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## Technological Forecasting &amp; Social Change



## Scenario orientation and use to support strategy development

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## ABSTRACT

Scenario planning is one of the tools consistently reported as being used by executives to support their business development. A scenario planning project typically consists of three phases — preparation, development and use. This paper focuses on the third phase, where the scenarios that have been developed are put to their intended use in the context of developing strategy. Significant problems have been experienced as scenario projects move into this critical phase, perhaps due to a failure to link scenario development with strategy creation and execution efforts. These issues are explored via a case study of a large UK organisation operating in the transport sector, where a scenario-based strategy development exercise was used to support the leadership development of senior managers. We propose that a scenario orientation phase is a valuable missing link in many scenario projects, which can establish a bridge between scenario development and scenario use. Scenario orientation is a process of familiarisation with the scenarios that involves understanding their nature in some detail. This can be a crucial step, particularly if there is a significant time lapse between scenario development and scenario use, or if the people using the scenarios were not involved in their development. Without a good orientation to the scenarios, participants in a scenario planning exercise may be poor at the subsequent activities that require their explicit use.

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## 1. Introduction

Scenario planning is one of the tools consistently reported as being used by executives to support their business development [1–4,9]. Burt and van der Heijden [10] propose a framework for understanding purpose in future studies, based on Vickers' appreciative systems theory [11]. The framework identifies three guiding purposes for futures studies: sense-making, norm creating and strategic choice. Such a framework perhaps gives us an indication of why scenario planning is widely used within many different organisations; it is felt to have great potential to support strategic thinking and business development in a number of important ways, as identified by Burt and van der Heijden [10].

The scenario development process typically consists of three phases (see for example the Futures Group method as described in Ringland [5]). The exact composition of each phase varies across authors and methods, but broadly speaking they consist of the following activities:

- A preparatory phase where the purpose and focus of the exercise is agreed and driving forces are identified.
- A development phase involving the development of the scenarios.
- A use phase when the scenarios are used for their intended purpose.

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In this paper we differentiate between scenario preparation/development and scenario use, within the context of developing strategy. Schwartz describes using scenarios as “rehearsing the future, running through simulated events as if you're already living them” ([12], p200). He emphasises that within a scenario project at Royal Dutch/Shell, only half of the time was spent building the scenarios and “the other half was travelling the globe, presenting the scenarios to people in chemicals, refining, marketing, exploration, and production, or in other parts of the business” ([12], p 201).

Some authors note that the “promise and potential of scenarios” ([6], p22) is not always realised. Wilson goes so far as to say that using scenarios “... is perhaps the most critical phase of the scenario process” ([7], p29). Fahey and Randall [6] attribute the potential problems experienced with scenario use to the failure to link scenario development with strategy creation and execution efforts. Schoemaker [8] also identifies one of the pitfalls of scenario planning as being a failure to link into the planning process. We can conclude that the use of scenarios is less well researched than the process of their development. In this paper we therefore focus on the post-development phase of the scenario process and in particular on the use of scenarios within the context of strategy development, to address this gap in the research and to explore ways of avoiding the pitfalls noted above.

The paper is organised as follows. First we review the literature relating to the use of scenarios. We then present a case study which describes the use of scenarios within a leadership development programme for a large organisation in the transport sector. Within the case study, we identify the need for an additional post-development activity which is termed scenario orientation; we also propose a process for scenario use. A discussion of the case study follows and we conclude with some suggestions for further research.

## 2. Literature review: the use of scenarios

Much of the scenario literature focuses on the generation and development of the scenarios themselves. Bradfield et al. [13] describe the origins and evolution of scenario approaches. They identify two centres of development: the USA and French centres. The USA centre originated three schools of thought toward the scenario development process: intuitive logics; probabilistic modified trends; and cross impact analysis. The French centre is associated with the origins of the approach known as La Prospective. Varum and Melo [14] explore directions in the scenario planning literature, identifying the patterns of publication over time and classifying the literature into theoretical, methodological or empirical developments. Van Notten et al. [15] provide a typology of the different types of scenarios developed in practice. We will not explore this literature in depth here; rather we focus on what has been written concerning the use of scenarios.

A review of the existing literature on the use of scenarios (post scenario development) to develop strategy reveals three activities that are common to a number of authors. Each of these activities will now be considered in turn.

### 2.1. Understanding the implications of the scenarios

The scenario literature often presents the first stage of using scenarios as that of considering what they mean for the organisation. This is more than a detached overview of the external environment using a tool such as PEST; Burt et al. [16] propose that the scenario process can move participants towards a mindset of “our” environment, of the need to “live in the future” (p. 71) to understand the implications of their own analysis. The aim of scenario analysis is not to obtain forecasts of the future, but to highlight crucial uncertainties that may impact upon the strategic decisions that managers have to make [17]. Burt and van der Heijden suggest that organisations need to “make sense of new realities earlier” ([18] p. 1022). Ringland [19] notes that “senior managers spend much of their time on current, internal issues” (p. 1496), and that scenario planning provides a non-threatening framework for a discussion where managers can surface issues of concern, and move towards a more strategic conversation. Verity [20] points out that strategy is concerned with the world outside the organisation as well as what is going on within its boundaries, and “scenario techniques are one of the few tools strategists have to help them formulate their ideas about both” (p195). Advocates of ‘backcasting’ approaches (e.g. [21,22]) argue that the aim of such an exercise should not be to predict the future, but to understand how desirable futures can be attained.

A series of questions are typically posed to help participants explore the implications and impact of the scenarios for the organisation. For example, the SRI approach asks participants to identify the major opportunities and threats inherent in each scenario and to explore the impact of each scenario on the company's goals [5]. Hadfield [23] encourages participants to consider which aspect of each scenario under consideration has a significant impact on the business, whilst Schoemaker [24] advocates identifying, for each scenario, the key success factors (competitive assets or core capabilities) that are crucial to the survival or competitive advantage of the organisation. Other approaches steer participants to explore different angles, for example the market and customer needs that might emerge from each scenario [5]. Walsh [25] advocates the use of scenario planning alongside a PESTEL analysis and internal resource analysis, to work towards a better understanding of firm performance in a changed external environment. O'Brien et al. [26], suggest the use of the SWOT tool as a framework for organising an assessment of future opportunities and threats that emerge from an analysis of the future external environment (using scenario planning) with an assessment of the strengths and weaknesses of current resources and competencies (taking a resource based view perspective [27,28]).

