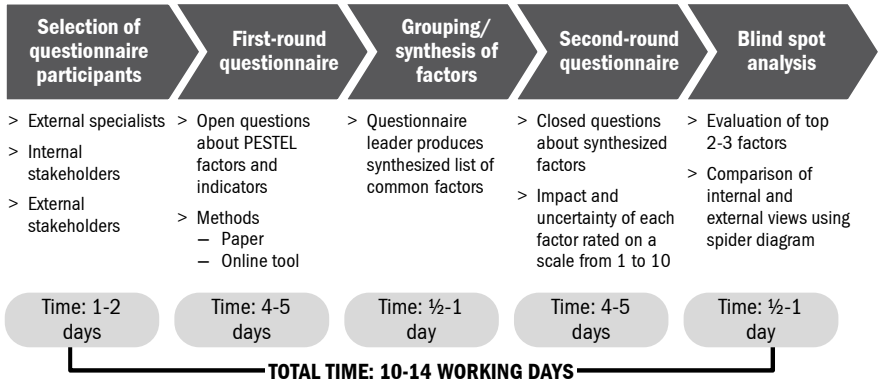
Discontinuities do not suddenly emerge out of nowhere. Every discontinuity is preceded by a certain historical development and is often announced by the weak signals referred to above (Ansoff, 1975). Weak signals indicate changes in proven business models or even economic principals. They are triggered by human behavior. Humans have a basic need to communicate their intended actions, insights and findings, especially when these are used to change existing structures or systems. Other humans pick up these insights and communicate them to a wider public, gradually diluting or weakening the signals (Krampe, 1985). This form of human behavior expresses itself in a wide variety of media and via all kinds of sources. Weak signals can thus appear in or stem from the press, books, databases, the Internet, exhibitions, clients, suppliers, competitors, politicians, and so on. Strategic planning tools should therefore systematically and constantly scan both internal and external information sources in search of weak signals, blind spots and resultant discontinuities (Liebl, 2005). In other words, companies and their organizational systems require methodological support if they are to challenge existing perceptions, identify weak signals and blind spots, and then channel their findings into strategic planning processes in a structured manner via decision makers. We believe the 360° stakeholder feedback tool described in the section below is capable of completing this task.

#### 4.1.3.2
#### DESCRIPTION OF 360° STAKEHOLDER FEEDBACK

360° stakeholder feedback gathers and manages weak signals and identifies blind spots. Specifically, its purpose is to compile a comprehensive list of factors that could influence a company's future, evaluate these factors according to their potential impact on performance and their degree of uncertainty, and then benchmark of the views of different stakeholder groups with regard to these factors of influence (Wulf et al., 2010). Normally, the tool comprises a two-step survey process (Figure 4.4).

In a first step, survey participants are asked open questions about the factors of influence that will shape an industry's environment now and in the future. Participants are also asked how these factors can be measured using existing indicators (Figure 4.5). The precise focus of the survey was defined in step one of our six-step scenario-based approach to strategic planning (*definition of scope*) using the framing

# **FIGURE 4.4:** 360° STAKEHOLDER FEEDBACK PROCESS




checklist. The questionnaire is structured on the basis of six dimensions: political, economic, social, technological, environmental and legal influence factors (PESTEL). Factors from the company's macro-environment are selected because they will play a key role in shaping the company's future development and usually cannot be influenced by the company itself. Upon completion of the first step, the questionnaire leader clusters and synthesizes the factors identified by all respondents in light of common features, such as the number of times a specific factor was cited.

Once the factors of influence have been grouped and synthesized, the second step is to send them out to the survey participants once again, this time in a closed questionnaire (Figure 4.6). In the second questionnaire, participants are asked to rate each factor in terms of its impact on performance and its uncertainty on a scale from one (low/weak) to ten (high/strong). Once all questionnaires have been returned, the questionnaire leader can identify those factors that have the greatest impact on performance impact and those that are the most uncertain.

One important aspect in ensuring a high quality standard – and, ultimately, the success of the 360° stakeholder feedback – is the need to select suitable

# **FIGURE 4.5:** SCENARIO PLANNING FOR EUROPEAN AIRLINE NETWORK CARRIERS, FIRST-ROUND QUESTIONNAIRE

**Scenario Planning for the European Network Carriers**

**1. Please name important POLITICAL FACTORS that will have crucial influence on the European network carriers within the next 5 years and think of indicators to measure the factors:**

| Influence factors | Indicators |
|---|---|
| | |

**2. Please name important ECONOMIC FACTORS that will have crucial influence on the European network carriers within the next 5 years and think of indicators to measure the factors:**

| Influence factors | Indicators |
|---|---|
| | |

**3. Please name important SOCIETAL FACTORS that will have crucial influence on the European network carriers within the next 5 years and think of indicators to measure the factors:**

| Influence factors | Indicators |
|---|---|
| | |

**4. Please name important TECHNOLOGICAL FACTORS that will have crucial influence on the European network carriers within the next 5 years and think of indicators to measure the factors:**

| Influence factors | Indicators |
|---|---|
| | |

**5. Please name important ECOLOGICAL FACTORS that will have crucial influence on the European network carriers within the next 5 years and think of indicators to measure the factors:**

| Influence factors | Indicators |
|---|---|
| | |

**6. Please name important LEGAL FACTORS that will have crucial influence on the European network carriers within the next 5 years and think of indicators to measure the factors:**

| Influence factors | Indicators |
|---|---|
| | |

respondents. The questionnaire leader should therefore select a wide range of active stakeholders in the industry concerned. Internal stakeholders should include a company's key employees, such as the board of directors, senior management and the strategy team. External specialists such as market experts, scenario specialists, think tanks, consultants and research institutes should also be asked to participate in the questionnaire. Finally, external stakeholders such as key customers, suppliers, financial institutions, shareholders and even competitors should likewise take part in the questionnaire. Involving a broad variety of individuals in the tool is a challenging task. Yet it is crucial if the most important factors of influence are to be identified reliably. As we will see later on, this aspect does not necessarily prolong the process – but it does add significant value.

# **FIGURE 4.6:** SCENARIO PLANNING FOR EUROPEAN AIRLINE NETWORK CARRIERS, SECOND-ROUND QUESTIONNAIRE

**Scenario Planning for the European Network Carriers**

**Please rate the following factors from 1 (low/weak) to 10 (high/strong).**

| POLITICAL FACTORS | IMPACT | UNCERTAINTY |
|---|---|---|
| Geopolitical stability (e.g. war, terror, disease) | | |
| International liberalization of air travel (e.g. open sky agreements | | |
| Harmonization of air traffic controls (Single European Sky) | | |
| Governmental competition policy (e.g. subsidies, protectionist regulations) | | |
| Taxation of air travel (e.g. VAT, kerosene) | | |
| Political support for airport expansion | | |
| **ECONOMICAL FACTORS** | | |
| Global economic growth | | |
| Shift of economic power towards Asia | | |
| Prices of oil/fuel and CO2 certificates | | |
| Capital market risks (e.g. exchange rates, interest rates, liquidity) | | |
| Allocation of airport slots and fees | | |
| New competitors from emerging countries | | |
| Expansion of low-cost carriers (e.g. in terms of distances, destinations, services) | | |
| Rising demand in emerging markets due to the growing middle class | | |
| **SOCIETAL FACTORS** | | |
| Development of corporate travel budgets | | |
| Acceptance of airport expansion among population | | |
| Disposable income of population | | |
| Service/comfort/price expectations of potential customers | | |
| **TECHNOLOGICAL FACTORS** | | |
| Improvements in operational efficiency (e.g. speed, safety) | | |
| Improvements in travel comfort (e.g. entertainment, service, noise level) | | |
| Technological advances in video conferencing | | |
| Technological advances in rail travel | | |
| Development of synthetic jet fuel replacements | | |
| **ECOLOGICAL FACTORS** | | |
| Environmental consciousness of consumers | | |
| Increasing amount of environmental regulations | | |
| **LEGAL FACTORS** | | |
| Application of the EU Emission Trading System | | |
| Changes in collective bargaining law | | |
| Changing safety regulations | | |

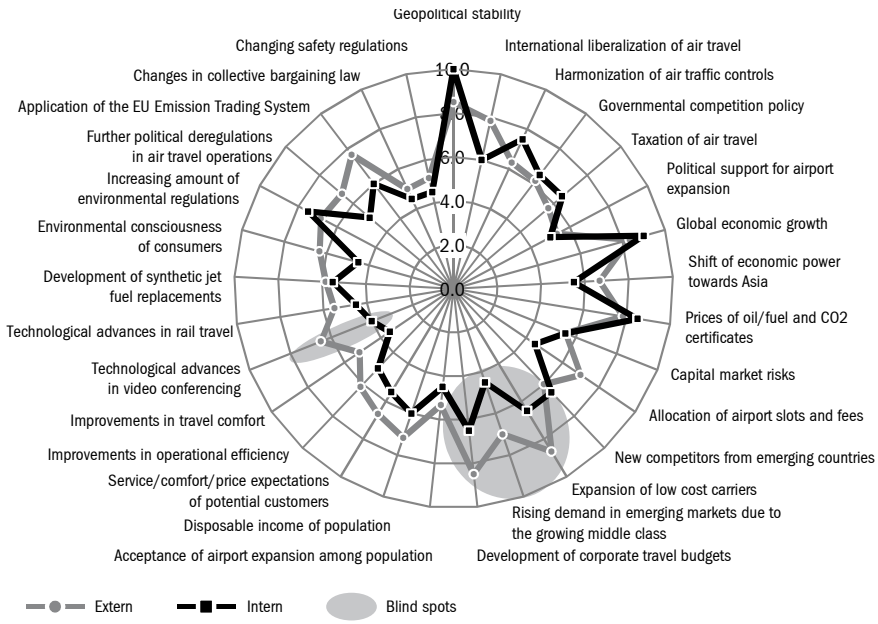
In the search for suitable survey respondents, the questionnaire leader can draw on a wide variety of sources. Once top management support has been given, it is usually no problem finding internal questionnaire candidates. These people should hold senior positions that give them a general overview of both the company's strategy and external factors of influence. Individuals involved purely in day-to-day operations are not ideal to answer the questionnaire due to the narrow focus of their activities.

External questionnaire candidates are more difficult to identify. External stakeholders such as customers or suppliers can be identified in company databases. Here again, the focus should be on senior managers. The press, the Internet and personal contacts are all good sources for external specialists. In our experience, however, a company's alumni and global business professional networks (such as XING or LinkedIn) are the best sources for contacting and selecting potential external questionnaire participants. Once a list has been drawn up, it is advisable for companies to maintain a database of potential questionnaire respondents for future scenario planning activities to ensure that the tool is used as efficiently as possible.

There are different ways to complete the 360° stakeholder feedback questionnaire. The traditional way is to conduct the survey on paper by mailing questionnaires to participants and having them returned in the same way upon completion. Alternatively, the same process can take place online using a standardized survey tool (such as surveymonkey or unipark). When selecting a survey method it is important to keep the scope of the scenario planning process, the time frame and available resources in mind. If a company wishes to consult external experts, the paper or online format are the most suitable methods due to both scalability and practicability considerations. Based on our experience, we generally advise clients to use an online-based questionnaire, as answers from external questionnaire respondents are normally received much faster than with the paper method. Questionnaire respondents can easily be contacted by phone or e-mail and be sent a link to the online survey. They are then free to complete the survey wherever and whenever it is most convenient. Additionally, the answers to the second (closed) questionnaire are automatically combined and evaluated if an online tool is used. This makes the process of identifying blind spots faster and simpler (see next section).

Combining the results of external and internal questionnaires is a very important exercise when trying to identify the blind spots described above. Blind spots can be brought to light by comparing the weak signals and factors of influence mentioned by survey participants from different backgrounds. Spider diagrams, for example, are one good way to quickly visualize blind spots. Blind spots are defined as those factors which external respondents believe will have a significantly greater impact or will be significantly more uncertain than internal respondents do (Figures

# **FIGURE 4.7:** SPIDER DIAGRAM OF THE EUROPEAN AIRLINE SCENARIO – IMPACT: EXTERNAL VERSUS INTERNAL VIEW

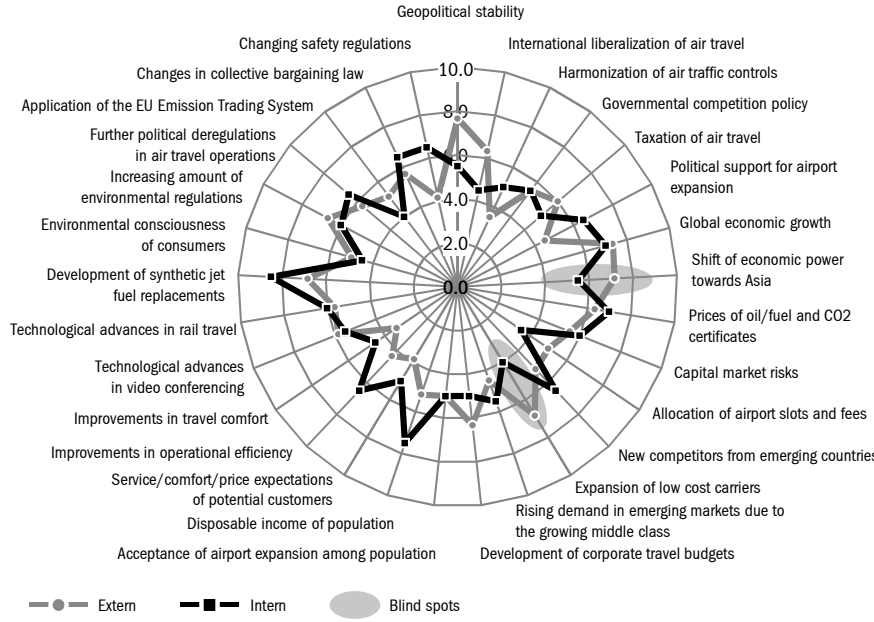



4.7 and 4.8). Based on the blind spots highlighted by a spider diagram, relevant factors of influence that a company has so far neglected can be taken into account in the ongoing scenario-based strategic planning process.

## 4.1.4
## EVALUATION OF THE FRAMING CHECKLIST AND 360° STAKEHOLDER FEEDBACK

The framing checklist is an efficient and precise starting point from which to initiate and structure a scenario-based strategic planning process. Its core advantage is its intuitive and comprehensive set of items, all of which are important when

# **FIGURE 4.8:** SPIDER DIAGRAM OF THE EUROPEAN AIRLINE SCENARIO – UNCERTAINTY: EXTERNAL VERSUS INTERNAL VIEW




defining the purpose and agenda of a scenario planning activity. The tool has already been extensively applied in numerous scenario-based strategic planning projects. Its usefulness is illustrated by the practical case of the European airline industry.

At the same time, our experience of applying the tool has also highlighted certain manageable limitations. First, the five items that structure the scenario development process are not exhaustive. Depending on the context for the scenario development process, other items such as cost, deadlines and resources may have

to be added to the list. This can be done quickly, however, simply by noting the relevant items on the list. Second, if a company has several different business units with a presence in different geographical regions, it will not be enough to use only one framing checklist for the overall scenario-based strategy development process. In such cases, the tool must be applied separately to each business unit to enable the scenario development process to be managed effectively.

The main advantage of 360° stakeholder feedback lies in its standardized, efficient approach to identifying blind spots and weak signals. Standardized documentation means that few resources are required for a process that is already fast and straightforward. It should take only one person one working day to identify a significant number of relevant questionnaire respondents. The standard questionnaires can then be dispatched quickly, allowing the first part of the two-step process to be completed within a week. Handling the synthesis, grouping the factors of influence and preparing and circulating the second questionnaire takes another working day. Ideally, the whole process could thus be completed within two weeks. During this time, two working days will be spent managing the survey process. The remaining time is available for other tasks in the six-step scenario-based approach to strategic planning. The manpower and resources required to apply the 360° stakeholder feedback tool are therefore marginal. Additionally, our practical experience in applying the tool shows that group bias can be avoided and existing perceptions overcome by using a wide range of questionnaire respondents.

Applying the tool also revealed certain shortcomings. One is that the interpretation and grouping of factors of influence resulting from the first-round questionnaire can be subjective. There is also the danger of selecting unsuitable questionnaire participants who are not involved in a company's strategic planning processes. To a certain extent, answers supplied by unsuitable participants can distort the overall list of factors of influence. Finally, given the complex nature of the tool, it may quite simply not be possible to fully identify all factors of influence. All these drawbacks can nevertheless be kept within manageable limits, for example by using several questionnaire leaders to group the factors of influence and thereby minimize subjectivity. Another option is to define specific criteria to reduce the possibility of selecting unsuitable questionnaire respondents.

