



SCENARIO BUILDING: A SUITABLE METHOD FOR STRATEGIC PROPERTY PLANNING?

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“Whoever does not know how to take care of the future in the present will depend upon the uncertainties of that very future.”

(Seneca 4BC-AD65)

Abstract

The scenario method has been widely used by decision-makers in business, industry and government for over thirty years as an unrivalled technique to learn about the future before it happens.

This paper examines the principles, practice and pitfalls of scenario building with the prime aim of presenting the technique as one singularly relevant to the study of future property investment, development and management decisions and land use policy formulation.

The origins of the approach from its military based beginnings, through the popularised global environmental applications to the current widescale use by industry and commerce are traced. Some definitions are advanced to demonstrate the multi-various nature of the method, and different types of scenario identified to show their adaptability and agility. The general purpose of the technique as a learning mechanism for organisations is explored, and the step-by-step process of scenario building specifically analysed.

Conclusions are drawn which record the success of scenario building in many fields other than property and predict the adoption of the scenario approach as the principal behavioural technique for determining corporate real estate strategy in the future.

Keywords

Future, scenario, building, method, property.

Scenario Building: A Suitable Method for Strategic Property Planning?

Introduction

Nothing is more obvious than the unpredictability of the future. Experience, furthermore, has shown us that no unique forecast can be relied upon. Yet, however good our research methods may become, we shall never be able to escape from the ultimate dilemma that all our knowledge is about the past, whilst all our decisions are about the future. As has been averred, moreover, studying futures is not really a question of knowledge and facts at all, but rather one of conjectures (de Jouvenal, 1967). A special approach towards projecting potential futures, so as to improve present decisions, is thus required. Scenario building is such a technique.

Of recent years, the dominant tradition of property research has been empiricist and retrospective. Considerable effort has been invested in analysing time series data, and performing ever more elaborate calculations, in order to guide current decision-making. Much of the work is derived from other financial markets, and though of improving quality as a comparative and reflective exercise, it can easily overlook many deeper questions. Especially those about the future.

What is argued here, is that instead of attempting to emulate and employ approaches and techniques drawn increasingly from the quantitative tool-kit of economics, the future study of property markets should align itself more with developments in the humanities – in particular, the construction of normative scenarios.*

Taking the general field of futures studies, it has been contended that attempting to impose standards of value neutrality actually runs counter to a paradigm shift that has been taking place in the human sciences. These are moving away from an understanding of science as requiring the objectivity of the disinterested, value neutral observer. Instead, they have come to accept the inevitability of 'interested engagement' (Ogilvy, 1996). The disinterested, dispassionate 'view from nowhere' (Nagel, 1986) is neither possible to attain, nor appropriate as an aspiration.

This paper suggests that 'scenario building' offers a methodology for understanding the whole range of possibilities that present themselves in the fields of property investment, development, management and marketing, and the valuations that result, to organisations and agencies of all kinds. By learning to use and develop such scenarios these organisations and agencies can take actions to make a desirable future occur; quickly adapt to unfavourable environments; and efficiently implement strategies that will succeed in many different market conditions (Porter, M. 1985).

* Normativity in future studies is considered in slightly different terms from how it is generally considered in the social sciences, where norms are taken as codes of behaviour related to values. In future studies, normativity indicates the relations of these studies with specific values, desires, wishes or needs of the future.

Origins

Scenario building has enjoyed a rich, though somewhat chequered, history over the past thirty years or so, in business, government and the military. The use of the term 'scenario' in the context of future studies is generally accredited to one Leo Rosten, drawing upon his Hollywood background, when suggesting to a group of physicists, who were hunting for a name for hypothetical alternative descriptions of how satellites might behave, that 'scenario' was a more dignified expression than 'screenplay'.

The term was taken up, with much enthusiasm, by the legendary Herman Kahn when working at the RAND Corporation in the 1950's on US military studies. As founder of the Hudson Institute, he developed their use during the mid-1960's, and coined his trademark phrase "thinking the unthinkable" during a bitter exchange of letters with the editor of the *Scientific American* about his scenarios regarding the threat of thermo-nuclear war. His joint text *The Year 2000* remains a classic (Kahn & Weiner, 1967).