SWOT is one of the most widely reported tools used to support strategy development [3,29]. Some authors have criticised SWOT as being too simplistic and failing to provide any analytic output [30]. However, some of these criticisms are based on the observation of examples of poor implementation in practice, rather than being based on a methodological critique. In contrast, some authors cite simplicity along with transparency as reasons driving tool popularity amongst executives [29]. Others give

alternative explanations for the continued popularity of such simple tools, including SWOT: they are flexible and can be adapted to different situations; they are easy to remember and thus can be picked up by novice users; and they have established technical, cultural and linguistic legitimacy [31].

## 2.2. Developing strategic options

The use of multiple futures is intended to enrich the “portfolio of possible strategic initiatives” ([32], p. 158) leading to action, new experience and new understanding of the business environment. Organisations need to articulate the range of options open for action [18]. Coates [33] notes that scenarios are often used to “stimulate users to develop and clarify practical choices, policies, and alternative actions that may be taken to deal with the consequences of the scenario” (p. 116). According to Hines [34], “by developing strategic options and multiple contingency plans, the organization will be equipped to manage the uncertainty of the future” (p. 21). Within the literature, strategy development is considered from two different starting points: a review of existing strategies or consideration of new ones. Some recommend as a starting point “stress testing” the organisation’s current strategy under each scenario [35]. For Schwartz [12], this involves returning to the focal issue or decision and exploring questions such as “how does the decision look in each scenario?”, “what vulnerabilities have been revealed?” and “is the decision robust across all scenarios ... if not how could it be adapted?” (p231). Similarly, the Futures Group scenario method [5] describes the contrasting of the implications of the alternative worlds in terms of how different the business decisions and goals might play out under each of the alternative futures.

Other authors suggest identifying new options using a variety of prompts such as “what strategy alternatives are suggested by each scenario?” [6], or “what should we do ... and not do?” (SRI process as described by Ringland, [6]). Some authors recommend the use of frameworks and analytical approaches to help generate new options using the scenarios. For example, Hadfield [23] advocates using an analysis of competition, whilst van der Heijden [35] and Schoemaker [36] advocate an analysis of core competencies and capabilities. Korte and Chermack [37] argue that scenario planning should be considered as a tool to help change organisational culture, given its potential value in influencing mental models (both individual and shared). Bodwell and Chermack [38] make the connection between scenario planning and the concept of ‘organizational ambidexterity’, suggesting that scenario planning has the potential to help organisations to simultaneously exploit existing competencies whilst exploring new opportunities. In a similar vein, Day and Schoemaker [39] comment that whilst “scenario planning has proved a powerful tool for imagining different futures” (p. 19), managers should seek a balance between strategic commitment (e.g. major investment decisions) and maintaining flexibility in their set of strategic options. O'Brien et al. [26] describe the use of TOWS analysis to generate strategic options based on an analysis of the externally focused opportunities and threats arising from each future scenario combined with an assessment of the current strengths and weaknesses of internal resources and competences.

One of the common principles of scenario use is that a set of strategies should be robust or resilient across scenarios. However the proposed route to this set of strategies appears to vary, with some authors (such as Wilson, [7]) suggesting the use of a ‘planning-focus’ scenario from which to develop an initial set of strategic options. These initial options are subsequently tested against the other scenarios and modified to improve their resilience. He also suggests an alternative approach involving the use of the scenarios collectively to generate strategies across the set of scenarios.

## 2.3. Evaluating strategic options

Harries [40] notes that “one of the major tenets of scenario planning is that it is a useful basis to test the robustness of plans of action” (p. 809). Put simply, organisations need to “know when to act and, as importantly, when not to act” ([18], p. 1022). At this option evaluation stage in the scenario planning process, “the set of scenarios are used to test decisions against the set of assumptions contained in the scenario stories” ([41], p. 448). The metaphor of a “wind-tunnel” has been used to describe the role of a set of scenarios in testing the organisation’s contemporary strategies and decisions (e.g. Wack [42]; MacKay and McKiernan [43]). Some authors [44,45], despite advocating wide participation in earlier phases of the scenario process, argue that the phase of strategic choice should involve a limited number of participants, “for reasons of confidentiality or liability” ([44] p 1491).

A variety of approaches are used to rehearse strategic options using scenarios. Some take the form of prompts to participants, for example, “how does the decision look in each scenario?” [12], and “what are the risks and vulnerabilities revealed by each scenario?” [6,12] Some authors suggest criteria against which strategic options should be evaluated, for example WUS (Want = supports the vision, Utilise = today’s strengths, Should = matches the environment) analysis [46]. Alternatively O'Brien et al. [26] use vision alignment, robustness and stakeholder response to compare strategic options. Other authors draw on additional analytic tools. For example, Ringland [5] explores the use of PIMS and an analysis of market attractiveness and capabilities, whilst the use of multi criteria decision analysis to evaluate different strategic decisions across the set of scenarios is explored by Goodwin and Wright [47,48] and Montibeller et al. [49]. Finally, both Miller and Waller [50] and Cornelius et al. [51] consider applying ideas based on real options to support the evaluation of potential strategic options. Wright et al. [52] suggest that there are a number of typical outcomes of this evaluation stage, including a confirmation that the overall strategy is sound, or that new, alternative options are more robust, or that contingency planning against unfavourable futures is necessary.

#### 2.4. Summary of key issues

The extant literature reinforces the view that scenarios are a useful tool for highlighting the critical uncertainties that impact upon strategic decision making. It is implicit in much of what is written that a deep understanding of the relevant set of scenarios is a pre-requisite to their use. It is also clear from the literature that there is no one generally accepted approach to the use of scenarios – different authors pursue different routes through the stages of scenario use identified above. A unifying theme is that authors have chosen relatively simple tools, frameworks and structures to guide participants through the generation of an audit trail linking strategy development back to the scenarios in use.

Much of the scenario literature appears to be based on the assumption that continuity of participation in the process is not an issue, since those who develop the scenarios are typically their users. However, the literature also provides examples of instances where this is not the case. As noted above, Schwartz [12], writing about his experiences within Shell, reported how a significant proportion of the time required for a scenario project was spent presenting scenarios to 'others in the business' who had not been involved in their development ([12], p201). In other cases, scenarios are published for wider consumption beyond immediate participant interest and use [53], and hence continuity of participation from scenario development to scenario use cannot be assumed. Even when there is continuity of participation, the literature does not address issues of whether participants need to adopt a different perspective during the scenario use stage, in comparison with scenario development; we will return to this point in the discussion section of the paper.