The outcome of the framing checklist should be a precise set of items to start and guide the scenario development process. Ideally, a structured, strategic dialog should be initiated in order to develop not only the scenarios themselves, but also the overall process and the resultant strategic recommendations. As Peter Schwartz (1996) puts it: "You cannot create scenarios from recipes – but you can practice creating scenarios." The overall outcome of 360° stakeholder feedback is an extensive, validated list of those factors that could have an impact on a company, plus a structured list of identified blind spots and weak signals. Nonetheless, there can never be a guarantee that the process will always identify all weak signals and/or blind spots. On the other hand, some projected developments may never materialize at all. From a company's perspective, this is a very positive signal as it indicates that its strategic early-warning systems seem to be working well.

# 4.2 APPLYING FRAMEWORKS ONE AND TWO: THE FRAMING CHECKLIST AND 360° STAKEHOLDER FEEDBACK IN THE EUROPEAN AIRLINE INDUSTRY

## 4.2.1 INTRODUCTION

Now that we have described the framing checklist and 360° stakeholder feedback, this section shows how these methods can be applied in corporate practice based on an example from the European airline industry. The example is taken from a scenario project conducted jointly by HHL Leipzig Graduate School of Management and Roland Berger Strategy Consultants in which the scenario-based strategic planning approach was used to analyze the industry.

Dynamic changes have given rise to a high degree of uncertainty in the airline industry. Air travel has lost its status as the costly privilege of a select few. Instead, in today's globalized economy, it has become a necessity. On the one hand, this generates enormous growth potential as airlines seek to satisfy increasing demand for global air travel. On the other hand, it also creates challenges.

New technologies, vanishing economic barriers and deregulation are driving prices down and leading to the commoditization of air transport. The emergence of low-cost European airlines such as Ryanair, easyJet and Air Berlin has supported this development. Traditional, state-owned network carriers thus have to face new competitors that are smaller, very flexible and have access to almost every country in Europe. Further challenges to the airline industry are rooted in growing environmental awareness and how this is affecting patterns of consumption. Two further threats arise from the industry's heavy dependency on overall economic development on the one hand and oil as the basis for kerosene costs on the other.

Scenario-based planning was applied to help managers in the industry plan reliably and overcome these challenges even in the face of such volatile conditions.

## 4.2.2 THE FRAMING CHECKLIST

To kick off the scenario project, we conducted a short workshop with the project team and project partners in which we applied the framing checklist to set the scope for the entire project. It became apparent that the five questions did indeed cover all the core issues that needed to be considered before the start of the project. This gave us certainty that every important aspect was covered and that all project partners shared a common understanding of the steps ahead.

First, we defined the development of industry scenarios for the European airline industry between now and 2017 as the *goal of the scenario project.* Like most industries today, the airline industry is very diverse, comprising multiple segments that are influenced by different factors. We therefore needed to focus our analysis on one segment to ensure sound results and account for the interdependencies that exist between the various segments. Accordingly, we focused specifically on the passenger transportation segment for traditional network carriers. Cargo carriers and low-cost airlines were excluded from the scenario analysis.

Since the scenarios were to be created for an industry, we defined a composite *strategic level of analysis* that covered both macro-level factors and industry-specific developments. Furthermore, we concentrated on the corporate level to derive strategic recommendations for the strategy manual.

A further key step in the first process step is the *definition of stakeholders.* The goal is to identify a broad range of stakeholder groups that are important to the industry and that are to be specified in greater detail in the 360° stakeholder feedback exercise. For the purposes of our project, we agreed on six main stakeholder groups: executives from European airlines, external industry experts representing the research and political communities, industry consultants, bank analysts and airline customers.

Next, we determined the roles of the project *participants*, set a time line for the whole project and fixed dates for the important meetings at which the scenarios and strategy recommendations were to be discussed.

The final step was to set the *time horizon* for the analysis to five years to mirror the typical planning cycle in this industry.

Having defined the scope and outlined the most important project characteristics, we were able to start the actual scenario analysis based on a common understanding shared by all participants.

### 4.2.3
### 360° STAKEHOLDER FEEDBACK

In the second step of our scenario project for the European airline industry, we applied the 360° stakeholder feedback tool to analyze which factors of influence are most important to the industry. In addition, we were able to identify industry executives' blind spots by examining their assumptions and underlying mental models and comparing them with those of external stakeholders. To gather 360° stakeholder feedback, we adhered to the tool's three-step process: selecting the relevant stakeholders, conducting the inquiry and finally analyzing the results.

## STEP 1: SELECTION OF STAKEHOLDERS

Together with our project partners, we selected 44 internal and external stakeholders to be included in the process. The internal view of the industry was provided by several major European airlines in the network carrier segment, which together accounted for more than 40% of total sales revenues in the European airline industry. External experts were identified based on their influence on and knowledge of the industry. Politicians at both the German and European levels were included in the process, for example, as were airport executives. Furthermore, research institutions such as the German Aerospace Center (DLR) and industry associations such as the International Air Transport Association (IATA) were identified as important stakeholders for the industry.

These industry specialists were supplemented by experts from outside the industry to ensure that a complete picture of all relevant factors was obtained. We selected various bank analysts who cover the industry, for example, as well as including a client perspective from both the business and leisure travel segments.

## STEP 2: STAKEHOLDER INQUIRY

The survey we conducted was designed to deliver as complete a picture as possible of the relevant political, economical, environmental, social and technological factors that influence the European airline industry. To this end, we first circulated an open questionnaire to give study participants the opportunity to name whatever factors they considered to be particularly important for the development of the industry over the next five years. We used both paper questionnaires and an online tool supported by e-mail to make the process as convenient as possible for the experts concerned. In every survey, one of the biggest challenges is achieving a high response rate. Where experts are asked to participate, the challenge is even greater. In the interests of obtaining 360° stakeholder feedback, it has thus proven very effective to first call the identified experts and inform them about the scenario project, the procedure and the time it would take them to fill out the questionnaire.

The factors of influence identified by experts were then analyzed and clustered in the various dimensions. This analysis looked at all factors that generally had the same meaning but were formulated in slightly different ways. These were

then combined to form a single factor that integrated the others without changing their meaning. For example, we clustered the factors "geopolitical events such as terrorist attacks or pandemics" and "international political stability" to form the political factor "geopolitical stability". Furthermore, we calculated the frequency of each factor and found that some factors were identified by almost every expert, whereas others were named only by one or very few participants. This analysis is important to ensure that factors beyond the perception of the majority of experts are also channeled into the second round, in order to potentially identify weak signals. To comprehensively account for these factors, we included 23 of the most frequently mentioned factors and 5 potential weak signals in the second questionnaire. In total, 28 factors were included in the second round.

In this second step, the grouped and synthesized factors of influence were again circulated to the industry experts, this time in a closed questionnaire (Figure 4.9). On a scale from one (low/weak) to ten (high/strong), participants in the second round were asked to rate each factor in terms of its potential impact on the industry and its degree of uncertainty. The majority of questionnaires were returned to us within seven days, enabling us to start the analysis phase in which we identified the most relevant factors for the industry as well as important blind spots and weak signals.

STEP 3: RESULT ANALYSIS:

In the last step of the 360° stakeholder feedback exercise, we analyzed the final results from the two surveys involving industry experts, who produced an extensive list of 28 factors of influence with regard to weak signals and blind spots. These ranged from the "shift of economic power to Asia" to the "importance of European low-cost carriers".

To identify blind spots, we aggregated the ratings supplied by all external and internal experts and mapped them using a spider diagram (Figures 4.10 and 4.11) that visualizes the perceptions of the different stakeholder groups. Several blind spots were identified, especially regarding the impact of the potential "expansion of low-cost carriers", "the development of corporate travel budgets", "rising demand in emerging countries" and "international liberalization of air travel". In addition, the factor "shift of economic power to Asia" emerged as a blind spot in the dimension uncertainty.

# **FIGURE 4.9:** SECOND-ROUND QUESTIONNAIRE

**Scenario Planning for the European Network Carriers**

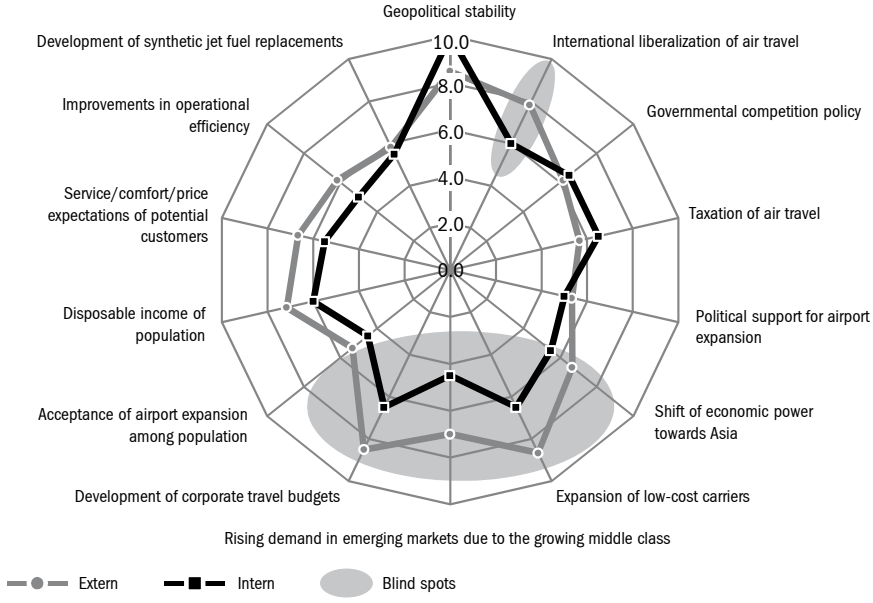
**Please rate the following factors from 1 (low/weak) to 10 (high/strong).**

| POLITICAL FACTORS | IMPACT | UNCERTAINTY |
|---|---|---|
| Geopolitical stability (e.g. war, terror, disease) | | |
| International liberalization of air travel (e.g. open sky agreements | | |
| Harmonization of air traffic controls (Single European Sky) | | |
| Governmental competition policy (e.g. subsidies, protectionist regulations) | | |
| Taxation of air travel (e.g. VAT, kerosene) | | |
| Political support for airport expansion | | |
| **ECONOMICAL FACTORS** | | |
| Global economic growth | | |
| Shift of economic power towards Asia | | |
| Prices of oil/fuel and CO2 certificates | | |
| Capital market risks (e.g. exchange rates, interest rates, liquidity) | | |
| Allocation of airport slots and fees | | |
| New competitors from emerging countries | | |
| Expansion of low-cost carriers (e.g. in terms of distances, destinations, services) | | |
| Rising demand in emerging markets due to the growing middle class | | |
| **SOCIETAL FACTORS** | | |
| Development of corporate travel budgets | | |
| Acceptance of airport expansion among population | | |
| Disposable income of population | | |
| Service/comfort/price expectations of potential customers | | |
| **TECHNOLOGICAL FACTORS** | | |
| Improvements in operational efficiency (e.g. speed, safety) | | |
| Improvements in travel comfort (e.g. entertainment, service, noise level) | | |
| Technological advances in video conferencing | | |
| Technological advances in rail travel | | |
| Development of synthetic jet fuel replacements | | |
| **ECOLOGICAL FACTORS** | | |
| Environmental consciousness of consumers | | |
| Increasing amount of environmental regulations | | |
| **LEGAL FACTORS** | | |
| Application of the EU Emission Trading System | | |
| Changes in collective bargaining law | | |
| Changing safety regulations | | |

Internal and external stakeholders attached a significantly different weighting to two factors – "international liberalization of air travel" and "the expansion of low-cost carriers" – in both dimensions, impact and uncertainty. The blind spots do not imply that either the internal or the external partners were right or wrong in their assessment. Rather, the main benefit of blind spot analysis is to discuss and question the perception of executives.

# **FIGURE 4.10:** BLIND SPOTS IN THE IMPACT DIMENSION

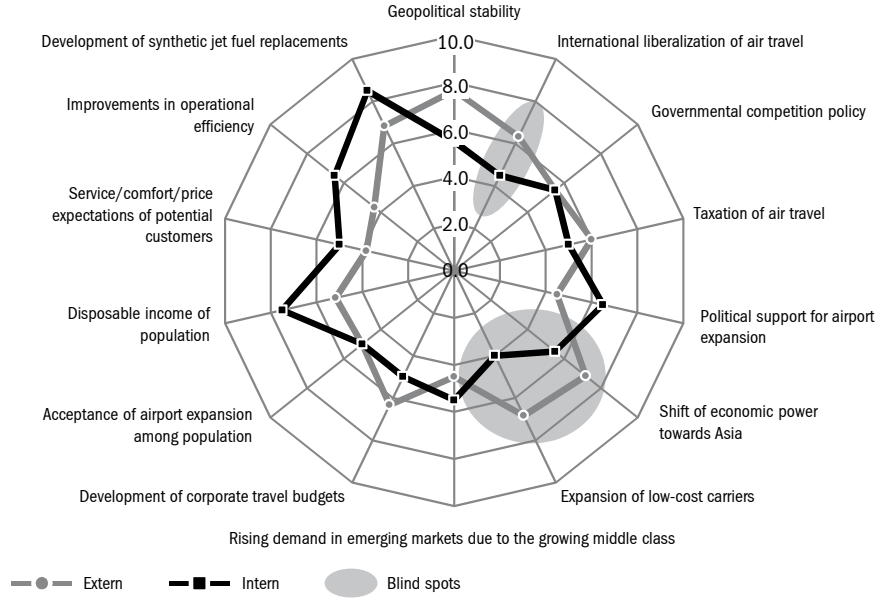
**Impact:** External vs. Internal view




We used these findings in a workshop with the project partners in which we discussed all factors and focused especially on the blind spots identified. Participants were surprised that there were such major differences in perceptions, especially with regard to "the expansion of low-cost carriers" and "the international liberalization of air travel". Inclusion of a third factor, "rising demand in emerging markets", quickly moved the discussion toward a reassessment of the competitive threats posed by low-cost carriers and new growth opportunities in Asia. It was quickly decided to place more emphasize on analyzing these factors and give them more thorough consideration in the subsequent steps of scenario analysis, especially in the strategy development phase.

# **FIGURE 4.11:** BLIND SPOTS IN THE UNCERTAINTY DIMENSION

**Impact:** External vs. Internal view




Besides identifying blind spots, we also conducted a weak signal analysis. Surprisingly, we found no weak signals at all for the industry. This means that none of the factors named by only a small percentage of participants in the first round of the survey were rated high in terms of impact and uncertainty by all the experts in the second round. This is a good sign, as it implies that all relevant factors for the industry's future are perceived by internal and external stakeholders alike, and that no important developments have been disregarded.

360° stakeholder feedback showed that European network carriers will face future challenges for which they are not yet fully prepared. Thanks to the support

provided by this tool, they can now channel these factors of influence into their strategic planning processes. In addition, 360° stakeholder feedback produced a comprehensive list of evaluated factors. This list formed the basis for further analyses in the trend and uncertainty analysis. This third process step and the scenario matrix tool used in the scenario-building process are described in the section that follows.

## 4.3 INTRODUCING TOOLS THREE AND FOUR: THE IMPACT/UNCERTAINTY GRID AND THE SCENARIO MATRIX

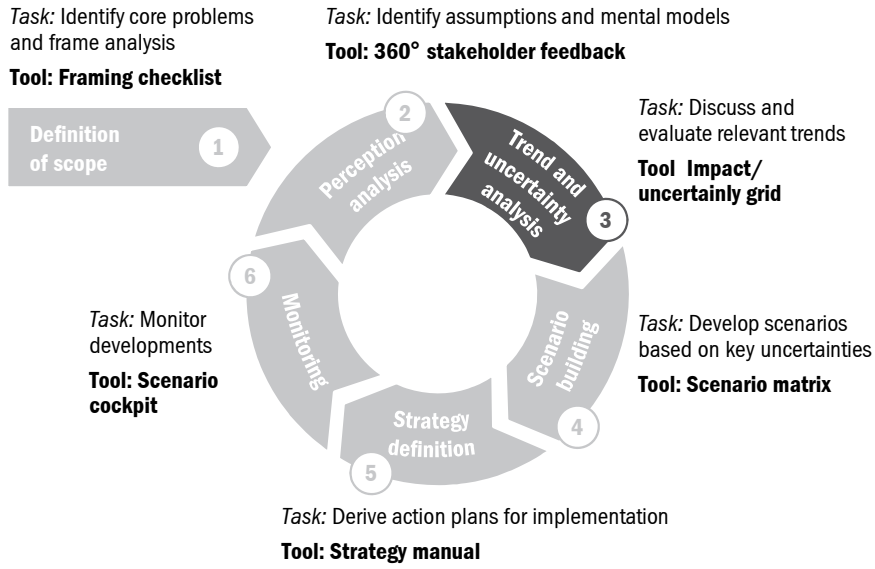
The section above introduces the first two tools, the framing checklist and 360° stakeholder feedback, in our scenario-based approach to strategic planning. An example from the European airline industry illustrates how these tools can be applied. This section introduces the next two tools: the impact/uncertainty grid and the scenario matrix.