No paper on scenario building or planning would be complete without mention of the pioneer work performed by Royal Dutch/Shell during the 1970's and thereafter. Successive champions of the methodology included Ted Newland, Pierre Wack, Arie de Geus and Kees van der Heijden. Also during the 1970's, the consulting firm SRI International (formerly Stanford Research Institute) devised a structured approach to scenario writing that supported strategic planning under the leadership of such luminaries as Willis Harman, Arnold Mitchell, Oliver Markley and Marie Spengler. Other consulting firms and agencies offering scenario planning services sprang up, most notably Battelle, Datar, The Futures Group, Global Business Network and Northeast Consulting. Public attention towards the use of scenarios was initially drawn by the publication of the highly contentious *The Limits to Growth* by Dennis and Donella Meadows (1967); early professional impetus was provided by Jay Ogilvy, Paul Hawken and Peter Schwartz in their seminal text *Seven Tomorrows* (1980); and wider acceptance gained by the work of such leading figures as Michel Godet (1986) in France, Martha Garrett (1991) in the States and James Robertson (1983) in the UK.

What stands out is that while the scenario building approach has spread throughout many fields of industry, commerce and government over the past thirty years, virtually no serious use has been made of the method in the world of property. (Perhaps even more surprising is that so few applications have been developed in the field of town planning).

Definition

The term 'scenario' describes a fuzzy concept that is used, misused and even abused, with various shades of meaning attached to it. A dictionary definition holds it as "an outline of a natural or expected course of events", but in the field of futures studies it has gained a more specialised connotation. Perhaps the best way of conveying what scenarios are, and what scenario building is about, is to list some of the most popular descriptions circulating:

'A scenario approach involves developing future environment situations and describing the path from any given present situation to these future situations.'

'Scenario building is an instrument that aids decision-makers by providing a context for planning and programming, lowering the level of uncertainty and raising the level of

knowledge in relation to the consequences of actions which have been taken, or are going to be taken, in the present.'

'Scenarios tend to clarify the present possibilities of decisions by indicating the guidelines for decisions.'

'Scenarios are a synthesis of the different paths (events and actors strategies) that lead to a possible future.'

'Scenarios are descriptive narratives of plausible alternative projections of a specific part of the future.'

'they resemble a set of stories built around plots that make significant elements of the world stand out.'

'..... about making choices today with an understanding of how they might turn out.'

'..... a tool for ordering one's perceptions about alternative future environments in which one's decisions will be played-out.'

'..... a means for investigating important decisions.'

As a direct reference, J. Warfield of the Battelle Institute states:

"A scenario is a narrative description of a possible state of affairs or development over time. It can be very useful to communicate speculative thoughts about future developments to elicit discussion and feedback, and to stimulate the imagination. Scenarios generally are based on quantitative expert information, but may include qualitative information as well."

(The Knowledge Base of Future Studies, 1996)

It is important to recognise that scenarios are not just simulations of various combinations of present realities, they are also experiments in thinking about how an organisation will operate under a variety of future possibilities. Further, that they do not have to capture and represent all the complexity in the world to augment understanding and enhance decision-making – sometimes very simple scenarios suffice in altering decision-makers to new possibilities. Nevertheless, it has been argued that scenario building can be considered: an objective method, as it is mainly based on data and information; a multiple method, since it considers and uses subjective methods (such as Delphi techniques) at various stages; a systematic method, because interrelationships between areas and trends are stressed in many cases; and a synoptic as well as simultaneous method, since a variety of variables are analysed at the same time (Masini, 1993).

Again, it should be emphasised that scenarios are neither predictions nor forecasts. They are simply projections of a potential future.

Purpose

The prime aim of scenarios and scenario building is to enable decision-makers to detect and explore all, or as many as possible, alternative futures so as to clarify present actions and subsequent consequences. They should, thus, be prevented from making strategic decisions before they have done some strategic thinking!

According to Michel Godet (1987), scenarios should aim to detect the key variables that emerge from the relationship between the many different factors describing a particular system, especially those relating to the particular actors and their strategies. In doing so, they provide a context for thinking clearly about the otherwise impossible complex array of factors that affect any decision; give a common language to decision-makers for talking about these factors and encourage them to think about a series of 'what-if' stories; help lift the 'blinkers' that limit creativity and resourcefulness; and lead to organisations thinking strategically and continuously learning about key decisions and priorities (Schwartz, 1996).