### 3. Case study: the use of scenarios

Yin [54] suggests that it is appropriate to use a case study approach when the phenomenon under study is not readily distinguishable from its context. Here, the phenomenon under study is the use of scenarios for the purpose of supporting strategy development. The context of the study is that the scenario-based strategy development exercise sits within a broader senior leadership development programme for the client organisation. It is hard to distinguish the phenomenon from its context, since the exercise came at the end of the programme and was seen as the bringing together of the many experiences and learning that had taken place throughout the programme.

Case study analysis involves the in-depth study of a particular subject using amongst other approaches, personal observation [55]; in this case, we were part of a team observing groups undertaking the exercise. Thus our approach to gathering research data was influenced by ethnographic methods [56] – we observed groups and made extensive notes about the process the group had followed.

As is explained below, the case is set within a management development programme in a large organisation. Research projects using students (e.g. [57]) have been the subject of some debate in the literature. Criticisms of the use of simulations or games include their use within contrived and simplified contexts which are far removed from reality [58]. Some authors defend the use of 'students' or 'artificial' research settings over 'natural' research settings (e.g. [58,59]), given the need to compare, control and manipulate factors when learning about complex systems. In this instance, although the participants – all senior managers – were working in a classroom setting during the management development programme, they were considering the future strategy of their own organisation where the majority of the participants had many years of work experience, and where they were being considered for promotion to the highest levels of the organisation. We suggest that this is very different to instances of scenario planning using a group of students to consider a case study of an organisation of which they have little or no prior knowledge, or personal commitment to the future of the organisation under discussion. In fact, we propose that the use of scenarios described in the case below has much in common with a 'real world' practice-based strategy development exercise, in terms of the background, knowledge and experience of the participants, and their commitment to producing a robust set of strategic recommendations for their own organisation to present to their senior colleagues at the end of the exercise.

#### 3.1. Introduction to the case study

The client organisation was a large company within the UK transport sector. The organisation was developing a strategic leadership development programme aimed at senior managers within the organisation. The programme focused, in particular, on two aspects of leadership: personal and strategic. The former considered the impact of leaders on the people they worked with – their teams, colleagues, executives, clients and other stakeholders. The latter was concerned with working on the decisions and choices leaders make, since it is through the decisions and choices they make that leaders can have an impact over the medium and longer term. The clients were keen that within the programme, participants would be able to identify strategic level 'debate' and how it differed from more operational decision-making. We were part of a team of four tutors who met with the client to discuss the development of a scenario-based strategy development exercise which the client believed would support this latter skill of strategic leadership. The client believed that a scenario-based strategy development exercise would be the most realistic way to develop the strategic thinking skills of its senior managers.

The scenario-based strategy development exercise was designed to take place during the final module of a five-module programme. The purpose of the exercise was for participants to practise developing strategies for their own organisation in response to alternative possible futures; there was no explicit aim to develop their skills in scenario planning.

The client was keen that the programme would develop participants' strategic thinking skills. This was described as, first, an awareness and understanding of the organisation's and industry's stakeholders and, second, an ability to think across and beyond

the traditional functional silos that existed within the organisation and which were perceived to form a barrier to effective strategy development. Thus an important feature of the exercise was the involvement of current top managers (some at board level) within the organisation who, along with the tutors, formed a panel of expertise to provide feedback, during the exercise, to participants about their strategic thinking.

The programme was rolled out across the organisation and targeted a cohort of managers who were on developmental paths towards very senior positions within the organisation. Each running of the module typically involved 15–18 participants; in total approaching 20 runs of the module took place over a period of 4 years. Participants were drawn from across the functions within the organisation, so it was not uncommon to have a cohort with a number of specialist engineers alongside colleagues from some central support functions such as finance, marketing or human resource development.

We were part of the team of tutors who developed the materials and led each run of the exercise. All tutors had experience of developing and using scenarios with organisations across a variety of sectors. During each run of the exercise the team consisted of one tutor chairing the presentations and panel feedback, two tutors briefing the exercise, observing the groups and providing 'process' focused feedback, and two senior managers from the organisation who provided 'content' focused feedback. Feedback from the tutors tended to comment mainly on such issues as effective (or ineffective) use of any strategy tools; time management; group dynamics and group leadership/facilitation issues. In contrast, feedback from the senior managers focused on issues such how well the recommended strategic options fitted with the organisation, their rationale and reasoning behind the recommended options.

Whilst the tutor team remained constant throughout the life of the programme, the composition of the panel varied, due to the availability of certain senior managers to participate. However, a number of the top management team were very committed to the programme and made themselves available to act as panel members on a regular basis. Towards the end of the life of the programme, some senior manager panel members were those who had previously been participants on the programme and who had subsequently been promoted to senior positions.

The structure of the exercise and its materials were developed in consultation with senior executives from the client organisation who were the sponsors and champions of the leadership programme. The meetings to develop the exercise took place over a period of approximately 8 months prior to running a pilot of the exercise, and its ultimate launch. The structure of the exercise was agreed; it would focus on strategy rather than scenario development. The scenarios (see excerpts in [Appendix 1](#)) were developed jointly by the senior executives and the tutors, with the executives focusing on the scenarios' content and the tutors focusing on the development process and in particular, leading the writing of the scenario narratives. As the programme ran over a number of years, the scenarios were updated on two occasions, each time by a team involving senior executives and tutors. We noted that it was possible for the scenarios to become 'dated' in a number of ways. For instance, as external events unfolded, some of the driving factors – such as a change of government in a UK election – became less uncertain.

We now describe the materials used for the exercise, followed by the exercise itself, which we have split into two developmental stages. First we introduce the 'early version' of the materials, which were followed during the first few runs of the exercise. After these early runs, the team met to reflect on their experiences. We describe these reflections along with the changes that were made to the exercise as a result; we term this updated exercise the 'revised version'.

### *3.2. The materials for the exercise*

Each participant received a pack of materials at the start of the exercise. The participant pack consisted of some scene-setting information; in particular it contained two scenario narratives, which set out in some detail two possible future external environments in which the organisation might have to operate. It also set out a briefing for each group, explaining that they needed to prepare a presentation for the organisation's board outlining their strategic response to the scenarios that they had been given.

A time horizon of 5 years was chosen for the scenarios as this coincided with the planning cycle adopted by the organisation. It was also deemed to be an appropriate horizon given the pace of change of relevant external factors such as the government in power, the state of the economy, and other changes within the industry. Early consultations with the organisation's senior executives focused on the key issues facing the organisation. A list of important factors in their external environment that might pose serious challenges to senior managers was generated. We used this information to draft the two scenarios which were then revised after feedback from the participating executives. The scenarios focused on two possible futures of the UK transport sector and included, inter alia, factors relating to government funding of the sector, stakeholder actions, the state of the economy, technological developments, and consumer demand for travel. The scenario narratives were presented from the viewpoint of a future senior executive from the client organisation who was reflecting, over a period of time, on the state of the external environment.