### 4.3.1 THE IMPACT/UNCERTAINTY GRID

The general aim of trend and uncertainty analysis is to discuss and evaluate relevant trends and critical uncertainties. In particular, critical uncertainties are analyzed to yield two key meta-categories that are needed in order to build a scenario in the fourth step (Wulf et al., 2010). Before explaining the impact/uncertainty grid itself, let us briefly examine the basic idea behind clustering and evaluating factors in scenario projects.

Scenario-based strategic planning involves coping with a wide variety of factors that can potentially be used to construct scenarios. All available factors must be filtered in terms of their logic and structure to identify the ones that are best suited to a specific scenario-based strategic planning activity (Wright/Cairns, 2011). In the past, several methods have been proposed for identifying relevant factors and clustering trends and uncertainties. These methods include:

# **FIGURE 4.12:** THE SIX-STEP SCENARIO-BASED APPROACH TO STRATEGIC PLANNING




◆ Holding workshops with scenario and industry experts. The aim is to collect, evaluate and define relevant future trends and factors (Wrigh/Cairns, 2011)
◆ Conducting interviews with scenario and industry experts. The aim is to identify and evaluate trends based on expert opinions (van der Heijden, 2005)
◆ Building a computerized model consisting largely of a factor analysis that weights each factor against the others. This makes it possible to automatically identify the most important factors (Gausemeier et al, 2009)

All of these methods have two main advantages. First, they make it possible to isolate trends in detail by discussing them. Second, factors can be weighted quantitatively by using computerized models. These tools also have limitations, however. Conducting a series of workshops takes a lot of time and can be very

resource-intensive. Moreover, the participants must be chosen very carefully in order to identify and evaluate the right trends.

The same is true of expert interviews. Interviewing a wide range of experts is time-consuming, and analysis of the interview data can be colored by the interviewer's subjective perceptions. It is also difficult to quantify the importance of trends and factors during interviews that focus on obtaining qualitative data.

Computerized models use quantitative data. However, the results often do not fit the scope of the scenario-based strategic planning project, as they lack a certain level of human interaction and analysis.

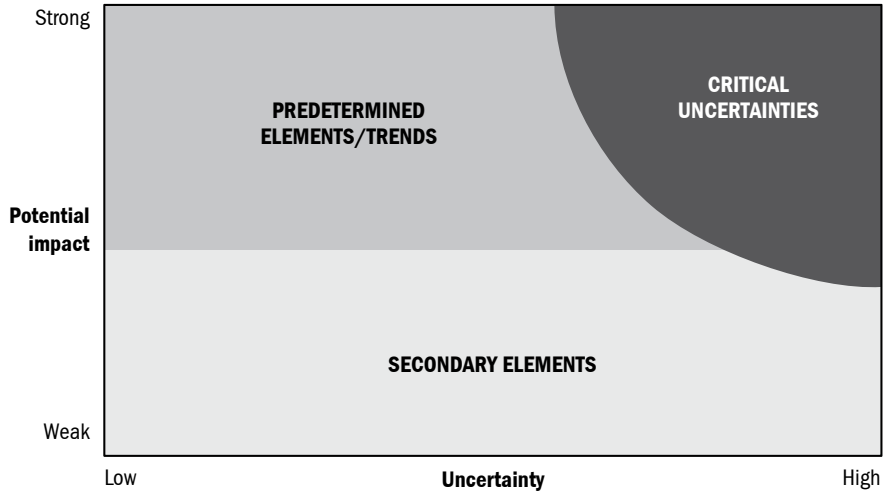
Participants in a scenario-based strategic planning project need a brief, comprehensive and straightforward tool to cluster all relevant factors. In the previous section, we introduced 360° stakeholder feedback and explained how factors can be collected and rated in terms of their level of impact and uncertainty. The impact/uncertainty grid is based on the findings of 360° stakeholder feedback. It allows the participants in a scenario planning project to intuitively identify two key uncertainty factors. These are needed in order to build sound scenarios.

## 4.3.2 DESCRIPTION OF THE IMPACT/UNCERTAINTY GRID

The impact/uncertainty grid is a concise cluster of relevant factors. It allows the participants in a scenario project to identify two key uncertainties that they can use to construct four distinct scenarios. In the previous step, we were able to determine and identify factors that are likely to impact the chosen scope of our scenario analysis in the future. Perception analysis allowed us to rate each factor in terms of its importance and uncertainty on a scale from one (= low/weak) to ten (= high/strong).

The impact/uncertainty grid is a matrix with two dimensions: uncertainty along the x axis and potential impact (on future performance) along the y axis (Figure 4.13). The range of the axes corresponds to the rating scale applied during application of the tool, i.e. one to ten.

# **FIGURE 4.13:** THE IMPACT/UNCERTAINTY GRID




Source: van 't Klooster/van Asselt, 2006

Relevant factors are placed on the grid according to their rating. Ideally, the result will be a graph shape showing the factors spread across the whole range of the axes. If the relevant factors are clustered around one focal point, we recommend adjusting the axes accordingly. Let us, for example, assume that all relevant factors on the impact dimension score in a range from three to eight. In this case, it is possible to stretch the axis by eliminating values below three and above eight. This method does not manipulate the results, but merely enhances their (graphical) visualization.

The next step is to cluster the relevant factors into secondary elements, trends and, in particular, critical uncertainties. Secondary elements have a weak impact and can have low or high uncertainty. For the purposes of scenario development, these factors can be largely ignored, since they will have only a minor impact on a firm's future development. Instead, firms should concentrate on trends and critical uncertainties.

Trends have a strong impact and low to medium uncertainty. The future direction of these trends is fairly certain and they can have a high impact on a firm's future success. One example of such a trend is demographic change in Germany. Germany's population is getting older, the country's labor force is shrinking and people are tending to start working at a later age. The continuation of this development is relatively certain. It will have a substantial impact on how companies organize their daily operations and on their future financial performance.

Finally, critical uncertainties have a powerful impact on a firm's future success and are exposed to high uncertainty. These factors are the most important ones on the grid as they are the most difficult to manage. How a factor will develop, i.e. positively or negatively, is unknown. Yet regardless of its development, the factor will have a strong impact on a firm's financial performance. Examples are input factor prices, key markets and key technologies (such as e-mobility). For this reason, "critical uncertainties" should take priority when scenarios are developed.

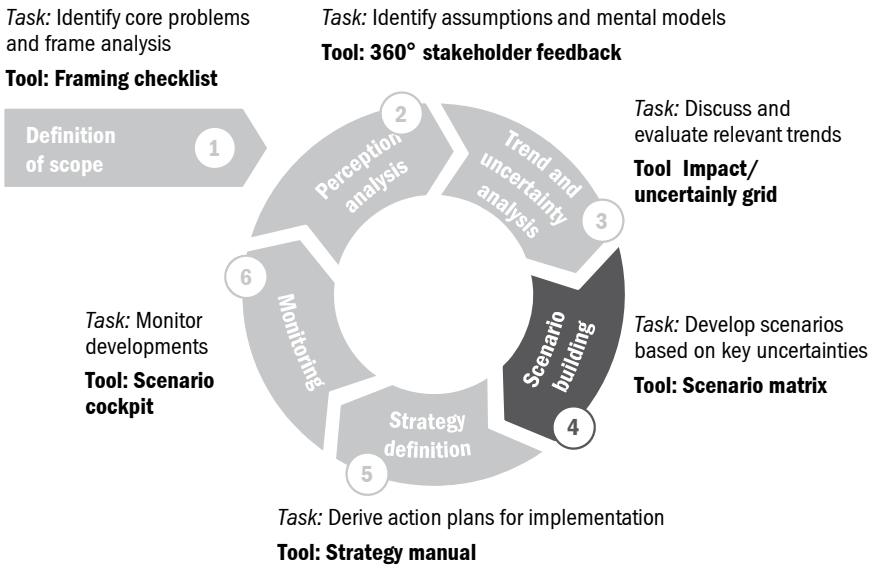
Critical uncertainties are then grouped into meta-categories based on common elements or topics. Two of these meta-categories are chosen to lay the foundation for the scenario-building step. The final task of the impact/uncertainty grid is to identify these two mega-categories by revealing aspects that are common to the critical uncertainties. Several critical uncertainties have a political or regulatory aspect, for example, and should therefore be clustered in a separate meta-category.

Having explained how the impact/uncertainty grid can be used to identify two key uncertainties, the next section explains how these can be used to construct four distinct future scenarios.

### 4.3.3 THE SCENARIO MATRIX

The overall goal of the scenario-building step and the scenario matrix is to develop four distinct future scenarios. Of particular interest in this context is the process of deriving the scenarios from the two critical factors of influence already identified. This is done using what is known as a scenario influence diagram and a scenario

# **FIGURE 4.14:** THE SIX-STEP SCENARIO-BASED APPROACH TO STRATEGIC PLANNING




fact sheet (Wulf et al., 2010). Before explaining the scenario matrix itself, let us examine exactly what scenarios are, what the basic idea behind them is and how they can help a company to think and plan ahead.

Building sound and plausible scenarios is a challenging task that needs to follow a structured process. Before this process can begin, however, it is vital first to identify the purpose that is to be served by developing scenarios. Academics commonly distinguish between three purposes that scenarios can accomplish:

- First, scenarios are used as a one-time activity to predict and evaluate the outcome of a predefined strategic plan of action
- Second, scenarios are used as a one-time activity to support and enhance a specific strategic planning process, including related decisions

◆ Third, scenarios are used for everything from a one-time activity to an ongoing course of action within an organization's strategic planning process, thereby supporting the way in which the organization learns (Bradfield et al., 2005).

What all three purposes have in common, however, is that scenarios enable managers to be better prepared for strategic decisions, especially in times of increased volatility and uncertainty.

The scenario-building approach presented in this section can be used for all three of the purposes described above. In most cases, however, it is used for the third purpose as its holistic approach lends itself to the use of scenario planning for a company's continuous strategic planning activities. We define scenarios as a plausible description of how the future may develop based on a coherent and internally consistent set of assumptions about key relationships and driving forces (Metz et al., 2007). In the context of our approach, scenarios are not intended as forecasts or precise predictions, nor do they constitute a statement of intent about a desired future (Lindgren/Bandhold, 2009). Rather, they paint a picture or tell a story describing a possible future which, as explained in the previous paragraph, helps an organization to learn and to prepare itself for unforeseen events. As used for the purposes of this paper, scenarios provide different views on what the future might look like (van der Heijden et al., 2002). To put that another way, scenarios attempt to answer 'What if…?' questions, bringing both risks and opportunities to an organization's attention rather than concealing them (Lindgren/Bandhold, 2009). In our six-step scenario-based approach to strategic planning, scenarios actually go one step further than these by responding to 'If, then…' hypotheses. This allows strategic recommendations to be issued regarding a specific course of action to be undertaken by organizations in the four scenarios (Liebl, 2002). A detailed discussion of this aspect is provided in the section on the strategy manual.

As explained in the previous sections, scenarios examine critical uncertainties and variations thereof in addition to important known trends (van der Heijden et al., 2002). Different tools have been developed in the past to develop scenarios on the basis of both uncertainties and trends. Again, distinctions can be drawn among three different approaches to scenario building. The first uses extrapolated

data analysis and trend models, assigning a specific probability of occurrence to each scenario. By consequence, this expert-led approach tends to focus on forecasting. "Expert-led" means that the planner controls the process and completes the narrowly focused scenario-building task using proprietary tools, expert judgment and historical time series data. The outcome is usually a brief document explaining the quantitative data with a short storyline for three to six scenarios (Bradfield et al., 2005).

The second approach applies both quantitative and qualitative analysis. It primarily uses intuition-based workshops and complex computer-based mathematical models to develop multiple future scenarios. It is expert-led but involves some participation by the organization's senior managers. The outcome is an extensive set of data-driven scenarios supported by a detailed storyline, plus recommendations for possible actions and their consequences (Bradfield et al., 2005).

The third approach focuses on qualitative analysis and the specific organization. Scenarios are constructed within an organization using inductive or deductive processes monitored by an experienced scenario practitioner. The outcome is a logical, qualitative and discursive described set of two to four scenarios, all of which are equally probable (Bradfield et al., 2005).

Detailed analysis of the descriptions of these three approaches shows that each one has a different agenda and objective. The first approach follows the traditional concept of strategic planning, i.e. it tries to find "the one best" strategy by assigning different probabilities to a variety of scenarios (Ansoff, 1965). Based on these probabilities, managers can feel more certain about the future and can develop and execute specific strategic actions in response to the most probable scenario. The focus is thus on obtaining better forecasts by perfecting extrapolated data analysis and/or trend models (Wack, 1985a). This approach might work well in a stable economic environment, but is very difficult to apply under volatile or uncertain conditions. Additionally, the quantified scenarios are developed by experts who have hardly any interaction with either the outside world or the decision makers who will be responsible for acting on the developed scenarios (Wack, 1985b). As with the other approaches, the outcome of this method is a document explaining

the scenarios. However, since decision makers are not involved in preparing the document, they seldom feel inspired, motivated or energized by scenarios that usually describe a situation beyond the focal point of their attention.

The agenda and goal of the second approach is slightly different and, to a certain extent, tries to overcome the limitations of the forecast-oriented approach. Instead of focusing exclusively on computer-based models that try to attach a probability of occurrence to each scenario, this approach also involves workshops with senior managers to discuss the findings and scenarios obtained from computer models. Senior managers can thus gain strategic insights that go beyond what is possible if they are merely presented with a set of figures on which to develop a strategy. However, they will still find it tremendously challenging to understand the uncertainty factors and forces that drive their value chain and, hence, the developed scenarios. To put it bluntly, this approach uses someone else's model and only lets senior managers discuss the outcomes instead of thinking the issues through for themselves – a crucial discipline if strategies are to be both developed and implemented effectively (Wack, 1985b).

The third approach goes one step further by using company-internal inductive and/or deductive processes to develop scenarios. At this stage, all relevant stakeholders are engaged in the scenario development process. This also means that managers are more likely to take the resultant scenarios seriously. Scenarios do not only represent information about a specific state of the world, however, but also have to do with people's perceptions (Wack, 1985b). It follows that, if the scenario-building process is kept solely within the cosmos of the organization, there is the danger of sticking to established mindsets and ignoring previously identified uncertain factors that could have a powerful impact on the future development of the business. To avoid this pitfall, the inclusion of internal and external stakeholders would seem necessary. Only then can the philosophy of expanding one's mind and of discussing possible outcomes be factored into the scenario development process (van der Heijden, 2005).

Of these three approaches, the last one comes closest to our understanding of scenario planning. It enables all key stakeholders to advance organizational

learning and helps an organization to prepare for unforeseen events. The other two approaches are either too complex or too expert-focused to be fully integrated into an organization's strategic planning process.

This brief discussion of the various scenario-building approaches shows that all three have their own shortcomings, however. All three are very resource-intensive, lack a method for identifying extreme or unforeseen events and are often difficult to incorporate in an organization's existing strategic planning activities (Lindgren/Bandhold, 2009). We believe that the tool described in the next section overcomes these shortcomings by giving extensive methodological support to the development and visualization of scenarios.