Scenarios are said to deal with the core problems of a given futures study (Coates, 1996). Individual trends do not automatically come together to create useful pictures of the future applicable to planning. A primary purpose of scenario building, therefore, is to create holistic, integrated images of how the future might evolve. These images, in turn, become the context for planning, a testing ground for ideas, or the stimulus for new development. A scenario may further be used to describe a future state, and thereby form the basis for policy analysis. Conversely, the scenario may tell a complete story including the possible or probable policy actions and outcomes. In addition to some future state, scenarios may describe the transition from a present to a future state (Coates, *Ibid*). They can also create alternative histories, describe histories that did not come about, or that would have come about if a certain factor had been altered (Inayatullah, 1996).

Ultimately, however, the purpose is not just about constructing scenarios, it is about informing decision-makers and influencing, as well as enhancing, decision-making. In this context, it has been suggested that the purpose of scenario building is to (Fahey & Randall, 1998):

- ❑ Augment understanding by helping to see what possible futures might look like, how they might come about, and why this might happen.
- ❑ Produce new decisions by forcing fresh considerations to surface.
- ❑ Reframe existing decisions by providing a new context within which they are taken.
- ❑ Identify contingent decisions by exploring what an organisation might do if certain circumstances arise.

In this way, scenario building can create a learning organisation. But that organisation must have the will, the insight and the stamina to undertake such a learning process, as well as making available the resources to make the necessary investment to develop the skills required to construct and employ those scenarios to identify, analyse and manage uncertainty. Good scenarios, moreover, always challenge and surprise - bad ones merely confirm current conceptions and perpetuate personal prejudices.

Types

Many valid methods of building scenarios exist. At the risk of oversimplification, however, scenario construction can be divided into two basic forms:

1. **Future Backward** - several significant futures are selected and attempts are made to discover the paths that lead to them.
2. **Future Forward** - based on an analysis of present forces and their likely evolution several sets of plausible futures are projected.

Generalising in the same way, scenarios usually have four dimensions (Inayatullah, 1996):

- (i) **'Status Quo'**; which assumes that the present will continue into the future. Also known as 'more of the same'.
- (ii) **'Collapse'**; which results when the system cannot sustain continued growth, or when the contradictions of the status quo lead to an internal decay or crash.
- (iii) **'Steady State'**; which is based upon a return to some previous time, either imagined or real, that was perhaps quieter, slower or generally less commercial, industrialised or densely populated.
- (iv) **'Transformation'**; which presumes some fundamental change that may be spiritual, technological, political or economic.

Another way in which scenarios can be categorised has been described by Fahey and Randall (1998 *op cit*) as follows:

- **Global scenarios**; which offer leaders a guide to a number of distinctive future environments that each have different implications for long-term investments, operating decisions and options analysis.
- **Industry scenarios**; which enable managers to identify plausible future states of an industry and differences between them, to examine how these distinct industry states might evolve, and to determine what the organisation would have to do to win within each industrial future.
- **Competitor scenarios**; which offer a unique method of identifying and testing plausible competitor strategy alternatives in various circumstances.
- **Technology scenarios**; which help management to make better technological decisions by better understanding the opportunities, risks and choices in preparing for a dynamic, turbulent and uncertain future market.

In terms of methodological approach three forms of scenario planning have been identified (Huss and Honton, 1987):

- (i) **Intuitive Logics**; first described by Pierre Wack (1985) and developed by SRI, Global Business Network and Shell.
- (ii) **Trend Impact Analysis**; used by The Futures Group.
- (iii) **Cross-Impact Analysis**; employed by Battelle with BASICS (Battelle Scenario Inputs to Corporate Strategies) and owing much to Michel Godet (1987).

Perhaps the most recent development has been the formal promotion of what is described as the Strategic Conversation (Schwartz, 1996). Here the scenario process is used as a building block for designing 'strategic conversations' which lead within organisations to collective learning about key decision and priorities. The central role of scenario thinking is emphasised by providing 'laboratories' in which different models of the future can be tested (van der Heijden, 1996).