### *3.3. The structure of the scenario-based strategy development exercise (early version)*

The exercise took place over a 24 hour period, from mid-day on Day 1 to mid-day on Day 2. The overnight break allowed the participants to reflect on the first part of the exercise, and to consider making changes for the second day. Participants worked in one of two syndicate groups throughout the exercise. During Day 1, the scenarios were presented to the participants who were invited to consider them in their groups and to recommend strategic responses to the organisation. In these early runs of the exercise, very little direction was given to participants as to what process their group should follow. The groups were not

facilitated; rather each group designed and worked through their own process. Each group was then observed by one of the tutors who made notes about the effectiveness of the both the design and implementation of the process that the group had chosen to follow.

At the end of Day 1, each group presented their recommendations to a panel consisting of a chair person, representing the chair of the organisation's board, two or three senior managers from the client organisation and two of the tutors. As mentioned earlier, the senior managers provided feedback on the 'content' of the strategic recommendations; the tutors helped the group to reflect on the 'process' that they had followed.

At the start of Day 2, participants designed their own group process for revising and/or modifying their Day 1 strategies; the design of this process tended to draw heavily on both the strategy 'content' and 'process' feedback they had been offered at the end of Day 1. Each group was again observed by the same tutor as they progressed through their chosen process. At the end of Day 2, they presented their strategic recommendations to the panel once more, and received further feedback on both content and process.

#### *3.4. Reflections on the 'early version' of the scenario-based strategy development exercise*

Following a small number of early runs of the scenario-based strategy development exercise, the tutors along with some of the other panel members set aside some time to reflect on the learning that was taking place. We discussed feedback received from participants and panel members, which raised a range of positive comments. For instance, the participants expressed appreciation for the observation of group work and the feedback from tutors on the group process; they also felt that they benefitted significantly from the feedback on the content of their strategic recommendations from their senior management colleagues. Both participants and panel members were very positive about the overall experience of working with the scenarios. However, as tutors, we made a number of observations about how the exercise was working, and expressed some concerns about ways in which the participant experience was potentially falling short of desired outcomes.

For each observation, we describe below what was observed by the tutors across a number of runs of the exercise. We then summarise what issues such observations raise in terms of the use of scenarios within a strategy development process. Finally we summarise the revisions made to the exercise in order to address the issues.

##### *3.4.1. Participants gave insufficient consideration to the scenarios when developing strategic options*

*3.4.1.1. Observations made.* In early runs of the exercise, it was observed that participants spent little time understanding the content of the scenarios and what they might mean for their organisation. Very few of the groups chose to spend a significant part of their time on trying to understand what it might be like to operate within these alternative future environments as depicted by the scenarios. They typically showed a great deal of concern for moving quickly to what they saw as the main task, which was generating new strategies for the organisation concerned. They felt that their focus should be finding "answers" to the exercise – and this involved finding new strategic options. At the time when the exercise was launched, the organisation was in the throes of a project that set out to clarify the organisation's direction and purpose (or 'vision' and 'mission') and to communicate this to staff; yet the groups often spent little time discussing the organisation's current strategic direction before beginning to talk about possible new strategic options.

*3.4.1.2. Issues raised and revisions made.* These observations illustrate, first, that participants did not familiarise themselves with the scenarios, and second, that they subsequently failed to use the scenarios as part of their strategy development process. In later runs, the tutors specifically advised the participants to spend time immersing themselves in the scenarios, scrutinising and "de-constructing" them. It was suggested that they should think carefully about the external factors that were driving the different futures. Participants were encouraged to challenge the scenarios in a positive way. For instance it was pointed out that many other possible driving forces and scenarios could have been chosen; the group who developed the scenarios had to make difficult judgements about some of the factors that seemed particularly uncertain and particularly important to their organisation, and to drop other factors from the scenarios. The tutors asked them to suggest (and to consider including in their analysis) other external factors that appeared to be missing from these two scenarios.

##### *3.4.2. Groups made limited use of the strategy tools that they already knew*

*3.4.2.1. Observations made.* Some groups made limited use of the strategy tools that they were aware of (e.g. SWOT), or appeared to have a confused understanding of how they might make best use of the tools in relation to the exercise. The analysis that emerged from the groups was sometimes weak as a result of this; the groups did not always interpret and analyse the information from the scenarios to the best of their ability. One example of a misunderstanding was that, in their haste to move towards strategic options, some participants showed a poor understanding of the difference between an opportunity (in the external environment) and a strategy (a strategic option which the organisation might pursue to take advantage of the opportunity identified).

*3.4.2.2. Issues raised and revisions made.* This observation suggests that participants did not know how to integrate the strategy tools with which they were familiar with the scenarios. A number of revisions were made as a consequence of this.

*Revision 1.* As a means of exploring the impact of the scenarios, in later runs the participants were explicitly introduced to SWOT analysis by the tutors, as a possible tool for capturing the opportunities and threats arising from the scenarios. The intention was to encourage the groups to spend more time 'orienting' themselves in the scenarios, i.e. explicitly identifying the driving forces (and hence the future opportunities and threats, i.e. the two of the four aspects of SWOT analysis that are externally focused) that were behind the scenarios. As a precursor to strategy development, the groups were also encouraged to think about the state of their organisation in the present time, in terms of its resources and capabilities – these were captured as current strengths and weaknesses.

*Revision 2.* In later runs of the exercise, the participants were explicitly reminded of the visioning project that was underway in the organisation, and of the results of that project so far in terms of re-stating the organisation's strategic direction. They were encouraged to give this careful consideration as they discussed the scenarios, and generated and evaluated strategic options.

*Revision 3.* In later runs of the exercise, the participants were introduced to the TOWS matrix [60,61] as a possible for tool for generating strategic options. One of the benefits of using such a framework was that it would give a clear narrative to their analysis, as it demonstrated quite explicitly how possible strategic options had emerged from an analysis of both the external environment (the opportunities and threats contained in the two scenarios) and the organisation's internal resources and capabilities (strengths and weaknesses).

*Revision 4.* In order to demonstrate to panel members that possible strategies had been carefully evaluated, the groups were encouraged to test their 'long list' of strategic options against a number of criteria. The tutors suggested that three relevant criteria were as follows: (1) fit with the organisation's vision, i.e. did the proposed strategies move the organisation towards its stated goals? (2) Fit with the scenarios, i.e. were the strategies robust under a range of possible futures? And (3) fit with stakeholders, i.e. how might stakeholders respond to each of the new strategies?