## 4.3.4 DESCRIPTION OF THE SCENARIO MATRIX

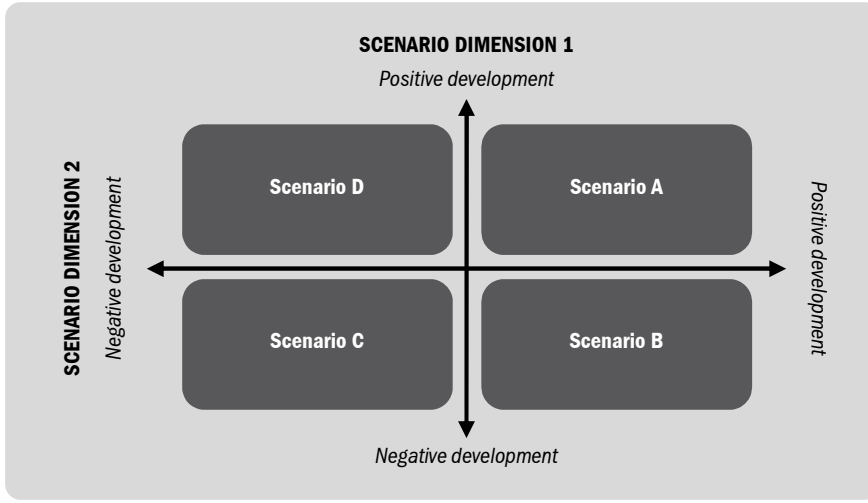
The scenario matrix tool described in this paper follows the matrix approach first presented by Kees van der Heijden (2005). This approach best fits our definition and perception of scenario planning. The scenario matrix is a deductive method that is useful for constructing and describing scenarios in uncertain and volatile situations. Deductive scenario methods are widely regarded as the most analytical and exhaustive ways to build scenarios from an outside-in perspective (van der Heijden, 2005).

The scenario matrix builds and visualizes four scenarios based on two key uncertainty factors. Four is regarded as the maximum number of scenarios that decision makers will be able to cope with (Wack, 1985b; van der Heijden, 2005). The scenario matrix is complemented by two other tools that are also important for scenario building: the fact sheet and the influence diagram. Overall, four sub-steps are necessary to design and describe scenarios on the basis of the scenario matrix tool.

### SUB-STEP 1: IDENTIFY THE SCENARIOS

The scenario matrix – the core of scenario identification – is based on the two key uncertainty factors that were identified using the impact/uncertainty grid in step three (trend and uncertainty analysis) of our six-step scenario-based strategic

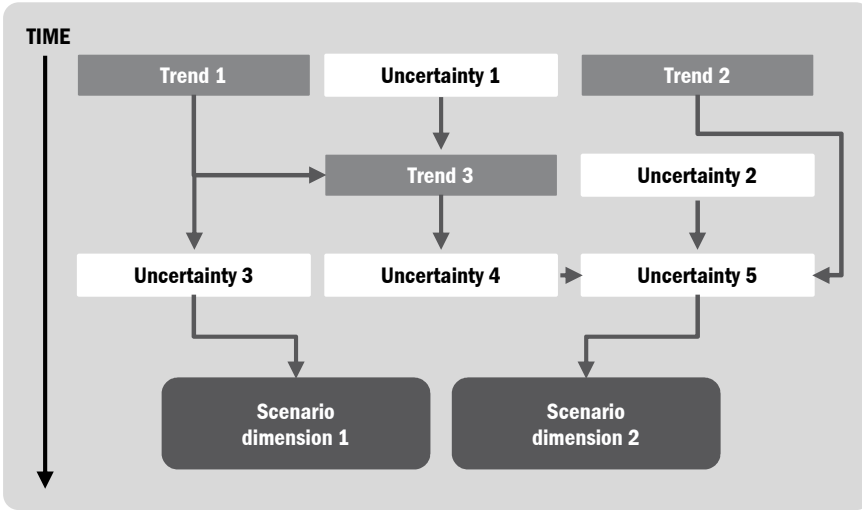
# FIGURE 4.15: THE SCENARIO MATRIX




Source: van der Heijden, 2005

planning process. To construct scenarios, each key future uncertainty must be projected with an extremely positive and an extremely negative outlook onto the *x* and *y* axes of the matrix. The scenarios can then be positioned in the four quadrants of the matrix, thereby automatically generating four distinct scenarios (Figure 4.15). The two key uncertainty dimensions thus form the basis on which the four scenarios are both built and described. We commonly develop scenarios that look three to five years into the future, as this matches the typical time frame for strategic planning activities. However, the projected future time horizon should always be based on the time frame agreed in the framing checklist. Each scenario should be given a concise name that is easy to remember. When brainstorming for relevant names, one option is to refer to historical events associated with the scenarios, such as Greek mythology, for example. The scenario name should enable the reader to quickly grasp the story behind the scenario and intuitively understand the alternative worlds which the scenarios describe. Importantly, it makes sense to focus the name on the chain of causes and effects behind the scenario description – what is known as the influence diagram – rather than on its end state (van der Heijden, 2005).

# FIGURE 4.16: THE INFLUENCE DIAGRAM




Source: van der Heijden, 2005

## SUB-STEP 2: CREATE AN INFLUENCE DIAGRAM

In the second sub-step, the stories behind the scenarios must be built. These stories describe the paths along which the world will arrive at the four alternative scenarios (van der Heijden, 2005). To create these stories, we generally build a chain of causes and effects leading to the end states described by the scenarios themselves. This chain of causes and effects is called an influence diagram and describes the strategic levers behind the scenarios (van der Heijden, 2005).

To develop the influence diagram, it is necessary to establish a list of factors, forces, trends and how they interrelate. The trends and uncertainties identified in step three of our six-step process are a good starting point. It is important to select the most important factors, link them together, look for interdependencies and analyze how one development impacts another.

When visualizing different future developments using an influence diagram, it is also important to ensure that the various developments are authentic and

consistent. Links between a trend and a critical uncertainty must be unambiguous, with arrows displaying the influence one development has on the other. For example, describing a future scenario in which an increase in taxes on venture capital firms leads to heavy investment in biotech start-ups would not be plausible and would discredit the whole scenario-building process. Such undesirable effects can be avoided by clearly distinguishing between developments and specific events and testing whether developments are capable of going up or down, e.g. by putting an 'increase in' in front of 'taxes' (Figure 4.16); (van der Heijden, 2005). It is thus the role of the scenario project leader to perform reality checks to test each link between trends and uncertainty factors for inconsistencies.

At this stage, it should be noted that we recommend that the development of the scenario axis and influence diagram be conducted in a workshop setting. Contributors to the workshop should be the participants identified in step one of the process using the framing checklist. Usually, these contributors consist of senior executives, industry experts and specialists involved in a company's strategic planning activities. The workshop should be facilitated by a moderator guiding participants through the steps described above. The key advantage of developing the scenarios in a workshop setting stems from the fact that all key participants are actively involved in the process of ensuring consistent and plausible scenarios.

### SUB-STEP 3: DESCRIBE THE SCENARIOS

Once the influence diagram has been completed and all interdependencies have been validated, the process of describing the four scenarios in narrative prose can begin. The influence diagram should serve as the basis on which to describe the dynamic nature of each development. Systematically describing why a certain development happens and how this influences other developments lays the basis for writing the story (van der Heijden, 2005). At this stage there are two writing techniques: One is to write small text modules for each trend and uncertainty in the influence diagram. Depending on the type of scenario, these text modules may take different forms, e.g. positive development of GDP in scenario A versus stagnating GDP growth in scenario B. When these text modules have been completed, they must be placed in a logical order, as in the influence diagram itself. The various text modules must then be connected to each other. When scenarios are written using

this technique, the global or macro-perspective is normally the point of departure. From here, scenarios are then broken down to the industry or company level depending on the scope of the scenario project.

The other technique is more creative. Rather than focusing on each trend and uncertainty in the influence diagram individually, it looks at the big picture and takes the influence diagram as its point of departure. Working backward from the final outcome of the scenario, it uses the various trends and critical uncertainties to explain what has to happen in order to arrive at each final state. Given that this technique focuses on a free style of writing, there is always the danger of giving strategic recommendations rather than describing the environment of the scenarios.

Looking back at the impact/uncertainty grid at this stage, it becomes clear that our method of describing the scenarios is not a random procedure of putting together unsystematic future developments. It is rather a precise and well-structured process based on a thorough and validated set of developments for the future.

Verbal description of the scenarios can now be completed by giving each scenario a concise headline and sub-header in the manner of newspaper articles. This step helps to capture the scenario reader's attention, makes it easier to communicate the essence of each scenario and, above all, to stimulate creative thinking about future developments.

### SUB-STEP 4: CREATE A FACT SHEET

The last sub-step in the 'scenario matrix' tool is to establish a brief fact sheet for each scenario. A fact sheet should contain the relevant numbers, key indicators and a brief description of each scenario. When browsing through a fact sheet, the reader should quickly understand the current situation given the scope of the scenario, the relevant measures on which it is based and what the scenario actually looks like.

After the description of the scenarios and the fact sheet have been completed, a final check should ensure whether the scenarios fulfill the purpose for which they

were developed. Do the scenarios help the reader to understand and anticipate both uncertainties and risks? Have the scenarios revealed strategic opportunities of which the organization was previously unaware (Wack, 1985b)? If the answer to both questions is yes, then the scenarios should lead managers to perform certain actions based on them. If the answer to the questions is no, the scenarios are mere guesswork and should be revised.

### 4.3.5 EVALUATING THE IMPACT/UNCERTAINTY GRID AND THE SCENARIO MATRIX

The impact/uncertainty grid has been applied in several scenario-based strategic planning projects. It is an efficient tool for discussing and evaluating relevant trends and critical uncertainties, as evidenced by the example of the European airline industry (see next section). Its main advantages are the ease with which it allows multiple factors to be clustered and its good visualization capabilities when it comes to selecting two meta-categories for the scenario development process. The tool also helps reduce the complexity of scenario planning projects by systematically condensing important factors.

Our application of the tool has nevertheless also revealed a number of weaknesses that must be addressed. The first is related to content. Clustering all critical uncertainties into two meta-categories can be challenging if the issues are too diverse to bundle. In some cases, it may therefore be necessary to leave out one or two critical uncertainties during the clustering process. These "excluded" uncertainties must, however, be explicitly mentioned in the scenario description.

The second weakness is on the operational level. Adjusting the scales to optimize graphical visualization of the impact and uncertainty dimensions can be time-consuming. The same is true of attempts to place the different factors in the different groups. Both steps can trigger extensive debates among members of the scenario-based strategic planning team and industry experts. We therefore recommend keeping this reality check as brief as possible. A willingness to accept compromises may also be necessary.

The scenario matrix tool is a well-structured, efficient and clear-cut method for developing four scenarios supported by an influence diagram and a fact sheet. Its main advantages lie in the logical and quick way in which the scenarios are developed. Applying the tool thoroughly and extensively, as in the case of the scenario study of the European airline industry (see next section), takes about five to six person days plus the resources required for the half- to one-day long scenario workshop. Compared to other scenario development techniques, the manpower and resources required to apply the tool and develop extensive scenarios can thus only be described as marginal.

Applying the tool to the European airline industry revealed two specific shortcomings. Firstly, developing four scenarios based on two key uncertainty factors supported by an extensive list of future developments stemming from the influence diagram evidently does not guarantee that the scenarios will be complete and exhaustive. Secondly, despite establishing an influence diagram to validate the authenticity of each factor of influence, a certain danger remains that logical pitfalls might appear within the scenarios. Having said that, when applying the tool as part of the whole six-step process to scenario-based strategic planning in accordance with the specifications provided in each tool description, the risks arising from these two shortcomings appears limited and, hence, manageable.

In conclusion, the impact/uncertainty grid and scenario matrix produce a list of key uncertainties and a plausible set of four scenarios indicating how an industry might develop in the future. These four scenarios enrich the strategic planning process by stimulating creative thinking and encouraging active engagement with the future. As such, they respond to a manager's deepest concerns. If the various scenarios are to deliver further benefits, however, strategic implications for an industry or company must be derived from each scenario. Before explaining this process in more detail, let us demonstrate the practical validity of the impact/uncertainty grid and the scenario matrix by looking at an example from the European airline industry.

# 4.4 APPLYING FRAMEWORKS THREE AND FOUR: THE IMPACT/UNCERTAINTY GRID AND THE SCENARIO MATRIX IN THE EUROPEAN AIRLINE INDUSTRY

## 4.4.1 INTRODUCTION

This section shows how the impact/uncertainty grid and the scenario matrix can be applied in corporate practice based on our project for the European airline industry. In particular, this section introduces the detailed descriptions of the industry scenarios that are then used to derive strategic recommendations in the next section.

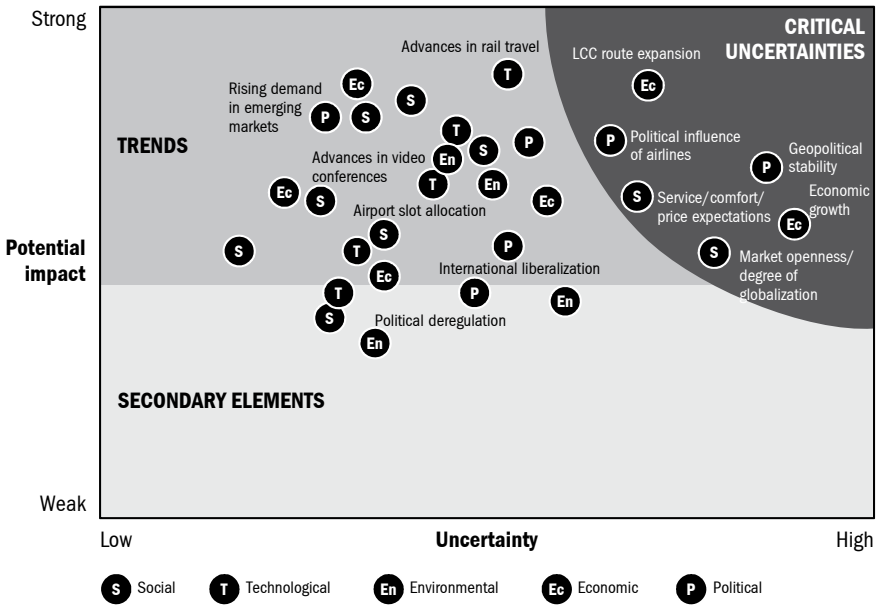
## 4.4.2 THE IMPACT/UNCERTAINTY GRID

Based on the results of the 360° stakeholder feedback exercise, we identified the key uncertainties and trends that were likely to impact the airline industry in the future. To do so, we applied the impact/uncertainty grid to cluster factors of influence according to their degree of impact and level of uncertainty. We placed the factors in the grid according to the scores assigned to them by the experts who took part in the 360° stakeholder feedback exercise. Next, we clustered the factors as "secondary elements", "trends" and, most importantly, "critical uncertainties" (Figure 4.17).

One particularly important task in this step was to identify the two key uncertainties that formed the basis for scenario development in the next step. To this end, we clustered three related critical uncertainties into one meta-category and two into another. These are what we call key uncertainties or scenario dimensions. The three critical uncertainties in the first scenario dimension are:

- Low-cost carrier expansion in terms of routes and services
- Economic growth
- Service/comfort/price expectation

# **FIGURE 4.17:** IMPACT/UNCERTAINTY GRID FOR THE EUROPEAN AIRLINE INDUSTRY



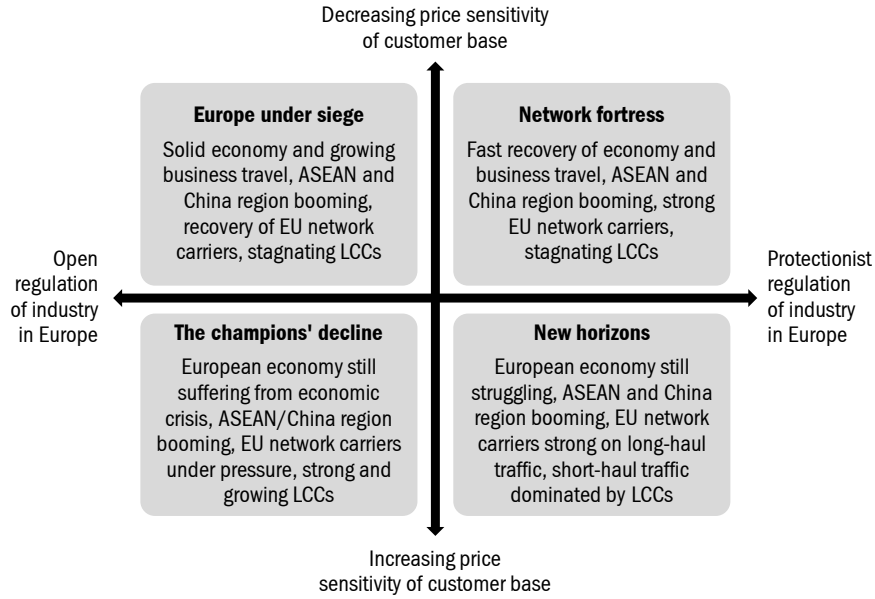

Changes in each of these factors would have a significant impact on the importance of low-cost carriers in Europe and the future of network carriers. Together, they therefore form the scenario dimension "*Price sensitivity of customer base*".