Process

A variety of processes by which scenarios are constructed have been developed over the years, but certain common characteristics and elements can be discerned. The methodology, for example, shares several important premises:

- ❑ The scenarios should be focussed on the needs of some issue, decision, strategy or plan.
- ❑ The scenarios should be logically structured and internally consistent.
- ❑ The process should be highly flexible and capable of adaptation to the needs of the given situation.
- ❑ There should be a high degree of 'ownership' of the final product.

The methodology described below comprises a seven-stage process which has evolved from a number of different sources. The terminology varies and the number of stages differs in alternative models, but the basic elements and process remains the same.

Step 1 – Task Identification and Analysis

The first step of any scenario building process is to identify the focal issue in question or the specific decision that has to be made. These tasks tend to be of a strategic or tactical kind, because scenarios deal more with longer-term trends and uncertainties, five to ten years hence, rather than shorter-term developments. Typical examples are cited by Wilson (1998):

- ❑ Capital allocation decisions in which the main concern may be the longer-term viability of various business areas or projects.
- ❑ Diversification or divestment decisions, or new areas of opportunity or risk.
- ❑ Major capital investments required for new facilities, or to expand or renovate existing ones.
- ❑ Long-term market strategies, technological acquisition and development strategies; or strategic considerations for other business functions.

It is often at this stage that the time-horizon for the scenario is determined. Information regarding the organisation's existing corporate identity, goals, strategies and present status should also be assembled, along with an analysis of the perceived strengths and weaknesses.

Step 2 – Key Decision Factor Appraisal

The next step is specifying the key factors influencing the success or failure of the decision identified in step one. Wilson (1998, *op cit*) again suggests some common examples:

- ❑ Market size, growth and volatility
- ❑ Competing products or substitutes resulting from new technology
- ❑ Long-range economic conditions and price trends
- ❑ Anticipated government regulation
- ❑ Capital availability and cost
- ❑ Technology availability and capacity

At this stage, all the key decision factors relate to external and largely uncontrollable conditions. More controllable factors internal to an organisation are introduced later in the process once the scenarios have been established.

Step 3 – Driving Forces

Once the key decision factors have been identified, the third step involves listing and exploring the driving forces of change in the macro-environment that influence these key factors. These driving forces are more fully examined elsewhere (Ratcliffe, 1997), but may usefully be summarised as follows:

- ❑ **Cultural** – societal attitudes towards such elements as work, health, education, welfare, crime, environment, equality and leisure.
- ❑ **Demographic** – regarding movements in population growth and change, including such issues as urbanisation, greater life expectation, enhanced opportunities for women, better contraception, changing family size and fertility rates and generally a modernisation of attitudes and ideas.
- ❑ **Economic** – relating especially to the fundamental changes taking place as a result of the end of communism, a technological shift to an era dominated by man-made brainpower industries, a demography never before seen, a global economy, and a period where there is no dominant economic, political or military power (Thurrow, 1996).
- ❑ **Environmental** – with particular regard to the growing acceptance of the philosophy of ‘sustainable development’ together with the steady rise in the number of environmental policy instruments in force and the general movement towards more responsible and effective resource planning and management.
- ❑ **Governmental** – in terms of the changing power structures throughout the world, the polarisation and fragmentation of governance, the emergence of city states, the transformation of the role of the public sector and the challenges offered by the emerging virtual world of cyberspace.
- ❑ **Technological** – in respect of the scope, pace and direction of technological change, the nature and function of the interactive society, the impact of information technology upon work and the way in which urban structure might be affected by advances in communications.

Step 4 – Ranking

The next step is the ranking of the key decision factors and the driving forces of change on the basis of two criteria:

- (i) the degree of importance for the success of the focal issue or key decision identified in step one.
- (ii) the degree of uncertainty surrounding those factors or trends.

The point being to identify the three or four factors or trends that are most important and most uncertain, because scenarios cannot differ over predetermined elements such as the inevitable ageing of given population cohorts (Schwartz, *op cit*).

To be systematic in this ranking process a simple impact/uncertainty matrix, with a basic high – medium – low scoring system, can be employed. From this, attention can be focussed on high-impact / low-uncertainty forces giving a relative certain future, for which planning must prepare; and high-impact / high-uncertainty forces that could provoke significant future change, for which longer-term planning should prepare.