### 3.4.3. *Participants did not provide an audit trail for their recommendations*

3.4.3.1. *Observations made.* It was noted that in early runs of the exercise, the participants tended to present their recommended strategic options to the panel (on both Day 1 and Day 2) without a clear "audit trail"; as a result the panel typically found their recommendations unconvincing. The panel members could not see what analysis had been undertaken, and what logic had been followed in order to arrive at the recommendations. Whilst this might have been anticipated on Day 1 of the exercise, it was felt that participants were not learning sufficiently well to improve their presentations on Day 2.

3.4.3.2. *Issues raised and revisions made.* This observation demonstrates the importance of linking strategy development to scenarios. If recommendations are to be considered 'responses' to scenarios, then it is important that the link between the scenarios and the recommendations should be made explicit. To support the development of an audit trail for each day's presentations, specific guidance was provided to groups about how to present their recommendations to the panel during the presentations, including:

- Demonstrate familiarity with the scenarios
- Narrate the story of how strategy development emerged from an assessment of the scenarios
- Think about the legitimacy and credibility of recommendations
- Think about the impact of the recommendations on stakeholders
- Demonstrate the link to current strategy and vision

### 3.4.4. *Participants gave little thought to process issues and individual roles*

3.4.4.1. *Observations made.* Tutors noted that the process followed by the group was often weak, in a number of ways. Participants would typically "jump straight in" to the exercise as they saw it, without giving due consideration either to the process that they would be following, or to the planning of a series of analytical and participative steps that might lead them towards a sound outcome. In addition, within the groups, insufficient thought was given to the potential role that each participant might play in that process, e.g. time-keeper, facilitator, presenter and so forth. As a result, the roles played by each individual were often confused, e.g. leadership or facilitation of the group sometimes changed in a spontaneous way, without group discussion. The tutors did not facilitate the groups (they simply observed the group activity, without contributing to the discussion), and it was noted that some groups began the exercise without nominating a leader or facilitator of any kind. A 'battle for leadership' of the group sometimes took place. The groups also tended to manage their time poorly, as typically no-one was nominated as timekeeper, and the group sometimes embarked on the exercise without planning out the available time first. Perhaps due to these weaknesses in group process and role definition, it was also not unusual for the process to lack energy; the groups sometimes spent a lot of time 'talking' rather than 'doing'; sitting in chairs rather than working at flipcharts and so on.

3.4.4.2. *Issues raised and revisions made.* These observations illustrate that groups did not make the best use of their time within the group setting; in addition, they did not always make effective use of tools.

This is perhaps the one area where revisions were not made to the exercise, as the client felt it was important for the groups to learn from their own reflections upon their experiences. Reflection was encouraged at the end of Day 1 during the panel feedback on the group process. In addition, at the start of Day 2, the groups were explicitly reminded to plan the process that they would follow for the morning's activities, and to discuss the roles that individuals might play.

### 3.4.5. Panel members felt their feedback lacked structure and consistency

**3.4.5.1. Observations made.** The senior management panel members who had experienced repeat exercises felt that the feedback provided by themselves and their colleagues sometimes lacked structure and consistency across exercises. Changing panel membership was felt to contribute to this problem.

**3.4.5.2. Issues raised and revisions made.** Both tutors and panel members from the client organisation agreed that we should aim to achieve greater consistency across exercises when feeding back to the groups. In later runs of the exercise, the panel members were provided with some guidance on giving feedback to the groups. Topics suggested included: appropriateness of the group's proposed strategic responses to the scenarios under consideration; level of specificity of the response, e.g. were the responses too detailed/vague; fit with the organisation's current strategy; link with organisational vision; sensitivity to stakeholders; and coherence and 'evidence base' of the presentation, including a visible 'audit trail' of analysis that led to the final recommendations. The introduction of these criteria provided the panel members with some assistance in giving feedback that was comprehensive, structured and consistent across groups.

Table 1 below summarises the observations, issues and revisions made to the strategy development exercise. Observations 1–3 are related to the familiarisation with and use of scenarios whereas observations 4–5 relate to the process used within the exercise.

### 3.5. Reflections on the revised process

In summary, the process followed during later runs of the exercise was as follows:

- Step 1 – scenario familiarisation: understanding the detail and logic of the set of scenarios
- Step 2 – vision review: understanding the existing strategic direction of the organisation
- Step 3 – scenario implications (SWOT): understanding the impact of the scenarios on the organisation
- Step 4 – strategy development (TOWS): brainstorming new strategic options for the organisation
- Step 5 – strategy evaluation (fit with vision, fit with scenarios, i.e. robustness, and fit with stakeholders): reviewing the potential strategic options against a number of criteria, in order to choose between them
- Step 6 – strategy recommendations: presentation to panel of top managers, and structured feedback session drawing on enhanced materials for panel members.

In the later runs of the exercise, it was noticed that the Day 2 discussions were typically much more focussed; the groups tended to discuss the issue of facilitation in some detail before getting started on the task that had been set for them, and decided what process they wanted to follow, and who would lead it. The process of orientation – interpreting and analysing information in the scenarios – was typically much more effective, with better time management, and better use of tools leading to a higher quality of discussion. The thinking appeared to be more structured, and ideas better organised. There was evidence that groups had used tools (such as SWOT, TOWS and strategic option evaluation/robustness checking) to support their analysis; when the recommendations were presented to the panel with a clear narrative, the participants found that the panel were more willing to follow their logic and see some merit in their recommendations. Comparing the Day 1 and Day 2 presentations of strategies, the panel felt that there was strong evidence of learning taking place.

Whereas Day 1 presentations had been characterised by a lack of demonstrable engagement with the scenarios and no justifications supporting the groups' strategic recommendations, the panel noted that the group's Day 2 presentations demonstrated that a clear audit trail had been provided by the groups showing how their strategic recommendations could be traced back to the scenarios. Thus the groups could explicitly show that they had engaged with the scenarios.