The second scenario dimension, "*Regulation of industry in Europe*", is a cluster consisting of two distinct critical uncertainties:

- Political influence of airlines
- Market openness/degree of globalization

These two factors not only significantly influence the relative competitive situation of European network carriers, but also the airline industry as a whole.

# **FIGURE 4.18:** FUTURE SCENARIOS FOR THE EUROPEAN AIRLINE INDUSTRY

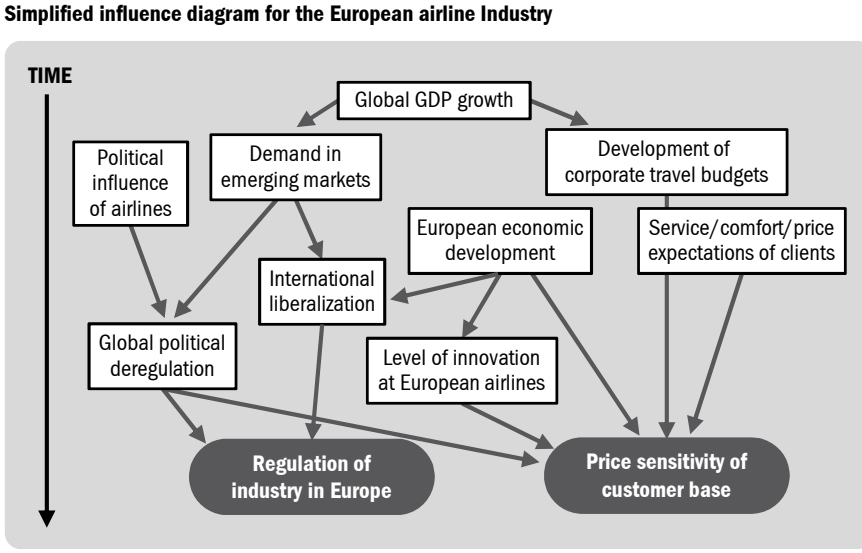



Having identified these two scenario dimensions, we continued to apply the scenario matrix to further develop the scenarios.

## 4.4.3 THE SCENARIO MATRIX

Based on the results obtained from the impact/uncertainty grid, we developed four industry scenarios by factoring in a more positive and a more negative development – positive and negative from the perspective of companies in the network carrier segment of the industry. In terms of the "degree of regulation of the industry in Europe", the positive development is "protectionist regulation of the industry in Europe". The negative development is "open regulation of the industry in Europe". In terms of the "price sensitivity of the customer base", the positive development is

# **FIGURE 4.19:** SIMPLIFIED INFLUENCE DIAGRAM FOR THE EUROPEAN AIRLINE INDUSTRY




"decreasing price sensitivity of the customer base" and the negative development is "increasing price sensitivity of the customer base". Having done this, we gave each scenario a concise name that is easy to remember. The different names symbolize the various developments within the scenario. For example, "Europe under siege" tells the story of European network carriers having to deal with very open regulation of their industry while at the same time seeing its customer base become less and less price-sensitive. Due to open regulation, their home market would thus come under attack from airlines based outside Europe, whereas the market as a whole would benefit from consumers' willingness to pay more for flights (Figure 4.18).

In the next step, we created the influence diagram displaying the developments that would have to take place by 2017 for the key uncertainties to develop

in one way or another. Developments included in the influence diagram were for example the "level of innovation at European airlines" and the "service/comfort/price expectations of clients" (Figure 4.19). Authenticity and consistency across the various developments was ensured. Based on these consistent developments, the scenarios were then described in detail in continuous prose.

The final step involves producing a fact sheet for each of the scenarios. The fact sheet contains relevant numbers, key indicators and a short description of the scenario.

The final outcome of applying the scenario matrix tool to the European airline industry was a set of four different but detailed industry scenarios for the period through 2017, plus a fact sheet for each scenario. The four scenarios and the corresponding fact sheets are reproduced below.

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## SCENARIO 1: NETWORK FORTRESS

*September 8, 2017 – European network carrier stocks on five-year high*

*European network carriers announced record profits in the latest reporting period. According to industry experts, this development is being driven mainly by rising demand for business and first-class tickets on routes to Asia and South America. Intra-European routes too are increasingly contributing to carriers' performance. Since 2014, the low-cost carriers that used to attract so many plaudits have lost much of their market share to network carriers. Following the stabilized Eurozone economy, business customers in particular focused on convenience and quality rather than price when booking flights.*

*Experts see the successful restructuring of European network carriers and favorable economic developments as the main factors behind this development. The period of stability that followed the European currency crisis in 2011/2012 increased global demand for air travel. After the near bankruptcy of Greece in 2012 and growing fears of financial distress in economies such as Spain and Italy, the G20 agreed to a raft of strict global financial market regulations. These*

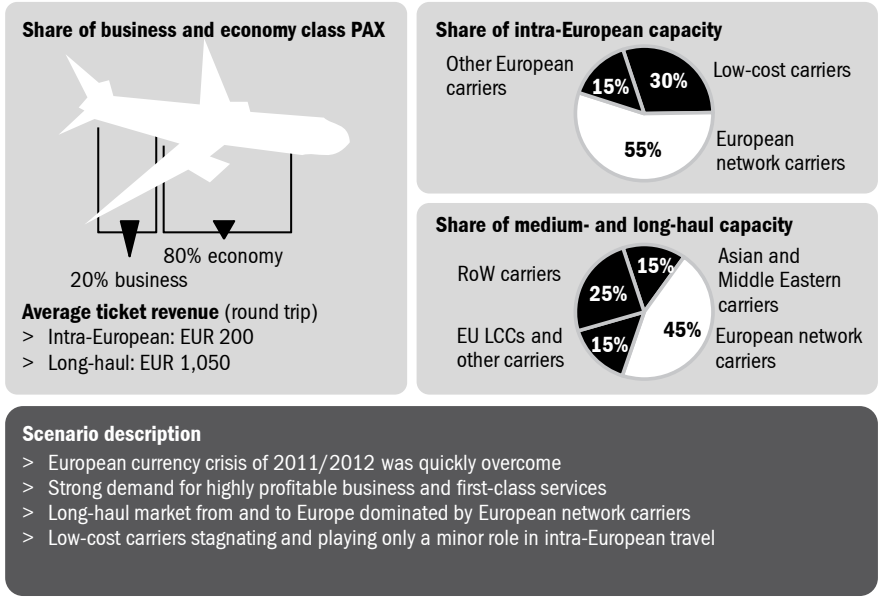
*regulations stabilized the sector and laid the foundations for a global economic recovery. Starting in 2014, Europe as a whole, and especially countries such as France, Germany and the United Kingdom, were able to return to positive average GDP growth rates of 2%. This growth was driven by different industry segments, with the renewable energy sector playing a particularly important role. Early investment in this new technology paid off as Germany in particular found itself well equipped to satisfy increasing global demand for green energy. Apart from Europe itself, this demand mainly originated in Asia and South America, the global boom regions, which delivered constant growth rates close to 10%.*

*In addition, the European currency crisis that challenged many airlines until the end of 2012 led to a number of largely unanticipated positive long-term effects for network carriers. Dwindling revenues and profits in the sector forced the launch of restructuring programs to reduce the cost base and ensure profitability. By renegotiating wage agreements and focusing more strongly on efficiency improvement, operational excellence and innovative products and pricing, many airlines succeeded in substantially reducing their cost base without detracting from service quality. After the economic turmoil, this paid dividends as European network carriers were able to offer superior quality and service compared to their low-cost rivals, and that at competitive prices.*

*Having been slashed during the European currency crisis, corporate travel budgets increased again after 2013. Growing demand for business travel thus fueled strong demand for the highly profitable business and first-class services run by European network carriers. Clients increasingly demanded high quality on their travels and were less willing to sacrifice convenience for price. This gave incumbent European network carriers an edge in intra-European competition compared to low-cost carriers, which saw their market shares decline as of 2014.*

*At the same time, the long-haul market for air travel to and from Europe is likewise dominated by European network carriers. Fears that Asian and Middle Eastern carriers would dominate the global market, prevalent among the managers of European airlines in the early years of the decade, proved to be unfounded. Restructuring efforts enabled European network carriers not only to reduce their*

# **FIGURE 4.20:** SCENARIO FACT SHEET: NETWORK FORTRESS




*cost base, but also to invest more cash in improved equipment and service offerings on long-haul flights. In 2016, two of the four airlines that received five-star ratings from Skytrax were European. This strong position further enhanced the positive perception of customers, who appreciate the new service level, especially in business and first-class seats. Despite heavy investment in new aircraft and service features, Asian and Middle Eastern airlines were unable to continue their ambitious growth plans, and they did not manage to significantly expand within the European market. Today, these companies play only a minor role in the long-haul market to and from Europe, with a combined market share of 15%.*

*Apart from the superior service and better products offered by European network carriers, this positive development was also made possible by strict regulation of the airline industry in Europe. In 2013, the European Union announced*

*a revision of the "Agenda for Freedom" that was signed in 2009 and supported greater international liberalization of the airline industry. The "European Aviation Act" includes new regulations on traffic rights and airport slot allocation in Europe that strongly support European carriers and have prevented the foreign ownership of European airlines. Asian and Middle Eastern airlines therefore had to focus on other markets such as intra-Asian routes or connections to the Americas.*

*Political analysts saw this step by the European Commission as the logical continuation of many previous political steps that had increased protectionism in Europe. Growing concern about Asian dominance of the world economy moved many politicians to try to protect home companies from overseas competition, particularly by focusing on ownership rights in order to prevent the loss of intellectual property.*

*This combination of increased protectionism on the European market, strong demand for high-quality service offerings and steady global economic growth, together with European network carriers' solid and competitive cost base has lifted the stocks of European aviation companies to record highs.*

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## SCENARIO 2: EUROPE UNDER SIEGE

*September 8, 2017 – Business travelers choose New World Alliance*

*The "New World Alliance" continues its unprecedented success story and intends to prolong its ambitious growth plan into the fourth year, having launched it in 2014. "Our goal is to maintain double-digit growth in terms of passenger numbers on our routes connecting Asia and Europe," the alliance's CEO says. Established network carriers in Europe are coming under enormous pressure as a result. Despite their recent accomplishments on intra-European routes, where they have been able to stifle the growth of low-cost carriers, European network carriers are yet to find a strategy that will let them compete on the long-haul market.*

*The dominance of the alliance on long-haul flights is rooted in the liberalization of the European airline industry coupled with the global economic power of Asia and the Middle East, which are home to most of New World's member airlines. These countries emerged from the global financial crisis of 2008/2009 as well as the European currency crisis of 2011/2012 as the world's fastest-growing regions and sparking off the development toward an "Asian century", which many Western experts had predicted even before the global crisis. However, despite strong growth in Asia and the Middle East, Europe and the US too were able to return to modest growth rates after the crisis, thanks to a combination of economic reforms and exports to Asia.*

*Business travel grew strongly due to the positive global economic development. Customers increasingly focused on premium services as travel budgets, which had crumbled drastically during the crisis, were gradually raised again. The founders of New World exploited this trend to establish "the world's five-star alliance" in 2015. By focusing sharply on superior service for the growing business traveler segment, the alliance –consisting of four Middle Eastern and Asian airlines – quickly gained market share by connecting Europe to the centers of global economic growth.*

*Having originally focused on hubs in Dubai, Singapore and Hong Kong, New World also beefed up its access to the European market in late 2014. By partnering with a large European airline, the alliance was able to further expedite its growth. Member airlines were able to safeguard their access to the attractive European market while also fully benefiting from the liberalization of the European airline industry that started in 2014. The extended open skies agreements between ASEAN, Middle Eastern countries, China and the EU was celebrated by politicians as a sign of good economic and political relations between these regions. It not only granted traffic rights to Asian and Middle Eastern airlines, but also enabled direct ownership of European airlines by foreign investors.*

*After this agreement was ratified, the European partner airline was acquired by one of the Asian New World members, thereby securing a central European hub for the alliance's network. The resultant new slots at other European airports*

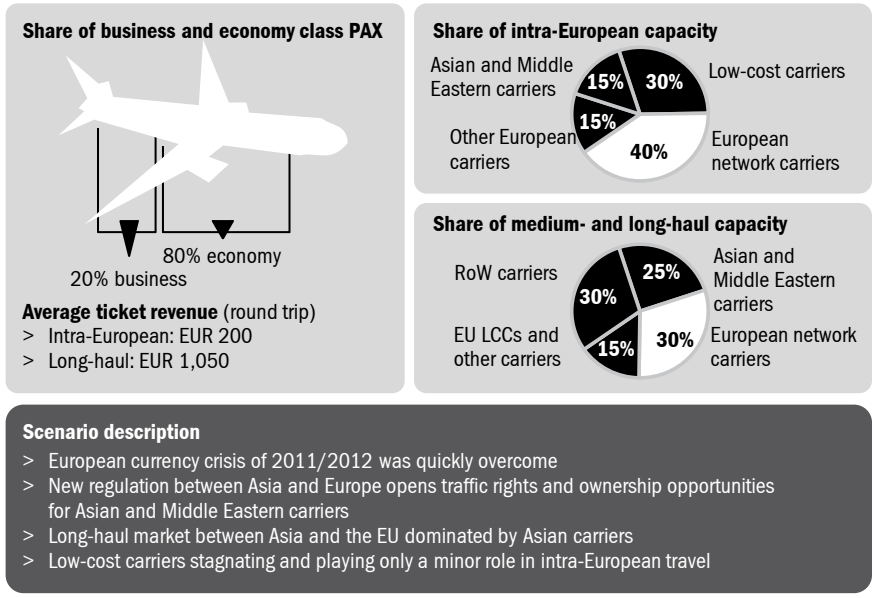
*were used to expand the alliance's route system within Europe thanks to the newly formed business-class-only brand New World Airlines. This created the basis for the current success of the alliance, which many experts expect to be sustainable. As one industry analyst puts it: "Other established European network carriers can hardly compete with the alliance's new fleet, its superior service offerings and its convenient connections within Europe."*

*Despite this fierce pressure from New World, established European network carriers still maintain a strong competitive position on intra-European routes. Business clients appreciate the quality of their offerings compared to low-cost competition and are willing to pay for this extra service. While many companies urged their employees to fly with low-cost airlines during the crisis, these clients have since returned to the business class service provided by European network carriers. The latter are also in a position to offer lower economy-class fares that have attracted many former low-cost customers. This was made possible by successful restructuring programs during and after the financial crisis that significantly reduced the cost base of European network carriers.*

*By contrast, low-cost carriers have not been able to maintain the pattern of growth seen in the first decade of the new millennium. They operate in the market segment that serves price-sensitive private customers, where experts expect no further growth in the coming years. The growth rates and market penetration of low-cost carriers peaked in 2013. As of 2014, however, they began to lose market share as customers were no longer willing to accept the poor service provided by budget airlines. In addition, consumers became increasingly aware of the total cost of flying low-cost and were less impressed by the heavily advertised "headline fares". When network carriers lowered their fares in economy class, they were perceived to be a genuine alternative to budget airlines. A recent consumer survey, for example, finds that the additional service these airlines offer clearly outweighs the slight price premium they charge over low-cost carriers.*

*Future challenges to indigenous network carriers' intra-European business could, however, be presented by New World. Many experts believe that the successful launch of this European business-class-only brand could significantly increase*

# **FIGURE 4.21:** SCENARIO FACT SHEET: EUROPE UNDER SIEGE




*competition in the highly profitable premium segment while eroding European network carriers' market share.*

*New World dominates the long-haul market from and to the new boom regions in Asia and the Middle East and is stepping up the pressure on established carriers in their former home markets. Accordingly, European carriers must respond quickly before additional acquisitions or partnership agreements by New World further add to its market power in Europe.*

## SCENARIO 3: THE CHAMPIONS' DECLINE

*September 8, 2017 – European network carriers struggle for survival*

*Many European network carriers are on the brink of bankruptcy. "Fierce competition from Asian competitors, stagnating economic growth in Europe and declining market shares in what used to be highly profitable business segments have substantially reduced European network carriers' cashflow and profits over the past five years," one industry analyst says. By contrast, low-cost airlines are reporting record sales. New routes and expansion to include long-haul destinations are enabling them to continually gain market share in both the business and leisure segments.*

*All airlines in Europe still face an extremely difficult macroeconomic environment. Contrary to economists' predictions in 2012, GDP growth has not exceeded 0.3% on average over the past five years. In some countries, such as Spain, economic performance has actually declined over the past three years. The European currency crisis of 2011/2012, which seemed to be over in 2013, persisted across Europe. Financial markets became increasingly nervous, a tendency amplified by rumors that even countries such as the US could default on their debt. Rising private and public debt levels and a lack of decisive political reforms to counteract the crisis have left European economies saddled with high unemployment and heavy indebtedness. The US too slipped into a deep recession in 2013. Company bailouts and implementation of the healthcare reform only added to the mountain of debt, leading to draconian tax increases and putting the brakes on consumption.*