Step 5 – Alternative Projections

The results of the ranking exercise in step four produces the axes along which the eventual scenarios will diverge, and step five is, in effect, the heart of the scenario building process. Determining these axes establishes a logical rationale and structure for the scenarios which can then be examined in depth. It is also at this stage of the process where intuition, insight and creativity play the greatest role. What are called the ‘scenario logics’ thus constitute the rationales that underlie a scenario’s plot or story – the ‘why’ underlying the ‘what’ and ‘how’ of a plot (Fahey & Randall, *op cit*).

The aim and importance of this step are stressed by Schwartz (1996) who states:

“The goal is to end up with just a few scenarios whose differences make a difference to decision-makers. If the scenarios are to function as useful learning tools, the lessons they teach must be based on issues basic to the success of the focal decision. And those fundamental differences – or “scenario drivers” – must be few in number in order to avoid a proliferation of different scenarios around every possible uncertainty. Many things can happen, but only a few scenarios can be developed in detail, or the process dissipates.”

The central challenge in this step, therefore, is to develop a structure that will produce a manageable number of scenarios, in a logical manner, that best captures the dynamics of the situation and communicates the point effectively. No less than two, and no more than four, is the golden rule in deciding the number of scenarios, and the following five criteria have been suggested as helpful in making the selection (Wilson, *op cit*):

- (i) **Plausibility** – the selected scenarios must be capable of happening.
- (ii) **Differentiation** – they should be structurally different, and not simple variations on the same theme.
- (iii) **Consistency** – the combination of logics in a scenario must ensure that there is no built-in internal inconsistency that would undermine its credibility.
- (iv) **Decision-Making Utility** – each scenario should contribute specific insights into the future that help make the decision identified in step one.
- (v) **Challenge** – the scenarios should challenge the organisation’s conventional wisdom about the future.

Using these criteria, it is usually possible to select quite quickly the few scenarios that are most worthy of further development.

Step 6 – Scenario Development

Elaborating or fleshing-out the scenario can best be accomplished by returning to the lists of key decision factors and driving forces of change identified at steps two and three. Each factor or force should be given some attention in each scenario. Sometimes it is immediately apparent which side of an uncertainty should be located in which scenario, sometimes not, but it is the various connections, inter-dependencies and mutual implications that scenarios are designed to reveal (Schwartz, *op cit*).

Common among the most important features found in elaborating a scenario are:

- A highly descriptive title that is memorable and conveys the essence of the plot.
- Compelling story lines that are dramatic, forceful, logical and plausible.

- A table of comparative descriptions detailing what might happen to every key factor or force in each scenario.

The guiding principle in determining the extent of this fleshing-out has been said to be:

“Provide as much – and no more – as is needed to help executives make the decision. Too much detail, and the scenario could lose its focus on decision making.”

(Wilson, *op cit*)

Step 7 – Interpretation

This step poses the fundamental question of how the task, issue or decision identified at step one looks in the light of the scenarios constructed. What are the strategic implications? How does the decision fit into each scenario? What options are suggested? Are any particular vulnerabilities exposed? Is the decision or strategy robust enough? Does it seem to work in only one scenario and thus qualify as high-risk? How can the strategy or decision be adapted to make it more robust? In this way, step seven enables decision-makers to turn scenarios into strategy.

It has been stressed, however, that the development of an effective and robust strategy requires far more than scenarios alone. Additional elements include a strategic vision, clear goals and objectives, competitive analysis and an assessment of core competencies. This seventh step in the scenario process does, however, permit the development of some vital initial strategic insights, although the needs of various organisations will obviously differ (Wilson, *ibid*).

If the scenarios have been built according to the steps outlined above, then a further product from interpretation will be the ability to translate movements of a few key indicators into an orderly set of signposts and implications for the industry or policy field in question. As Schwartz states (*op cit*):

“The logical coherence that was built into the scenarios will allow logical implications of leading indicators to be drawn out of the scenarios.”