As mentioned in the literature review, Bradfield et al. [13] provide a helpful overview of the evolution of the range of scenario approaches available, whilst Barber [62] also sets out components of a range of different scenario types. Franco et al. [63] summarise the typical steps in a scenario process across the main schools of scenario planning. Their summary highlights the fact that whilst there are many existing approaches to scenario planning, there are a number of generic steps which appear to be common to the majority of approaches to undertaking a scenario planning project – from identifying the topic and key decisions associated with that particular project, through to understanding the implications of the scenarios for users. These steps are typically presented (as in Franco et al., [63]) in a linear fashion – but the majority of academics and practitioners would be quick to point out that 'in the real world', the progress of a project concerning strategic futures may be far from linear (see for instance the T-cycle [64]); participants are likely to iterate between some of the steps. For example, having produced an initial draft of their scenarios, some groups may wish to return to their long list of 'factors' or 'driving forces', to ensure that the initial listing still seems comprehensive, or to check that they still have confidence in the short list of factors that they have chosen as the most important and uncertain. The authors are adopting a similar convention here, in presenting our process for scenario use in a linear manner. We propose that a similarly iterative approach is likely to occur in scenario use. Although we present our six steps in a

**Table 1**

Summary of observations, issues raised and changes made.

No.	Observations made	Issues raised by these observations	Revisions made to the exercise
1	Participants gave insufficient consideration to the scenarios when developing strategic options.	Lack of familiarisation with the scenarios Failure to explicitly link scenarios with strategy development	Groups encouraged to spend time immersing themselves in the scenarios
2	Groups made limited use of the strategy tools that they already knew.	Lack of knowledge and experience in combining tools Failure to explicitly link scenarios with strategy development	Introduced to SWOT analysis to capture future opportunities and threats and current strengths and weaknesses Reminded of the visioning work undertaken within organisation Introduced to TOWS matrix as a tool to generate options Introduced to criteria to evaluate strategic options: <ul style="list-style-type: none"> <li>• Robustness to scenarios</li> <li>• Alignment to vision</li> <li>• Impact on stakeholders</li> </ul>
3	Participants did not provide an audit trail for their recommendations.	Failure to explicitly link scenarios with strategy development	Encourage explicit consideration and inclusion of an audit trail
4	Participants gave little thought to process issues and individual roles.	Inefficient use of time and tools	Participants explicitly encouraged to plan their group process and agree roles for individuals
5	Panel members felt their feedback lacked structure and consistency.	Inconsistency of feedback across exercises	Panel members provided with structure around which to provide feedback

linear fashion (above), our experience suggests that – for example – as part of Step 5 (strategy evaluation), some participants will be keen to return to elements of Steps 1 and 2 (reviewing the scenarios and the organisation's vision). So we would stress that whilst such processes are often presented as linear, it is vital for researchers and users of scenario planning to acknowledge that this is essentially a useful 'shorthand' for the likely – and desirable – behaviour of groups undertaking scenario planning.

## 4. Discussion

### 4.1. Reflections on the case study

Our experience with the case study resonates with a gap in the literature relating to the scenario use phase of the scenario planning process, as distinct from the scenario preparation/development phases. In particular, the case study illustrates the following issues.

#### 4.1.1. Lack of continuity between scenario developers and scenario users

Whilst much of the scenario literature assumes continuity of participation in scenario exercises, this case study serves to illustrate some of the issues that arise when such an assumption does not hold. For the participants who had not been involved in scenario development, the exercise required them to immerse themselves in the use of the scenarios, so there was a need for them to develop – rapidly – a good level of familiarity with the scenarios. As they had not been involved in the scenario development phase, some participants in early runs of the exercise were inclined to challenge the scenarios as part of this process of familiarisation. For instance, they would debate why certain external factors were, or were not, included; or they might comment upon whether a particular scenario was realistic or not – e.g. “would we ever allow ourselves to get into this situation?” The tutors had to adapt their presentation of the exercise in later runs, to ensure that these comments were channelled in a constructive way. Thus a key issue arising from the lack of continuity of participants between scenario development and use was how to familiarise them with the scenarios in a way that facilitated their subsequent use.

#### 4.1.2. Delay between development and use

In this case study, some senior managers from the client organisation who were involved with the scenario development stage of the exercise were also involved in the scenario use stage (as panel members). However, for such panel members, there was a significant delay between scenario building and scenario use; this meant that as the scenario-based strategy development exercise itself began and they were required to play their role as panel members, they needed to re-familiarise themselves with the content of the scenarios as well as the purpose of the exercise.

#### 4.1.3. Different perspectives on scenarios when comparing their development to their use

The extant literature does not explore issues of how the 'mindset' required for scenario development may differ from the 'mindset' required for scenario use. For example, in this case study, the senior managers who had assisted with scenario development were required to view the scenarios from a different perspective when they adopted the role of panel member. Whilst assisting with scenario development, their aim had been to develop scenarios that were going to challenge the participants, yet seemed to be plausible and realistic; a rigorous process of brainstorming and reducing possible factors in the external environment that would create the future had been followed. Once the exercise began, however, the panel members

were required to look at the scenarios more directly from the perspective of the participants, who had not been involved in brainstorming external factors, and were therefore not aware of the external factors that were behind the scenarios, but had been told to use the scenarios to 'test' the organisation's current strategy and generate new strategic options.

A related issue (also not addressed in the published literature) that arises when comparing scenario development to scenario use is the mode of thinking required in these two different stages. For example, those involved in building the scenarios had begun with a very creative and divergent process of brainstorming external factors. However, when presented with the scenarios, the participants tended to adopt a very analytical and convergent style of behaviour, which they believed would move them rapidly towards strategic options for the organisation. Moreover, those involved in building the scenarios became immersed in a specific future time zone – the chosen time horizon for the scenarios, which was 5 years ahead. However, the exercise clearly required participants to think across time zones: what did the scenarios, set in the future, mean for the organisation, anchored in the present? The authors believe that this issue of thinking across time zones is worthy of further research.

#### 4.1.4. Which tools to employ to support scenario use

We noted earlier (whilst reviewing the relevant literature) that there were many differences in the tools used by authors to support the use of scenarios. However, we also noted that one unifying theme was the relative simplicity of tools used. Within the case study we introduced a number of tools, including the SWOT and TOWS frameworks, which supported both the familiarisation with and use of the scenarios in developing strategic options.

#### 4.2. Introducing the OODA Loop

We noted earlier that one of the pitfalls in scenario planning identified within the literature is the failure to link scenario development with scenario use. We also described the three activities that the literature associates with scenario use, namely, understanding the implications of the scenarios, generating options and evaluating options. Our experience in the case study highlights a number of issues that we believe contribute to this key pitfall and which suggest the need for further attention to be paid to the process of using scenarios. The time-lag between scenario development and use, and also the possibility of changing personnel, point to the need for a period of familiarisation with the scenarios. In reflecting on the revised process presented above, we draw here on the work of Lindgren and Bandhold [46] who describe Boyd's "OODA loop" [65], a model of an individual's mental processes, used by the US Air Force to assess a fighter pilot's ability to learn.