*Adverse economic developments have put severe pressure on corporations to cut costs. This is reflected in shrinking travel budgets and a lower overall travel volume. Business trips have been reduced to a minimum. If managers travel at all, they travel low-cost. This observation lines up with the findings of a recent consumer survey, which identified a shift in the mindset of both business and leisure travelers. Today, price is by far the most important purchase criteria for both target groups. Low-cost airlines are making effective use of this development and have increased their share of the European market to 45%.*

*European network carriers too are trying to accommodate customers' increasing price sensitivity. Many of the intra-European routes that used to be controlled by European network carriers are now serviced by newly established low-cost subsidiaries. Yet despite such moves, network carriers are still unable to match the prices of their low-cost competitors due to their cost structures. In spite of resolute attempts to restructure, the strong influence of unions has prevented cuts in personnel expenditures and rendered structural adjustments impossible. Unit costs thus remain high in both established business lines and at the new low-cost subsidiaries.*

*Although the current economic situation in Europe is bleak, global GDP has still grown by 4.6% p.a., as recently announced by IMF. This growth is being driven by Asian economies. Even with lower demand from Europe and the US, China has achieved a constant double-digit growth rate, mainly based on exports to other Asian countries and a stable domestic market. This impressive growth is not limited to China, however. Economies such as Malaysia, Singapore, Vietnam and especially Indonesia are adding average growth rates of around 8% p.a. to this positive development. As European and American companies were no longer able to grow significantly in their traditional Western home markets, many increased their investments in Asia. Thanks to this heavy foreign investment and to their own rich domestic sources of raw materials, China and the ASEAN countries (Indonesia, Malaysia, the Philippines, Singapore, Thailand, Brunei, Burma, Cambodia, Laos, Vietnam) now dominate the world economy, forming a market of 1.7 billion people. That is almost twice the size of the European Union and NAFTA combined. Experts predict that the ASEAN region and China will remain the dominant and most vibrant economic zone for the decades to come.*

*The dominance of the emerged Asian economies is reflected in today's aviation market. Compared to European network carriers, Asian airlines are flourishing. Positive market development in Asia has enabled these companies to grow consistently and to increase investment in their service and fleet. On long-haul flights to and from Europe, they have significantly expanded their offerings, increasing their share of the European long-haul market to almost 30% by attracting former customers of European network carriers.*

*This development began in 2013. Backed by a steady stream of revenue from their home markets, Asian and Middle Eastern airlines lowered their prices for routes to and from Europe. Happy to gain access to the award-winning service of these airlines for comparatively low fares, customers turned their back on European network carriers. The latter responded by calling for tighter market regulation in order to defend their position in Europe.*

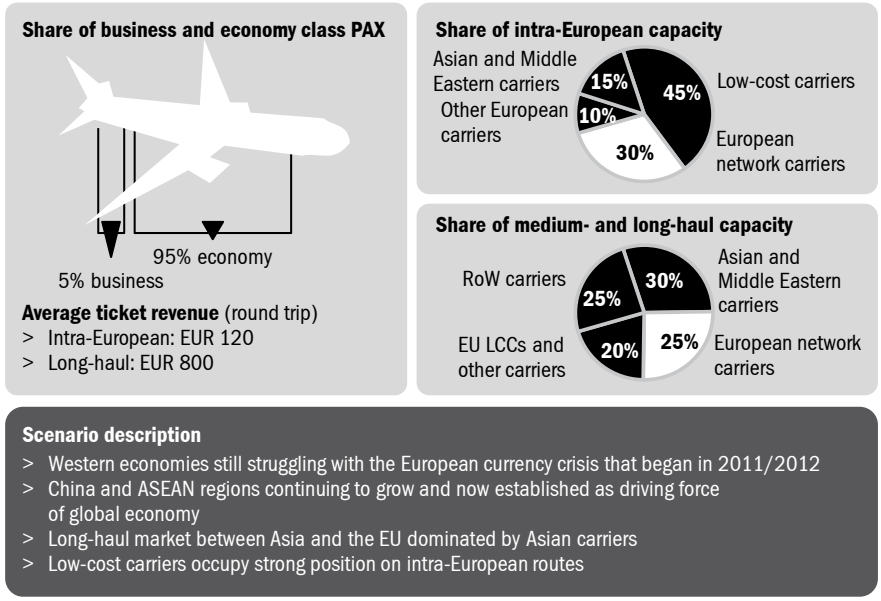
*However, the opposite happened. Due to Western economies' heavy reliance on Asian growth regions, the European Commission passed extended open skies agreements between the EU and both China and the ASEAN countries. By early 2015, European governments could no longer ignore Asian governments' call for liberalization as threats of protectionist tariffs for European exports to China steadily increased the pressure on the Commission. The agreement granted full European traffic and ownership rights to companies based in China or the ASEAN countries.*

*The first Asian carrier bought a European hybrid airline as soon as the open skies agreement took effect. This enabled the company to further accelerate its growth strategy in Europe.*

*Competitive pressure from Asian airlines is flanked – and exacerbated – by low-cost carriers that have now launched their own long-haul operations. A consortium of four European and Asian low-cost carriers founded the new "Global X Alliance" and introduced flights connecting European and Asian capitals in 2014. This move turned out to be the right step at the right time, as private customers in particular have since been using this service to treat themselves to low-cost holidays in Asia. "The growth rates have even surprised us," admits the CEO of one European low-cost carrier. "It reminds me of the days when we started short-haul flights in Europe."*

*Devoid of any effective means to counteract the pressure from low-cost airlines and competition from Asia and the Middle East, European network carriers are expected to be the next in line asking governments to bail them out.*

# FIGURE 4.22: SCENARIO FACT SHEET: THE CHAMPIONS' DECLINE




## SCENARIO 4: NEW HORIZONS

*September 8, 2017 – Low-cost airline launches frequent flyer and corporate program "Fly and Save More"*

*The launch of the frequent flyer and corporate program "Fly and Save More" marked the first low-cost carrier's response to intensified competition for business travelers on intra-European routes. Although their share of this segment is already sizeable, low-cost carriers are aiming to expand their revenues to further increase the pressure on network carriers and erode potential competitive advantages on the part of the latter. Network carriers, though extremely well positioned on the long-haul market, still have problems competing with cheaper rivals within Europe.*

*Low-cost airlines, once dismissed by their incumbent competitors, have turned out to be the most popular alternative for business travelers on intra-European flights. With Europe still struggling in the aftermath of the European currency crisis of 2011/2012, corporate travel budgets have been cut drastically. Bailouts for corporations and, in some cases, for governments have substantially increased the level of debt in all Western economies. The tax hikes introduced to reduce this debt have in turn slowed economic growth, which, as a result, has never risen above 1% over the past five years.*

*These developments drove business travelers to opt for economy instead of business class on long-haul flights and low-cost instead of network carriers on short-haul flights. Leisure travelers too have become much more sensitive to price. Now that they have less disposable income due to higher unemployment and tax rates, travelers focus on cheap fares and are less concerned about additional service offerings provided by the airlines.*

*In this market environment, low-cost carriers have broadened their focus to include corporate travelers and, in particular, frequent flyers. The first low-cost frequent flyer and corporate program was launched to further increase market share in this highly profitable segment. By contrast, network carriers are struggling with declining market shares as they cannot compete with the low-cost airlines on price. Despite moderate restructuring successes, their unit costs are still comparatively high as they have been unable to reduce personnel costs in particular. "In an era of high unemployment and decreasing real wages, it is our duty to fight for our colleagues. High-quality work deserves commensurate pay," explains one European network carrier union representative.*

*While low-cost carriers dominate the intra-European market, network carriers have at least been able to grow in the long-haul market. This has also increased the utilization of feeder connections to and from hubs. Demand for long-haul flights connecting Europe, the US, the ASEAN region and China has been growing strongly in recent years, making these routes the most attractive ones in the industry. The rise of Asia to become the global center of economic growth has continued throughout the decade, making a local presence a necessity for Western*

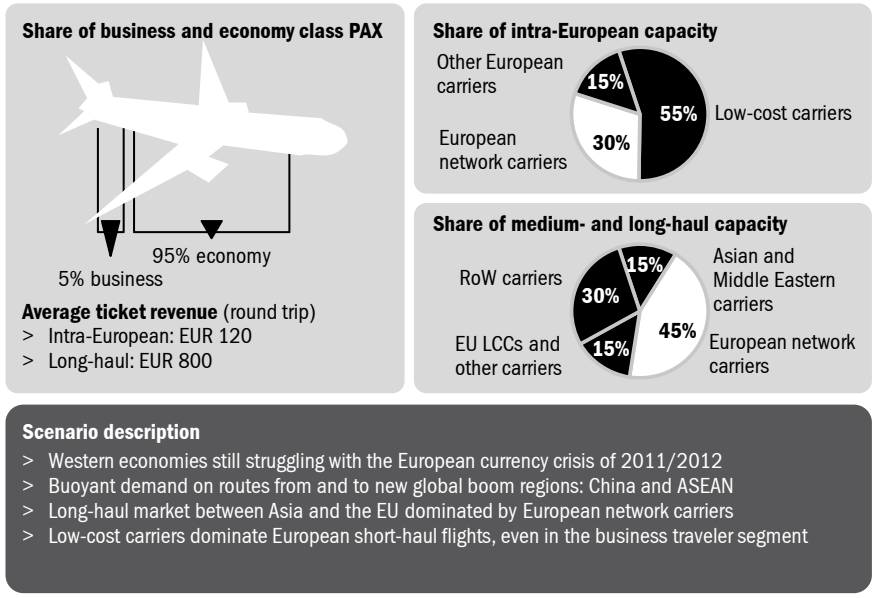
*businesses. Unlike what many market observers expected back in 2012, European network carriers have been able to capture a large share of growth on routes to Asia. This has given them a strong position relative to their Asian competitors.*

*Strict new regulations in Europe and a growing sense of solidarity with home companies among customers paved the way to this development. In 2013, the European Commission ratified strict regulations for the European airline industry. With economic growth stagnating, protectionism was seen as possibly the best way to shield European companies from cheaper competitors around the world. As part of a raft of protectionist measures, the Commission enacted the European Aviation Act, which severely limited traffic rights for companies from outside the EU and banned minority ownership by foreign investors. Today, this step has proved to be successful, at least for European network carriers. With a market share of 45%, they occupy a strong position on the long-haul market.*

*Another factor determining this strong position in the long-haul market is the fact that many European customers simply prefer European airlines to Asian companies. A recent consumer study found that this purchasing behavior is mainly attributable to a growing sense of obligation to support European companies, thereby strengthening the home economy and safeguarding growth and jobs in Europe. "Growing fears of Asian dominance in the world economy and resultant job losses – which many have experienced at first hand – has nurtured a 'buy-European' attitude among many consumers," the author of the study explains.*

*By consequence, Asian and Middle Eastern airlines have been unable to extend their growth to the European market. Instead, they have focused investment on other markets such as the Americas and intra-Asian routes. This successful strategy has generated large profits and cashflows for the airlines and strengthened their ambition to continue to grow on a global basis. "We want to be the world's largest and most profitable airline," one Asian airline CEO said in Singapore. "We can be cheaper and offer better service than our European competitors. Liberalizing the market in Europe would thus be beneficial to customers," she adds. Experts expect growing pressure from Asian governments for a revision of the European Aviation Act in order to enable fair competition in the global aviation market.*

# **FIGURE 4.23:** SCENARIO FACT SHEET: NEW HORIZONS




*Faced with strong competition from low-cost airlines in Europe, network carriers are earning their money on the market for long-haul flights to and from the boom regions of Asia and the Middle East. However, their favorable market position is largely thanks to the protective legislation of European governments. Should Asian pressure for deregulation increase, market conditions may change drastically. European network carriers are well advised to prepare for this eventuality.*

Applying the scenario matrix enabled us to generate the four concise scenarios for the airline industry in 2017 that are outlined above. These scenarios lay the foundation on which strategic options for network carriers can be derived in the next step of our approach to scenario-based strategic planning. This is the subject of the next section.

# 4.5 INTRODUCING TOOLS FIVE AND SIX: THE STRATEGY MANUAL AND THE MONITORING COCKPIT

## 4.5.1 INTRODUCTION

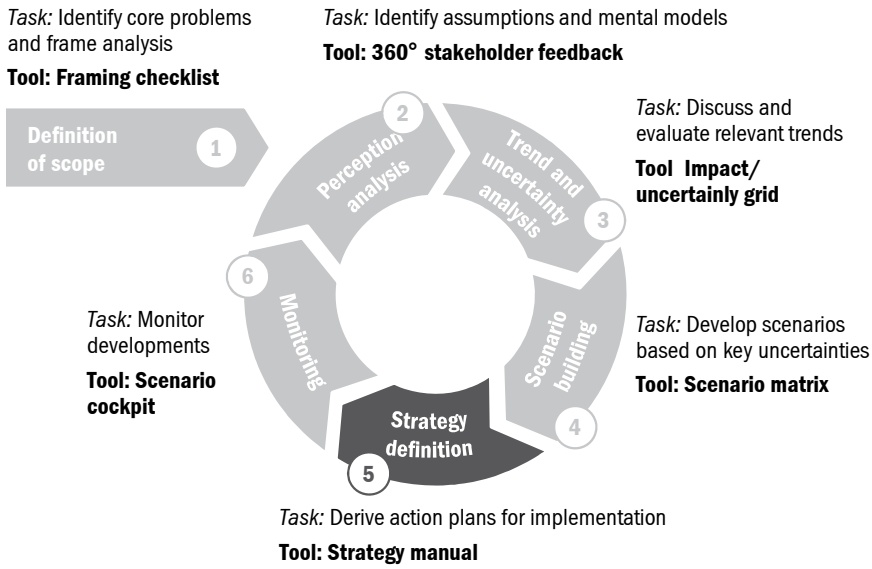
The following section introduces the last two tools in our scenario-based approach to strategic planning: the strategy manual and the monitoring cockpit. We use our example from the European airline industry to illustrate how these tools can be applied.

## 4.5.2 THE STRATEGY MANUAL

In this section, we describe the fifth stage of our six-step scenario-based approach to strategic planning: strategy definition. Having completed the scenario-building stage (stage four) using the scenario matrix, we now move on to actually drawing up a strategy. This strategy is based on four scenarios and is created with the help of the strategy manual (figure 4.24). The overall goal of this stage is to generate a core strategy for a "strategy corridor" leading to the best possible scenario outcome. Of particular interest is the actual process of developing a core strategy for the strategy corridor and specific scenario options. Before turning to the strategy manual itself, we examine what the process of strategy development actually consists of, what the basic idea behind a strategy corridor is, and how practitioners can manage four different scenarios with a single core strategy.

Strategy manuals can be used for a number of different purposes, so it is important to first identify what precise application we have in mind. Here, we recommend going back to the framing checklist introduced in the first step of our scenario-planning process, to remind all members of the scenario planning team what the purpose of the scenario-based strategic planning is. van der Heijden (2005) identifies four different applications for strategy manuals:

# **FIGURE 4.24:** THE SIX-STEP SCENARIO-BASED APPROACH TO STRATEGIC PLANNING




1. *Sensitivity assessment:* Testing a specific strategic decision against different scenarios.
2. *Strategy testing:* Testing an existing strategy's viability against different scenarios to identify which elements of the strategy are more relevant under which conditions.
3. *Selective scenario strategy development:* Selecting a specific scenario and aligning all the strategic elements with this scenario.
4. *Complete scenario strategy development:* Developing a unique strategy for all scenarios, whereby common elements are integrated into a single strategy that is subsequently implemented.

The first application – sensitivity assessment – is the most straightforward. In this situation, members of the scenario planning team already have a specific

strategic decision in mind that they want to test against different scenarios. In our experience, using scenarios as a tool to evaluate a specific strategic decision is often only the starting point, however. Frequently it results in the strategic decision being adapted in some way to the new insights gained from the scenario exercise.

The second application – strategy testing – is slightly more complex. It is most often used to determine under which conditions an existing strategy is adequate. As before, the starting point for this approach is to take an existing strategy and fine-tune it for different scenarios. Scenario planning teams adopting this approach soon realize that the scenarios they have developed offer them new possibilities as well as unanticipated challenges. Often they find that their strategy needs to be adapted accordingly.