Operation

Methods of projecting and analysing possible futures invariably are received with more than a little scepticism, and over the past couple of decades the use of scenarios has met with mixed results. Experiences drawn from a wide range of applications in diverse industry, business and policy fields has produced some common recommendations and warnings as to the operation of scenario building. These can be summarised as follows:

1. Participants

Scenario building is essentially a team exercise, and it is important that team members are drawn from a representative cross-section of the organisation. Top management must be supportive, fully involved, subscribe to the logics evolved and committed to the outcome. A balance of line and staff personnel should be achieved, with staff confined

to supporting line managers in shaping the scope and focus of the scenarios. Specialist or exceptional outside inputs should be invited. Experts on particular topics can be involved at specific stages of the scenario building process, and the part played by 'remarkable' persons intermittently or throughout cannot be understated. A diversity of views is a prerequisite. Participant's individual roles must be made clear at the outset, and a core group, with supporting players, is normally established at the beginning. An author, or pair of authors, should also be assigned to write the scenarios at the start. Ideally, authorship should be the task of an internal decision maker, and not an outside facilitator or consultant.

2. Expectations

Scenarios will not work if they are seen as a gimmick. The expectations must be realistic. Understanding is a more likely outcome than a plan, and it often takes time for an organisation, especially a large one, to learn that the future will not resemble the past. Appropriate time-frames should be set, both for the horizon of the scenarios, as well as time taken to build them. Many organisations find it hard to look far enough ahead, and most underestimate the resources required to conduct the process properly. A particular problem frequently encountered in scenario building is getting decision-makers to confront the key beliefs, challenge conventional wisdom and look at the prospects of 'breaking-out-of-the-box'.

3. Number of Scenarios

It has already been stated that between two to four is the normal bracket of scenarios sufficient to explore the possible futures within which decisions will have to be taken, but there is the danger of always ending up with three scenarios (though, in practice, this is often the case). Inexperience with scenario building tempts those involved to generate a 'good' and a 'bad' at the extremes, and an 'average' in the middle, with a tendency to drift towards the middle, and treat it as the 'most likely' single-point forecast. All the advantages of a multiple-scenario method are then lost. At the same time, it is important to avoid drafting several scenarios that are simply slight variations on the same theme. An underlying danger, moreover, is that the participants endeavour to construct the 'right' answer in a single scenario. The true value of the scenario building exercise is stressed as being the experience of exploring a set of distinct and plausible futures that could unfold (Schwartz & Ogilvy, 1998).

4. Naming Scenarios

It is important to choose an evocative and memorable name for each scenario which succeeds in portraying the essential logic or story driving it. Vivid and meaningful titles stand a much better chance of becoming accepted and used within the decision making and implementing parts of an organisation. Good names become useful shorthand when planners and managers meet in groups; they also stimulate interest and lead to better questions being asked. Each of the scenarios constructed, however, should attract the same degree of imagination and creativity in finding a name, so that the most picturesque is not necessarily the most preferred. (Beatles songs gained a certain cachet in the early days of scenarios – Help, Imagine, Magical Mystery Tour, Yesterday!).

5. Policy

It is vital that the scenario building process is not an isolated one, but is firmly linked into existing planning, managing and budgeting processes within the organisation. At the same time, the distinction between the use of scenarios as thinking and learning frameworks, as opposed to employing them as a means of evaluating actual proposed projects needs to be drawn, and requires careful control. Again, it cannot be overstated that the stories told in the respective scenarios must be relevant to the key policy makers. The main objective, after all, is to alter the mind-set of decision-makers about future possible opportunities, threats and actions, so that they are not caught by surprise.

6. Process

It has been found that the scenario process may start to drift if participants do not have what has been called a “clear road map” (Shoemaker, 1998). This should set definite milestones and deliverables for the process together with the relevant dates, tasks and people concerned. A preoccupation with trends should be avoided as they simply project the past forwards and foster tunnel vision. The main focus should be placed upon examining the drivers of change, and great care taken to avoid internal inconsistencies that might otherwise arise in the scenarios. One of the most problematic areas concerns quantification. It is difficult, but essential, if the scenarios are to be taken seriously within an organisation for numbers to be attached wherever possible. However, quantification can easily reduce the scenario exercise to a simple sensitivity analysis unless there are highly significant qualitative differences between the scenarios (Schwartz & Ogilvy, *op cit*). Nevertheless, probabilities should not be assigned to the scenarios, nor should they be identified or ranked as ‘least’ or ‘most likely’ too early in the process.