The OODA loop, shown in Fig. 1, describes a cycle of observation, orientation, decision and action. Observation involves sensing signals in the environment; orientation involves interpreting and analysing information; decision involves making choices from a selection of possible responses to the information; and action involves enacting the decision(s) made. Lindgren and Bandhold [46] suggest that if the model is applied to organisations rather than individuals, it can be used to identify "quick responders", or high performing organisations who "are quicker to observe changes in the competitive landscape, quicker to orient themselves in the new landscape, quick to decide what to do, and to do it" ([46], p6).

Applying the OODA model to scenario planning suggests the need for an additional phase between scenario development and scenario use. This phase is one of familiarisation with the scenario details and orientation of the organisation within the scenarios. However, neither of these are currently explicit steps in the majority of scenario processes described in the extant literature. This

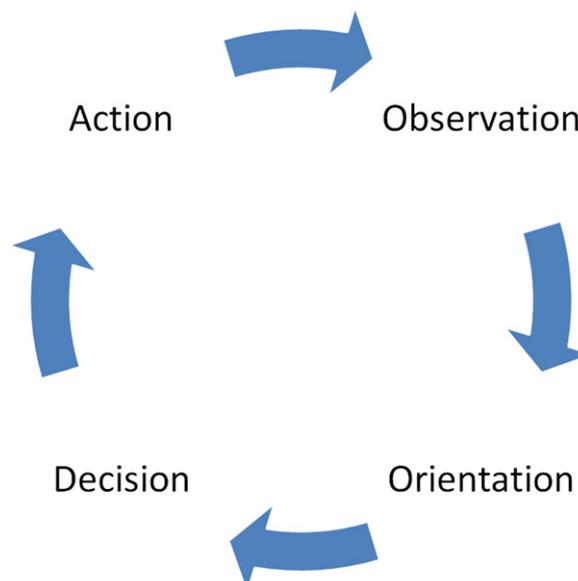


Fig. 1. The OODA Loop.

may be because the descriptions of a typical scenario planning process implicitly assume continuity between scenario development and scenario use. We suggest that an orientation phase is a particularly important step if either (or both) of the following conditions applies:

- (1) There is a significant time lapse between scenario development and scenario use; this could be the case in many scenario planning exercises, for example when regular strategic planning exercises are being run within large organisations over extended periods of time.
- (2) Some, or all, of the participants in the use of the scenarios were not involved in scenario development. This of course applies to classroom-based studies using pre-existing scenarios, and management development exercises such as the one described in the case study. However it also applies to many practice-based settings where participation in strategy development exercises may vary from stage to stage (for example due to time pressures for key individuals). It also applies to many situations where individuals, organisations or government bodies generate a set of scenarios and put them into the public domain, with the potential for others to use them (e.g. [66,67]).

#### 4.3. A suggested process for scenario use

Based on the stages of the OODA model and incorporating our experiences and reflections on the case study, we propose the following process for scenario use.

##### 4.3.1. *Orienting yourself within the scenarios (becoming familiar with the details of the scenarios and understanding/exploring the organisation's place within them)*

Scenario orientation is a phase that should be undertaken whenever there is a delay between the development and use of the scenarios and/or when there is no continuity of participants. We propose that this phase consist of two activities. First it is important that participants become familiar with the scenarios in the context of the purpose of the exercise. Scenario familiarisation involves understanding the key driving forces which together structure the scenarios along with the selection of themes shaping their design. Second, it is important to place the organisation within the scenarios to understand what it might be like to operate within such environments. An exploration of how other stakeholders appear in the scenarios may be a useful additional activity at this stage.

##### 4.3.2. *Revisiting the purpose of the exercise, to provide a clear focus for the use of the scenarios*

Much of the scenario literature points to the importance of having a focus to the scenario exercise (see for example [10,12,68]). It is our view that the purpose of the exercise should be explicitly articulated and understood prior to strategy development, in order to provide the context within which the scenarios are to be reviewed and the strategy developed. Where the purpose of the exercise is strategy development, a review of the organisational vision or direction, current strategy, and issues currently facing the organisation can help participants to agree a suitable focus.

##### 4.3.3. *Assessing scenario implications (exploring what the scenarios mean for the organisation)*

As noted earlier, the extant literature suggests a variety of approaches to assessing the implications of the set of scenarios for the organisation. There has been little research into how these different approaches compare. In our experience within this case study and elsewhere [26,69], we have found the use of SWOT analysis to be a useful tool to assist in this process. Whilst we note that some of the literature [5] considers the 'OT' part of the analysis to capture the opportunities and threats within the scenarios, we use a modified form of SWOT analysis so that it can be combined with scenario planning; to do this we work across two time zones, the present and the future time portrayed within the scenarios. The explicit consideration of key features of the possible future environments are captured as future opportunities and threats for the organisation. A consideration of internal strengths and weaknesses are captured through an assessment of the organisation's current resources and competencies.

##### 4.3.4. *Developing strategic options (exploring potential organisational responses to the scenarios)*

One of the practices recommended in the extant scenario literature when using scenarios to develop strategy is the reconsideration of the focal issue or question that drove the original scenario development exercise. We have already noted that the process of scenario orientation supports this point, and provides a useful link between scenario development and use. Another practice that we believe is useful at this and other stages in the processes of development and use is the explicit documentation of an audit trail demonstrating how the strategic options were generated. In our practice we use the TOWS matrix as it explicitly draws on the SWOT analysis developed to assess the implications of the scenarios, although we acknowledge that other methodological choices exist [23,35,36].

##### 4.3.5. *Evaluating strategic options (rehearsing the options against the scenarios and other criteria)*

We have already noted that a number of approaches to strategy evaluation exist, and that different authors recommend different criteria to assist in choosing between potential strategic options. Here we have argued that strategy evaluation should include careful consideration of the fit that exists between the possible strategies on the one hand, and both the scenarios and the organisation's existing vision (or stated strategic direction) on the other. This once again emphasises the importance of an orientation phase as part of a scenario planning project. In order to evaluate strategic options, participants must have a high

degree of familiarity with the detail of the scenarios and their possible impact on the organisation; otherwise important issues might be missed at the strategy evaluation stage.

#### 4.3.6. Explaining strategy recommendations (providing an audit trail to make explicit the link between the scenarios and the strategy)

The scenario literature does not include this step in the processes we have encountered. However our experience from the case study suggests that this is an important part of the process of convincing those in receipt of the output of scenario use and strategy development of the legitimacy and coherence of the recommendations.