The third application – selective scenario strategy development – has one major shortcoming: Scenario planning teams need to select the scenario that they consider most likely. This means attaching a probability to each of the scenarios. This difficulty can be overcome by developing a core strategy for a strategy corridor, as explained further below. In this case, the different scenarios no longer require probabilities as the company will automatically strive to achieve the best possible strategic result.

The final application – complete scenario strategy development – is very thorough. However, it is also somewhat impractical as developing a strategy for each scenario requires excessive resources. Moreover, implementing a strategy that covers aspects of all scenarios is cumbersome compared to focusing on a few crucial, high-impact elements. What planners often forget is that they have, in fact, already identified these crucial elements: the two key uncertainties driven by high-impact influence factors (see stage four). This final application comes closest to our goal. The overall aim of our scenario planning process is an adapted form of complete scenario strategy development with the focus on a single core strategy and a limited number of strategic options.

Our six-step approach usually only makes sense if the aim is to develop a complete strategy manual. Using a strategy manual for shorter, more condensed

forms of strategic planning, such as sensitivity assessment or strategy testing, would require excessive resources. Companies can carry out these activities more efficiently with the help of other strategy tools.

Deriving a robust strategy from four possible future scenarios is a challenging task, and one that requires a structured process. This is the most crucial – and most difficult – step in any scenario-based strategic planning activity. One of the reasons why scenario planning has never been fully accepted as a strategic planning tool is that, although it can be used to develop robust future scenarios, it does not provide managers with specific strategies that they can then implement to overcome the uncertainty inherent in any scenario-planning activity (De Wit/Meyer, 2010). Companies and strategic planners find it extremely difficult to accept multiple scenarios and develop a strategy based on different possible futures. This is especially true if probabilities are not attached to the scenarios.

The reason that we do not attach probabilities to the scenarios in our six-step approach is that we specifically want to highlight different possible developments rather than making forecasts. We believe that scenarios should stimulate creative thinking by establishing the boundaries of possible future developments. Scenario planning helps us reflect on and anticipate the uncertainties posed by future developments. It does not predict the future (Wilson, 2006).

By establishing four scenarios, the members of the scenario planning team tacitly accept that the future is uncertain. They can now focus on making appropriate strategic decisions rather than trying to guess what the future holds.

As mentioned above, creating an individual strategy for each of the four scenarios would require excessive resources. Indeed, developing a strategy that is relevant for most scenarios is unnecessary as in practice the company only wants to achieve the most positive scenario. The difference between our approach and traditional strategic planning is that we do not plan for a single strategic direction but for a strategy corridor that guides the company toward the most positive scenario (see figure 4.25).

What companies need is a core strategy that they can implement regardless of which influence factor dominates in the four scenarios. How strong the different elements in the core strategy are depends on how the company's environment develops, in other words which of the two scenario axes dominates future developments and thus which of the four scenarios is ultimately realized. The core strategy should therefore focus on the influence factors that form the two scenario axes. These two factors represent the cornerstones of the core strategy and the strategy corridor that the company strives toward. In addition to the core strategy, companies can also develop a small number of scenario-specific strategy options that are only to be implemented under certain conditions.

To summarize, the overall goal of the strategy manual is to develop a core strategy for the strategy corridor by defining focal points for the different scenario environments. These focal points, which form the boundaries of the scenarios, are those elements of the core strategy that must be more rigorously implemented than the others, depending on which scenario is realized. In addition, the strategy manual can be used to define certain scenario-specific strategy options.

## 4.5.3 DESCRIPTION OF THE STRATEGY MANUAL

The strategy manual presented here is based on traditional strategic planning processes (e.g. Ansoff/Nakamura, 2007; Mintzberg, 1994). We have applied it successfully as a tool in numerous scenario-based strategic planning projects. Companies can use it in their scenario planning to identify clear strategic actions for implementation. It is complemented by a strategy corridor that helps align these strategic actions with key uncertainties.

### THE STRATEGY CORRIDOR

The strategy manual rests on the belief that companies always strive toward the most positive scenario. This scenario is usually located in the upper right-hand corner of the scenario matrix. Of course, in reality the company is not always able to move toward this scenario, but it remains the overall strategic goal toward which the company strives.

The first step is for the scenario planning team to agree that it wants to move toward the most positive scenario. Next, the team should analyze the factors influencing the development of the scenario in question. The two main factors are the two axes of the scenarios and their corresponding critical uncertainties. These two factors drive the development of the scenario and form the focus of the strategy corridor.

Starting with the first axis, the team members should ask themselves the following questions:

1. How can we benefit from a positive development along this axis?
2. How can we avoid or manage any negative development along this axis?

Once this is clear to the team, they can begin devising specific strategic actions aimed at maximizing positive development and minimizing negative development along the first axis. When they have done this, they should do the same for the second scenario axis. The two scenario axes together create the corridor that guides strategy development.

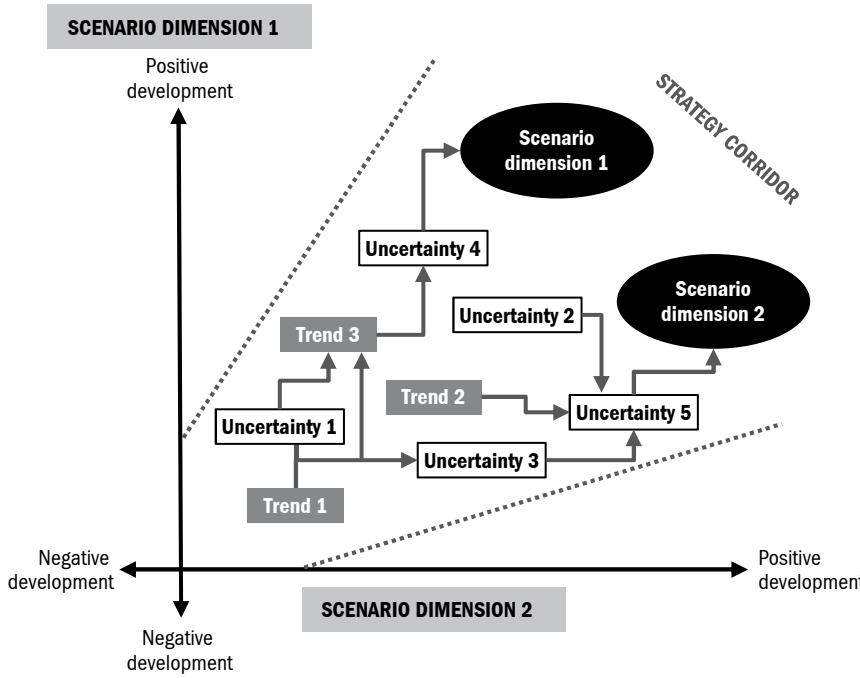
So far, the corridor contains only strategic actions focused on the two scenario axes. The team now needs to include the trends and other factors influencing the two axes. They can do this by using the influence diagram developed in step four of the scenario-based strategic planning process. Each factor and trend in the diagram should be transferred to the scenario matrix. This makes it clear which factors and trends drive the two axes.

Next, the team should analyze each trend and factor in detail, as they did for the two axes. Once again, they should ask themselves how they can benefit from the positive development of a trend or factor, and how they can best avoid or manage any negative development. As shown in figure 4.25, the trends and factors in the scenario matrix fill the strategy corridor and form the basis of the strategy manual.

## APPLICATION OF THE STRATEGY MANUAL

Having defined the strategy corridor, the next step is to examine each trend and uncertainty in detail. The two scenario dimensions form the boundaries of the

# FIGURE 4.25: THE STRATEGY CORRIDOR




strategy manual, in the sense that they are the core elements of the strategy manual. These two scenario dimensions are shaped and influenced by the cause and effect chain represented by the links between the various trends and uncertainties. The scenario planning team thus knows which trends and uncertainties need to develop in a positive direction for a specific scenario dimension to dominate future scenarios in a positive manner. In figure 4.25, for example, trend 1 must positively influence uncertainties 3 and 5 in order for scenario dimension 2 to develop positively.

Armed with this knowledge, the team can now determine the specific strategic actions that they need to take in order to benefit from trend 1. They can do this by quantifying the relationship between the various trends, uncertainties and key business drivers. The team can also determine from uncertainties 3 and 5 which

strategic actions they need to take in order to positively drive scenario dimension 2. They can then do the same for scenario dimension 1. By this means, they can develop a set of highly specific, easily managed strategic actions, which together form the core strategy.

In reality, it rarely happens that all the trends and uncertainties develop in a positive direction. The team should therefore develop, in addition to the core strategy, some scenario-specific strategic options. Again, the strategy corridor and scenario options can function as a basis for developing these strategic options. In our experience, most trends and uncertainties develop in a positive direction, with only one or two developing negatively. These one or two elements form the basis for developing the scenario-specific strategic options.

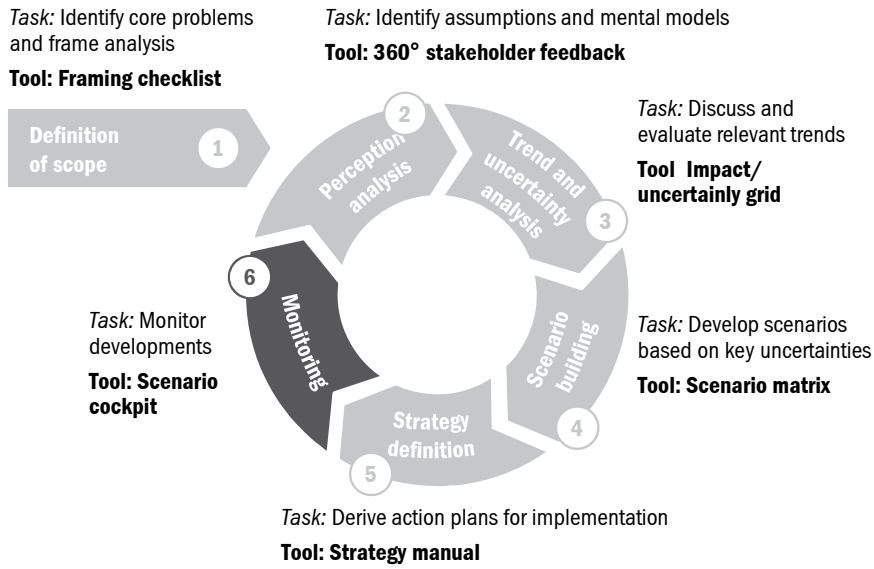
Figure 4.25 can also be used to illustrate this situation. The strategy corridor still points in a positive direction overall but it is now wider, incorporating a few trends and uncertainties that develop in a negative direction, namely trend 2 and uncertainties 3 and 5 (influencing scenario dimension 2 negatively). In this situation the company can still implement the initially envisioned core strategy but this core strategy must be supported by scenario-specific options that mitigate the negative threats posed by trend 2 and uncertainties 3 and 5. By incorporating these scenario-specific options, scenario dimension 2 remains positive overall.

In fact, the elements for which the company must develop scenario-specific options are the same as in a pure core strategy leading in a positive direction. However, the strategic actions focusing on the two scenario axes are implemented more strictly. How strictly depends on where the company is currently located along the scenario dimensions.

### 4.5.4 THE SCENARIO COCKPIT

In this section we describe the final stage of our six-step scenario-based approach to strategic planning: the monitoring stage. We show how a strategic controlling system indicating which strategic measures should be implemented can be set up

# **FIGURE 4.26:** THE SIX-STEP SCENARIO-BASED APPROACH TO STRATEGIC PLANNING




using the "scenario cockpit" tool (Figure 4.26). The overall goal of this stage is to identify which of the strategic options previously developed should be implemented and at what point in time. Of particular interest is the actual process of setting up a monitoring system to help track external developments. We also examine what elements this system should comprise. Before turning to the scenario cockpit itself, we examine what a strategic controlling process actually consists of, what the basic idea behind the tool is and how planners can monitor external developments.

Strategic controlling is important as it allows decision makers to determine which of the strategic options developed using the strategy manual should be implemented first and under what conditions. In an earlier stage of the process we developed specific strategic options to be implemented under certain conditions. Now

we need to look at how the external environment is actually developing and which scenario will actually come into being. The scenario cockpit helps us do this. Based on its results, we can implement the strategic actions developed earlier or adjust them as necessary.

It is important to note that simply developing scenarios and corresponding strategic actions is not sufficient in itself. The scenario-based strategic planning process must go further, implementing a formal controlling system that allows us to monitor external developments. Strategic controlling systems enable companies to react in a flexible manner to any external changes that occur in their environment. The information that these systems produce should be passed on to senior managers on a regular basis so that they can react to these developments and implement appropriate strategic actions. It is thus important not only to monitor external developments but to link them to the scenarios developed earlier on in the process, allowing managers to concentrate on specific strategic actions within the strategy corridor (Wulf/Stubner, 2012).

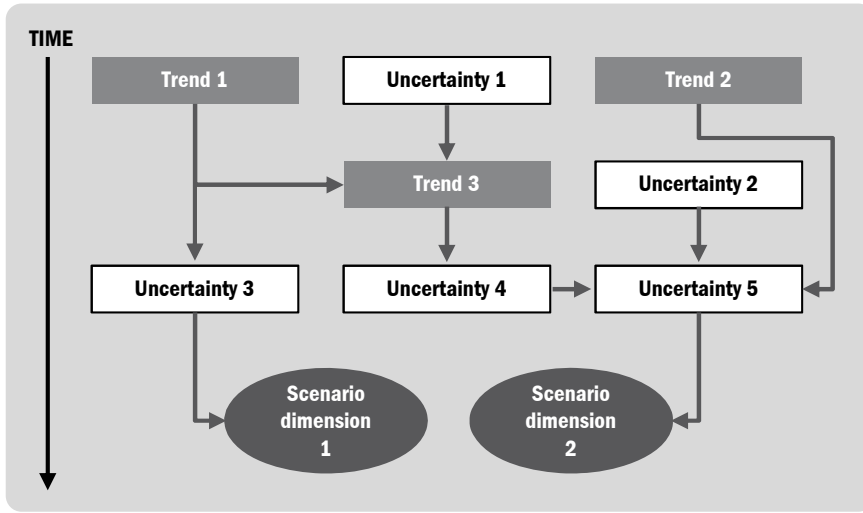
Essentially, the scenario cockpit is a strategic controlling system that monitors external developments. Most scenarios are of a qualitative nature, so adding quantifications where appropriate increases the plausibility of the scenarios and facilitates the monitoring of external developments. The scenario cockpit makes this possible and is thus an essential part of our approach to scenario-based strategic planning.

### 4.5.5 DESCRIPTION OF THE SCENARIO COCKPIT

The scenario cockpit described in this section is an extension of a strategic controlling concept first described by Wulf and Stubner (2012). It further draws on our own experience in scenario-based strategic planning projects.

The purpose of the scenario cockpit is to monitor external developments. It is an adaptable, easy to implement system. The first step is to identify indicators for external developments. The 360° stakeholder feedback may give some pointers

# FIGURE 4.27: INFLUENCE DIAGRAM




here, but a more effective way of finding indicators is to look at the influence diagram drawn up in the fourth stage of the scenario-planning process. This influence diagram is based on the results of the 360° stakeholder feedback and shows the interplay of factors needed for a certain scenario dimension to develop and lead to a specific scenario (Figure 4.27).

We therefore go back to the influence diagram and divide the influence factors into trends and critical uncertainties (see section 4.3.4). Having done this, we now determine if it is possible to attach a quantitative indicator – GDP growth, say – to each of the influence factors. This involves looking for proven actions and databases that can accurately measure developments in individual factors.

Finding quantitative indicators for trends is relatively straightforward as they have usually already been established by management research. They include OECD indicators and data from trend studies by consulting firms. Critical uncertainties are frequently more difficult to measure quantitatively. If no quantitative measures are available, qualitative measures may have to be used. Examples of such measures

# FIGURE 4.28: INDICATOR TABLE

| INFLUENCE FACTORS | INDICATORS |
|---|---|
| Trend 1 | German GDP growth |
| Trend 2 | Demographic age distribution |
| Trend 3 | Percentage of revenues spent on R&D |
| Uncertainty 1 | Customer satisfaction with new products |
| Uncertainty 2 | No. of articles on market liberalization |
| Uncertainty 3 | Customer demand in emerging markets |
| Uncertainty 4 | Reform initiatives debated in parliament |
| Uncertainty 5 | Corporate spending on video conferences |

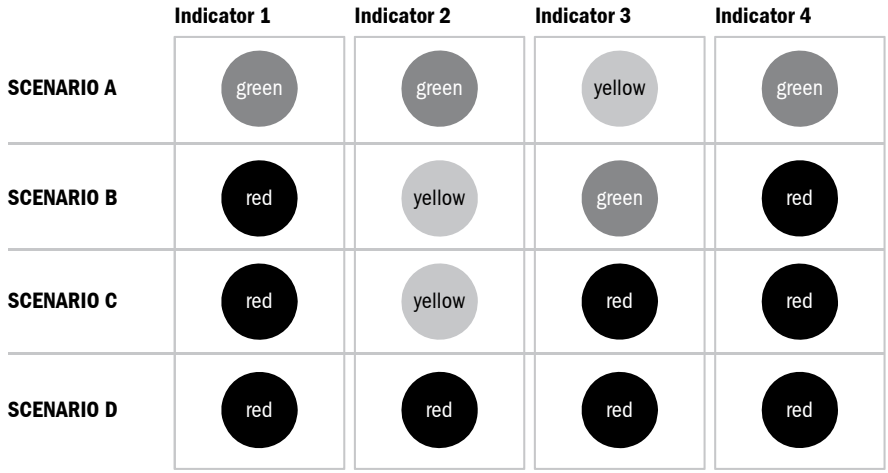
include interviews to see how customer expectations are changing and keyword searches on Google news to scan media stories.