7. Conflicts

A well-crafted set of scenarios is said to lure the decision-makers outside the comfort and familiarity of their traditional mind-set and mode of operation. In so-doing, a number of conflicts are described by Fahey & Randall, 1998 *op cit*, which tend to characterise scenario building:

- ❑ **Present versus Future** – decision makers have to respect and reconcile simultaneously present realities with the logic of plausible futures which demands a thorough understanding and analysis of the driving forces of change.
- ❑ **Closed versus Open-Ended** – scenarios can be constructed with very specific strategy decisions in mind, or they may be developed to ascertain which strategy decisions should be analysed.
- ❑ **Grounded versus Imaginative** – good scenarios are both thoroughly researched and thoroughly imagined, whilst bad scenarios rely too much on uninformed speculation and are poorly researched. A balance between detailed study and unfettered creativity needs to be struck.
- ❑ **Intellectual versus Emotional** – in similar vein, scenarios are necessarily an intellectual or analytical activity, but they must also capture the emotions of those who develop and implement them.
- ❑ **Advocacy versus Dialogue** – good scenarios are likely to be forged when individuals advocate their point of view, argue how a plot might evolve, demonstrate the logics that underpin it, and illustrate its implications for the organisation’s current and future strategies. Once scenarios have been selected, however, a reasoned

dialogue among all those concerned is required to secure effective strategic planning.

- **Scepticism versus Expertise** – expertise is naturally essential in the analytical process of scenario building, but because the future can be so different from the past a healthy scepticism should be maintained about the pronouncements, judgements and assessments of experts. This scepticism compels decision-makers critically to reflect upon each scenario's logics and its strategic implications.
- **Quantitative versus Qualitative** – as essentially constructs of the imagination, scenarios are fundamentally qualitative in nature, but some estimate of the extent of quantitative differences between scenarios is important if strategy is to be correctly calibrated.
- **Probability versus Plausibility** – one of the most contentious debates concerning the use and development of scenarios rages around the assignment of probability to the final scenarios. One school of thought (Battelle Management Consulting, for example) argues that not assigning probabilities is a 'cop-out' because probabilities give decision-makers important information on which to base their strategies. Another school (Global Business Network and SRI, for example) believes that assigning probabilities is a 'hangover' from the days when forecasters really thought they could predict the future (Fahey & Randall, *ibid*). Unashamedly, this author views probability assignment as a "dressing-up of prejudices" which can lead to a distortion of the process and a detraction from the basic purpose and function of the scenario building.

Related Techniques

The methodological base of scenario building, as with all future studies, is broad, diverse and comprises a wide range of approaches and techniques. An organisation embarking upon the task of scenario building is, in fact, faced with the problem of choosing the appropriate methodology because there are so many techniques available, not so few. The classic Handbook of Futures Research, for example, devotes over 300 pages to research methods based on diverse theories regarding organisation, systems, decision-making and game theory (Garrett, 1996). Among the dozens of methodologies described in this publication are field investigations, historical surveys, pattern discovery, public hearings, surveys, expert panels, the Delphi technique, gaming, brainstorming, check lists, morphological analysis, cross-impact analysis, imaging, science fiction, trend analysis and extrapolation, projections, regressions, growth curves, correlation methods, systems analysis, modelling, technology assessment, cost-benefit analysis, risk analysis, decision trees and relevance trees. In the years since this handbook was published, many other techniques have been adopted and adapted for use in scenario building, not just from future studies, but also from such related fields as strategic planning and management, technological forecasting and systems analysis (Garrett, *ibid*). In truth, many allegedly new techniques are actually refined and elaborated versions of classic techniques.

The challenge to those engaged in conducting a scenarios building exercise is, of course, to pick the right tool for the right job. Given the complexity of the task, this is not easy, but a strong dose of common-sense and self-discipline helps. Different techniques are required at different times for such varied tasks as creative thinking, information analysis, projection, optimisation or decision-making. Some of the most popularly employed methodologies and techniques can be listed as follows:

- **The Delphi Technique** – named after the ancient Greek oracle, this technique was developed by Olaf Helmer and Norman Dalkey at the RAND Corporation in the 1950's as a non-analytical, and hence subjective, method for gathering information and making decisions about the future. It is based on soliciting and aggregating individual opinions and judgements from selected experts in their fields to arrive at a consensus view as to what might happen in the future. An interactive feedback effect, anonymity of participants and attainment of consensus are the main characteristics of the technique, which in various forms is widely used (and abused!).
- **Cross-impact Matrices** – which involves systematically impacting a data set upon itself or another set in order to study and assess a field of interactions (Slaughter, 1995). It is another subjective method tracking the implications of scenario builders decisions with greater rigour. A further development in what are essentially a family of techniques is the Multiple Approach proposed by Harold Linstone (1984).
- **Teamwork Techniques** – there exist a whole cluster of 'creativity' techniques, which are mostly variants on the familiar brainstorming approach, widely used in scenario building. Another teamwork technique which can be used during the entire scenario process is known as the 'Metaplan Method' (von Reibnitz, 1985). This procedure is claimed to enable all individual development and evaluation stages to be made transparent and visual to the scenario building team as a whole.
- **Environmental Scanning** – this consists of a systematic scanning of the environment for precursors, events, signals of many kinds (the driving forces of change) and interpreting their significance (Slaughter, *op cit*). There are now a number of specialist consultancy firms that provide the basic information service.
- **Systems Thinking** – here, the fundamental principle of systems thinking, that the world should be viewed simultaneously from three levels – event, patterns of behaviour, and structure – is brought to the practice of scenario building. It is argued that:

“profound and rapid learning can occur when scenario planning and systems thinking are employed together”

(Ward & Schrieffer,

1996)

These authors have developed a 'dynamic scenarios methodology' which combines the two approaches.

- **Network Analysis** – given the complexity and interdependency of scenario elements, the approach lends itself to the use of network analysis and associated techniques such as dependency, consistency and stability analyses (von Reibnitz, *op cit*), as well as the application of sensitivity analysis. Too much methodological sophistication, however, can mask and confuse the prime purpose of scenario building.
- **Simulation Modelling** – unsurprisingly perhaps, a range of simulation models have been developed as tools for rigorous scenario building and analysis (Paich & Hinton, 1996). These might not reveal the 'truth' about the future, but used sensibly and selectively they can greatly facilitate and expedite the scenario process.

Increasingly the creativity of traditional scenario approaches will be galvanised by advances in information technology. The very title of one leading contribution to the development of the field, "How Information Technology Helps Scenarios Advance From Consensus to Decisiveness", points the way ahead (Noonan & Tenaglia, 1996).

Conclusion

The future will always be unpredictable, but it has been shown that by adopting the right approach and by using appropriate techniques it can be imagined, planned for and managed. Scenario building, in all its forms, has proved to be a powerful and effective component in the strategic planners tool-kit. Scenarios generate a distinctive kind of knowledge and promote organisational learning; they provide a process for enhancing decision-makers' understanding of how to prepare for and manage change; they increase the comprehension and acceptance of uncertainty by engaging all concerned in creative thinking; and they demonstrate to 'stakeholders' in an organisation how they and it could thrive in future environments that may be strikingly different from the present.

The property industry is constantly cited as being one of, if not the, largest business activity in any economy, and yet its record of foresight is poor. All too often property markets are caught-out by unforeseen events or the unforeseen consequences of planned events. Given the familiar characteristics trotted-out in introductory economic texts regarding durability, heterogeneity, indivisibility, long gestation periods in production, susceptibility to intervention and regulation, and the high costs of entry, exchange, and exit, the property market demands methods of appraisal, analysis, prediction and planning that improve future decision-making in real estate investment, development, management, marketing and valuation.

At one level there is the general need to explore more rigorously, yet more imaginatively, the impacts of cultural, demographic, economic, environmental, governmental and technological change upon international, national, regional and local real estate markets. At another level, there is the more specific requirement to investigate more closely and creatively such obvious property related issues as the changing nature of work and the future of the office; advances in information technology and the potential consequences for retail and residential real estate development; or the effect that new financial instruments and vehicles will have upon the property investment sector. At yet a further level, there is the call to examine more assiduously and inventively the physical and functional futures for particular sites, buildings and localities.

This paper concludes, therefore, where it commenced, by proselytising the role of the scenario approach in property research, and predicting that scenario building, or variants of it, will become the principal behavioural technique for determining corporate real estate strategy within the next few years.

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