Looking beyond the world of scenario planning, the broader strategy literature offers a range of perspectives on the issue of choosing a strategic direction (and hence how options are evaluated, as discussed above). The resource-based view (RBV) of the firm adopts an internal perspective, focusing on the resources available to the organisation, and arguing that the basis for competitive advantage lies in the application of the valuable resources at the firm's disposal [27,28]. The RBV is the basis for numerous calls for strategic flexibility (e.g. [70–72]), based on the “resource flexibility” of the resources available to the firm, and the “coordination flexibility” of the firm in making good use of its resources ([70], p. 135). These insights are valuable in highlighting that as we move towards option generation and evaluation, we need to be well aware of the resources at our disposal, and hence whether certain options are feasible for the organisation over the timescales envisioned. Perhaps providing an alternative perspective, the literature on strategic learning proposes that “strategic learning involves focused attention to those events that have direct links to the organisation's strategy, theories and practices, as perceived by the top management team” ([73], p 336). Also stressing the role of managers in strategy-making, Watson [74] points to “the relationship between the personal strategies of strategists and the strategic direction followed by organizations” (p 1305). The perspective of the authors is that scenario planning can provide an effective basis for the selection of a strategic direction for the organisation, as it has the potential to bring together a range of perspectives covering the external environment, internal constraints, strategic learning and the mindsets of every strategist who participates in the process. However, the scenario literature has tended to focus upon the development of scenarios, whilst appearing to give little thought to what makes effective use of scenarios. This paper seeks to make a contribution in this area, by stressing the concept of scenario orientation to support effective scenario use.

## 5. Conclusion

In this paper we have focused on the use of scenarios to support strategic development. We began with a review of the extant literature describing the use of scenarios and found evidence of three activities:

- Understanding the implications of the scenarios
- Developing strategic options
- Evaluating strategic options

We then presented a case study describing scenario use for supporting strategy development within the context of a senior leadership development programme. Within the case study, we presented and reflected upon the process used during early runs of the exercise. One of key observations was that participants rarely made good use of the scenarios that formed the basis of the exercise. We then described a revised version of the process to address the shortcomings of the earlier version. In reflecting on our experiences and the extant literature, we have highlighted the need to pay attention to how we use scenarios, and to give due consideration to scenario orientation prior to use. Scenario orientation is a process of familiarisation with the scenarios that involves understanding the detail and nature of the scenarios. We propose that scenario orientation is likely to be an important step, whenever there is a time lag between scenario development and use, and/or whenever some (or all) of the individuals involved in scenario use were not fully involved in scenario development. These issues of time delay or changing participation may occur in many categories of scenario use, including classroom-based studies, ‘real world’ practice-based settings, and ‘public’ use of scenarios developed and made available by a range of bodies (including government agencies or ‘think tanks’). Scenario orientation helps bridge the gap between scenario development and use; it is a prerequisite to gaining an understanding of what the scenarios might mean for the organisation. Without a good orientation to the scenarios, participants will be poor at the subsequent activities that require their explicit use. In summary, we propose that the process of scenario use should comprise the following stages:

- Scenario orientation: familiarisation with and understanding of the set of scenarios
- Revisiting the vision: focussing on the purpose of the exercise
- Scenario implications: understanding what the scenarios mean for the organisation
- Strategy development: generating strategic options
- Strategy evaluation: comparing the options against a number of criteria, and choosing between them
- Strategy recommendations: presenting the chosen strategic options, with an “audit trail”: explicitly articulating the trail from scenario orientation to strategy evaluation and choice

We noted earlier that little previous research has given any in-depth consideration to the issue of how scenarios are used. The literature review suggests that stage in a strategy development exercise when the scenarios are put to use is worthy of further research; there is a range of views on questions around how to use a set of scenarios once they have been developed. This paper makes a contribution in this area by addressing an important pitfall identified in the literature, namely how the gap between scenario development and scenario use can be ‘bridged’ within the context of a strategy development project. We propose that further research explores alternative approaches to scenario use. We believe that this would contribute to further enhancements of the

process followed in scenario planning projects, and may lead to the avoidance of the pitfalls that are commonly experienced as such projects move from the scenario development phase to the scenario use phase. A number of issues are worthy of further attention. For instance, it is likely that the orientation and use stages of a scenario planning project are significantly affected by both the content of the set of scenarios, and the manner of their presentation to the individuals/groups that are going to use them in the context of strategy development. Further research should address this question to understand the impact of scenario content and presentation on scenario orientation and use. Future studies should reflect the fact that participation in different stages of a scenario project will often vary, and that a set of scenarios are often placed in the public domain and put to use by a set of participants who were not involved in scenario development. Another important issue is the impact of facilitation of the scenario planning exercise; for example, if the exercise is facilitated, the facilitator has an opportunity to ensure that the participants spend time on the orientation phase, and to monitor the depth of the participants' appreciation of the scenarios that they are working with. Many of the important research questions in this area can only be addressed by in-depth access to 'live' scenario planning exercises. We propose that tools such as conversation analysis and video analysis are likely to prove valuable in analysing data from strategy workshops, to consider such questions as the importance of the scenario orientation phase in the context of strategy development.

## Appendix 1

### *Excerpt from scenario 1*

Don's mind wandered back to the previous meeting where they had received the report highlighting that the industry was currently faced with strongly rising demand for its services. A number of significant increases in the prices of fuel (petrol, diesel) ..., combined with increasingly strong arguments from the environmental pressure groups and rising public awareness and concern around 'green issues' was encouraging the public to leave their cars at home whenever possible ... the forthcoming Olympics is looking as if it will require further financial support from the government ... A number of government initiatives to raise 'green' taxes, coupled with increasing oil and food prices, have led to transport use exceeding expectations. First, the road pricing scheme which was rolled out nationally late in year C has led to increasing demand for commuter journeys. Second, the Carbon Tax, introduced for internal flights, led the airlines to increase their prices. This very quickly led to a reduction in demand for flights and an increase in transport numbers particularly on longer journeys.

### *Excerpt from scenario 2*

Don's mind wandered back to the previous meeting where they had received the report highlighting that the industry was currently faced with stagnating demand for its services. A number of significant increases in the prices of fuel (petrol, diesel) and electricity, combined with a stagnating economy had dampened demand for travel by public transport ... The government is continuing its squeeze on finances for a variety of reasons ... [details removed for reasons of confidentiality] ... A number of major projects in the industry have begun to hit serious difficulties ... [details of projects confidential] ... Pressure on staff is felt to be increasing. There is concern amongst some members of the Executive that this will cause industrial relations to further deteriorate, which in turn may well cause trade union militancy to be on the rise. This combination of failures has started to create a general sense, within Organization X, that the organisation has over-committed itself and cannot manage the business.

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