Next, we list the influence factors and their corresponding indicators in a table (Figure 4.28). This helps us avoid using the same indicator to measure more than one influence factor, which might lead us to misinterpret developments.

The indicator table is also useful for defining the "monitoring corridor" – a value range for each indicator and scenario that allows us to see which scenario is developing. Drawing up the monitoring corridor involves defining the value range that an indicator must reach in order for a certain scenario to develop. Having defined these value ranges, we must then match them to each scenario, avoiding any overlaps.

The final step is to apply a traffic light system to the data. Here, we suggest using an Excel spreadsheet. The purpose of the traffic lights is to indicate the direction in which the external environment is moving. The different colors should be linked to a value range for each indicator, with green standing for an increase, yellow for an average value and red for a decrease. Indicators should be checked

# **FIGURE 4.29:** SCENARIO COCKPIT: TRAFFIC LIGHT SYSTEM




regularly and the colors of the traffic lights changed accordingly. Senior managers should discuss any changes and identify what lies behind them, deciding what strategic actions to take. Changes in traffic lights are easy to communicate via an e-mail alert system linked to the Excel spreadsheet (Figure 4.29).

## 4.5.6 EVALUATING THE STRATEGY MANUAL AND THE SCENARIO COCKPIT

The strategy manual is a quick, straightforward process for drawing up a core strategy supported by a small number of scenario-specific strategy options. Developing a strategy corridor and a core strategy increases flexibility as it allows planners to steer their company in the desired direction. Identifying common influence factors within the strategy corridor automatically points the planners toward strategic actions that they can then implement. At the same time, the strategy manual takes a holistic approach by covering all possible future developments with its specific strategies.

The strategy manual has a number of shortcomings; however, these are manageable. First, developing a core strategy and scenario-specific options for all possible elements is resource-intensive. Accordingly, companies should carefully identify which specific influence factors they lack a strategy for, and which they have already dealt with in their earlier planning activities. Second, no matter how effective the strategy manual, the future remains uncertain: Companies cannot plan for all possible future developments.

The scenario cockpit is a simple tool for monitoring external developments and identifying which of the strategic options developed earlier on in the scenario-based strategic planning process should be implemented. Using the scenario cockpit to track external developments offers a high degree of flexibility as the tool can be quickly customized to the planners' requirements. Indicators are provided by the 360° stakeholder feedback and influence diagram; they do not need to be developed from scratch. Moreover, the tool offers a holistic approach to monitoring external developments as all relevant trends and critical uncertainties are matched to qualitative or quantitative indicators. The scenario cockpit thus incorporates an automatic safety mechanism.

The scenario cockpit has certain shortcomings when applied in practice. First, matching trends and critical uncertainties to indicators can be a time-consuming task, especially in the case of qualitative indicators. Here, a carefully thought-through influence diagram reduces the amount of effort needed. Second, there is a danger that an indicator might be forgotten or neglected, leading to incomplete results or a misinterpretation of external developments. If this happens, the company could end up thinking that the world is moving in the direction of Scenario A when in fact it is moving in the direction of Scenario B. However, if the influence diagram has been developed correctly, the danger of forgetting to include an indicator in the scenario cockpit is small.

The outcome of the strategy manual and scenario cockpit is a core strategy consisting of no-regret actions that companies can implement in any scenario, plus a strategic monitoring system that allows senior managers to track external developments and implement the right strategic actions at an appropriate time. Moreover,

the strategy manual delivers a set of strategic options that can be implemented in highly specific scenario conditions. The scenario cockpit also allows senior managers to adjust the strategic initiatives developed earlier in the light of external developments.

## 4.6
## APPLYING FRAMEWORKS FIVE AND SIX: THE STRATEGY MANUAL AND THE SCENARIO COCKPIT IN THE EUROPEAN AIRLINE INDUSTRY

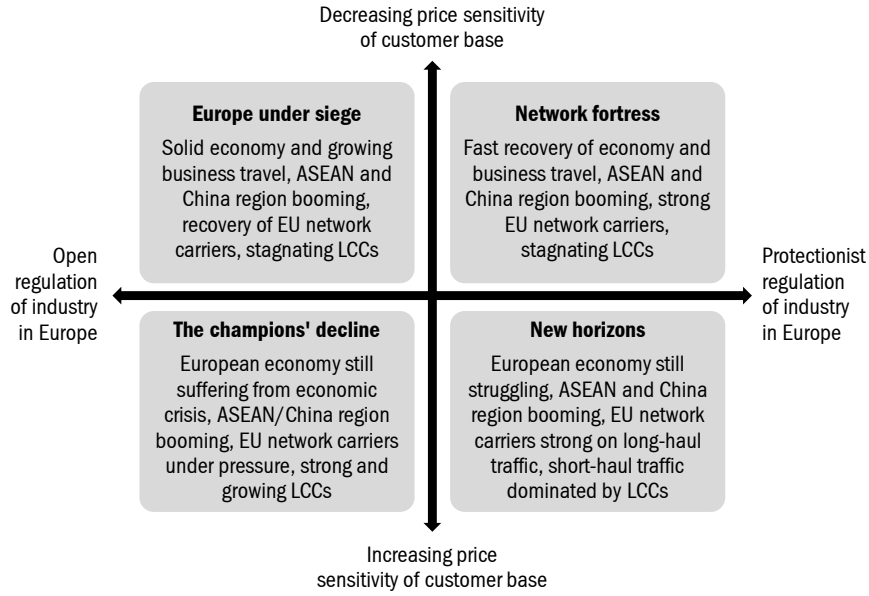
### 4.6.1
### THE STRATEGY MANUAL

We recently used the strategy manual as a tool in a study of the European airline industry from the perspective of network carriers, such as Lufthansa, Air France-KLM and British Airways. The strategic recommendations presented in this section were intended as practical first steps to be taken by network carriers in general; detailed strategy recommendations would require an analysis of the current situation of the specific company in question. As discussed in earlier sections, we identified two key uncertainties in the European airline industry: *degree of regulation of the industry in Europe* and *price sensitivity of the customer base*. These two uncertainties formed the scenario dimensions which led to the following four scenarios:

Looking at the four scenarios and the influence diagram, it becomes clear that European network carriers would like to create an environment in which their industry enjoys protectionist regulation (keeping foreign competitors out of the market) and a strong economic environment where customers are less price-sensitive than today.

The first step was to examine what strategic actions could influence the uncertainty of the *degree of regulation of the industry in Europe.* The answer is that European network carriers should monitor European regulators more closely, drawing attention to the economic and social significance of their industry. In

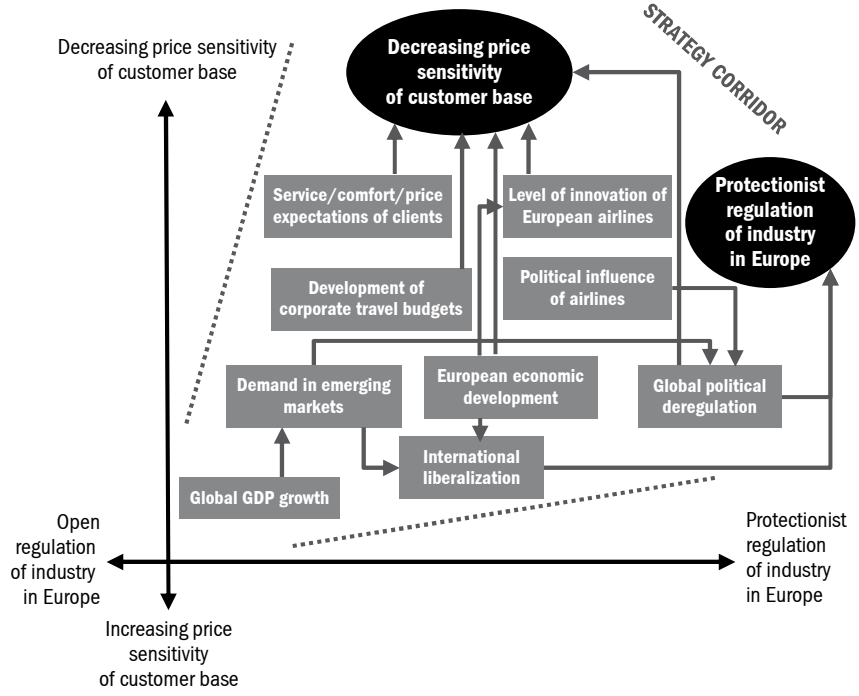
# **FIGURE 4.30:** SCENARIOS FOR THE EUROPEAN AIRLINE INDUSTRY




addition, they should make strategic moves that help protect their home markets whilst benefitting from trends such as the liberalization of international air travel. These strategic moves could include influencing regulators, allocating landing slots at airports and lobbying national and European bodies to reassess the opening up of markets to foreign airlines.

The second step was to determine what strategic actions would influence the uncertainty of the *price sensitivity of the customer base*. Here, European network carriers should pursue a strategy of investing in everything the customer sees, while saving costs and driving efficiency in back-office and support processes. Companies can manage both scenario axes by restructuring operations while simultaneously increasing service and quality levels to remain competitive and lobbying governing bodies to regulate markets in favor of European network carriers.

# **FIGURE 4.31:** STRATEGY CORRIDOR FOR THE EUROPEAN AIRLINE INDUSTRY




To shed further light on what drives the scenario axes and what strategic action is required, we then transferred the influence diagram to the strategy corridor. This revealed additional elements that the core strategy should contain (figure 4.31).

Next, we examined each trend and uncertainty in detail. This revealed that several of the factors that extend beyond the scenario axes are hard to influence by the network carriers – global GDP growth demand in emerging markets and European economic development, for instance. The carriers need to closely monitor these factors and take appropriate action depending on whether they develop in a positive or negative direction.

We also looked at factors that are likely to move in a negative rather than positive direction, such as European economic development. For these factors we developed scenario-specific strategy options. For instance, airlines can prepare themselves for weaker economic growth in Europe by increasing the flexibility of their seating arrangements – offering fewer business class seats and more seats in economy during an economic downturn.

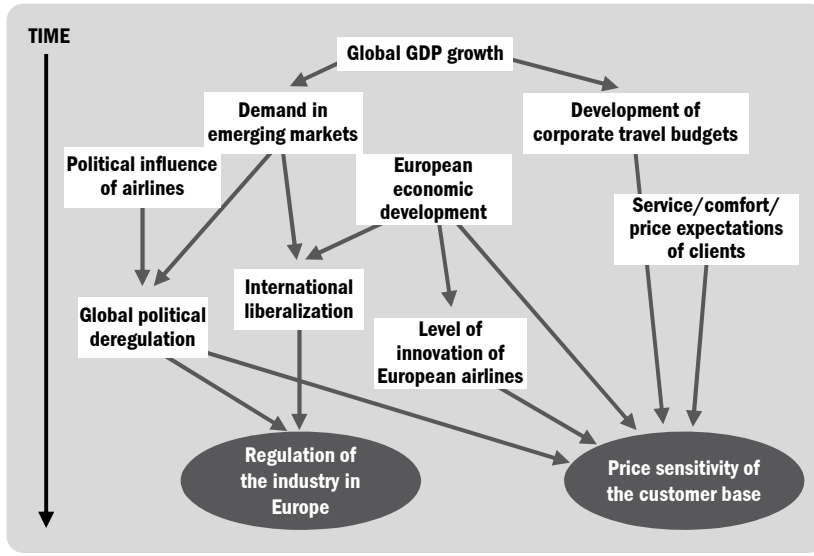
We shared our detailed strategic recommendations with experts in the airline industry, who confirmed our findings. The anticipated outcome of the strategy manual is a robust core strategy with specific focal points that can help European network carriers manage the challenges they face. In addition, the strategy manual provides scenario-specific options enabling them to cope with any sudden changes in the factors.

## 4.6.2 THE SCENARIO COCKPIT

Taking the results generated by the strategy manual, we now applied the scenario cockpit tool. The influence diagram developed for the European airline industry consists of nine influence factors driving the two afore-mentioned uncertainties *degree of regulation of the industry in Europe* and *price sensitivity of the customer base* (Figure 4.32).

We used the influence diagram as a basis for identifying which factors drive the scenarios and for finding indicators for the development of each scenario. We then looked for quantitative or qualitative indicators that could show the development of each factor (Figure 4.33). For influence factors such as *global GDP growth* and *European economic development*, this was easy: We used the GDP figures provided by the International Monetary Fund (for global GDP) and Eurostat (for Europe). For influence factors such as the *political influence of airlines,* finding appropriate indicators was more challenging. Here, we advise airlines to work closely with industry associations such as the International Air Transport Association (IATA) and the Association of European Airlines (AEA) – associations with close ties to regulators that are able to assess such factors.

# FIGURE 4.32: INFLUENCE DIAGRAM FOR THE EUROPEAN AIRLINE INDUSTRY




Having drawn up the indicator table, we then defined a value range for each indicator and scenario, allowing us to monitor which scenario actually developed. The scenario study was aimed at the whole industry rather than one specific company, so we defined value ranges for each indicator and scenario broadly. For the first influence factor *development of corporate travel budgets*, for instance, we took the percentage of demand for business versus economy class seats as an indicator. This gave us the indicator range shown in Figure 4.34.

We proceeded in a similar fashion for the remaining indicators. Finally, we transferred the value ranges for the indicators onto an Excel spreadsheet and applied the traffic lights system, to give decision makers in the airline industry a quick indication of which way the world is moving (Figure 4.35).

At the time of the project (summer 2011), the scenario cockpit indicated that the industry was heading in the direction of the scenarios "Network fortress" and

# **FIGURE 4.33:** INDICATOR TABLE FOR THE EUROPEAN AIRLINE INDUSTRY

| INFLUENCE FACTORS | INDICATORS |
|---|---|
| Development of corporate travel budgets | Percentage of demand for business versus economy class seats |
| Level of innovation of European airlines | Percentage of revenues spent on R&D |
| Global political deregulation | WTO statistics and tariff data |
| International liberalization | IATA data on airline market regulation |
| Global GDP growth | Global GDP data – IMF |
| Service/comfort/price expectations of clients | Customer surveys |
| European economic development | European GDP data – Eurostat |
| Demand in emerging markets | Internal booking data from emerging markets |
| Political influence of airlines | Political initiatives by airlines under parliamentary review |

Critical uncertainty | Trend

# **FIGURE 4.34:** INDICATOR RANGE FOR THE EUROPEAN AIRLINE INDUSTRY (EXAMPLE)

| SCENARIOS | PERCENTAGE OF DEMAND FOR BUSINESS VERSUS ECONOMY CLASS SEATS |
|---|---|
| **Network fortress** | 20% business vs. 80% economy |
| **New horizons** | 15% business vs. 85% economy |
| **Decline of champions** | 5% business vs. 95% economy |
| **Europe under siege** | 10% business vs. 90% economy |

## **FIGURE 4.35:** SCENARIO COCKPIT: TRAFFIC LIGHT SYSTEM FOR THE EUROPEAN AIRLINE INDUSTRY

| | DEVELOPMENT OF CORPORATE TRAVEL BUDGETS | LEVEL OF INNOVATION OF EUROPEAN AIRLINES | GLOBAL POLITICAL DEREGULATION | INTERNATIONAL LIBERALIZATION |
|---|---|---|---|---|
| **Network fortress** | green | yellow | yellow | green |
| **New horizons** | red | red | green | red |
| **Decline of champions** | red | yellow | red | red |
| **Europe under siege** | green | red | yellow | red |

"Europe under siege". This told airline managers that their priority should be the strategic actions specifically developed to cope with these two scenarios.

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