

# Managing the concept of strategic change within a higher education institution: the role of strategic and scenario planning techniques

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- *Many higher education institutions in the UK develop strategies based on traditional strategic planning techniques and environmental scanning methods. The case study of the University of Glamorgan presented here illustrates and supports the notion that the reliance on these traditional techniques may not be enough to enable higher education institutions to plan strategically and also balance the pressures of change within the current higher education environment.*
- *The case study focuses on the introduction and use of scenario planning as an additional strategic planning and environmental scanning tool. The outcomes demonstrate that the tool is useful as a means of enabling institutions to evaluate the external environment against their core mission and strengths to ensure that they respond only to those external changes that will either enhance business or represent a significant threat to it.*
- *Specifically the study also illustrates the effectiveness of scenario planning in involving all staff across the organization and encouraging their imaginations and ideas about future strategies and priorities for that organization.*

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## Introduction

*The paradox of complexity is that it makes things exceedingly difficult . . . rapid change is endemic and inevitable in post-modern society — a system which self-generates complex dynamics over and over again.* (Fallon, 1999)

In the past few years, the United Kingdom has witnessed considerable change within its higher education system, including the emergence of new types of institutions, changes to the funding structure and to tuition fees, a move to greater accessibility and transparency, technological advances, e-learning and substantial curriculum developments. The patterns of demand and competition for higher education have changed radically and are likely to change again with the introduction of the government's White Paper and their participation targets for higher education. In this

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rapidly evolving environment it is likely that those institutions that are not willing or able to change to meet such challenges may risk failure. Thus the question of how higher education might change over the next 20 years has become a key issue for those involved in delivering and managing higher education. Institutions can no longer afford to sit back and react to, still less ignore, external influences. There is a growing recognition that organizations will need to re-think and re-shape if they are to improve, develop and compete within the changing HE environment. As Fallon (1993) argues: *'It is a fundamental point of the new paradigm that we cannot expect "the outside" to organise itself to meet our needs.'*

In this context it is clear that higher education institutions today operate in an environment characterized by greater complexity than at any time in the past. In response to this, some higher education organizations are attempting to develop strategic and scenario planning techniques to shape visions as far into the future as 2020. This is becoming increasingly evident through the development of HE organizations such as *Forum for the Future*. It is also seen through the change in emphasis and content of institutions' visions, missions and objectives that now so readily appear on their web sites, in their marketing campaigns and in their strategic plans submitted to the Funding Councils.

However, the practice of strategic management in higher education institutions is highly revealing about the special characteristics of these institutions. It is argued that the appropriateness of an organization's strategy can be defined in terms of its fit or match, or congruence with the environmental or organizational contingencies facing the organization (Hofer and Schendel, 1978). This environment can be understood and studied at different levels such as the task environment (Dill, 1958), the sub-environment (Lawrence and Lorch, 1967) or through different perspectives such as adaptive (Hannan and Freeman, 1977), resource-dependent and cognitive (Child, 1972; Daft and Weick, 1984).

The adaptive perspective suggests that organizations are affected by their environments in ways that their managers or leaders formulate strategies, make decisions and implement them. Therefore, successful managers are either able to buffer their organizations from environmental disturbances or arrange smooth adjustments requiring minimal disruption. Hence the senior management will scan the relevant environment for opportunities and threats, formulate strategic responses, and adjust organizational structure, strategy and processes accordingly (Hannan and Freeman, 1977). The salient assumptions in this perspective are that organizations are viewed as active and not passive and that they can adapt to changes in the environment by making decisions to alter strategy, structure and processes and then implement these decisions (Porter, 1980; Hofer and Schendel, 1978; Miles and Snow, 1978; Ansoff, 1988).

Whilst many higher education organizations appear to attempt to adopt an adaptive perspective of the environment, they are also to some extent constrained by the resource-dependency perspective (Levine and White, 1961). Government regulation and Funding Council support are critical to higher education institutions that *'are embedded in an environment comprised of other organisations which they depend on for the many resources they themselves require'* (Pfeffer and Salancik, 1978).

In this context many higher education senior management teams may experience difficulties creating a fit between a volatile and unpredictable external environment, the internal dynamics and trajectory of their own institution, and the transparency needed in order to secure on-going funding from the government and Funding Councils. This can result in a lack of strategic leadership and can often lead to bland and inclusive strategic statements rather than strategic statements where distinctiveness and differentiation apply (Porter, 1980). At the same time, some academics are reluctant to engage with strategic planning so that an institution's vision and objectives can often be regarded along a

continuum of negativity from indifference to cynicism and resistance to change.

In this demanding environment one of the key challenges facing educational planners and management teams relates to the ability to identify a long-term strategic vision that can be delivered effectively — through best practice strategic management techniques that allow the institutions to balance the pressures of change, continuity and resources. Unfortunately, many organizations are failing to meet such challenges because they continue to base strategic planning on traditional strategic planning processes — those designed to optimize strategic decision-making in relatively predictable environments as opposed to today's uncertain and unpredictable environment.

This paper explores the process of strategic management at the University of Glamorgan and examines how the university has developed environmental scanning and scenario planning techniques as a means of isolating such uncertainty. The university adopted this approach to focus on opportunity-seeking planning rather than operations-driven planning. It also expected to be able to plan for and react to changes within the external and internal environment. In this way it expected to develop a long-term vision to make it unique from competitors and thereby enable it to take more control of its future.

The paper is in four main sections. The first section outlines the University of Glamorgan's strategic planning processes. The second section examines how the university adapted its processes in response to internal and external factors and developed scenario planning techniques to identify the key challenges within the higher education environment. The third section analyses the outcomes of these techniques and examines how such outcomes were translated into key strategies for the university. The last section focuses on the key outcomes of the development of the strategies and analyses the benefits and drawbacks of using qualitative means as opposed to traditional strategic planning techniques to manage a constantly changing and uncertain external environment.

### ***The University of Glamorgan's strategic planning processes***

In 1998–99 the university instigated a new 'strategic management programme' which was specifically designed to identify future direction, strengthen operational control and provide measurable and stretching targets against our fundamental mission. During this time the higher education environment could be categorized, according to Emery and Trist (1965), as 'disturbed and reactive', where a number of factors were leading to changes. Institutions were considering the outcomes of the Dearing Review and simultaneously engaged in a competitive process to attract and retain more students.

Within the context of this environment, the university used traditional planning techniques to develop a Strategic Business Case, based on an in-depth analysis of its internal strengths and weaknesses and the significant external influences and their trends and likely impacts. The business case highlighted 10 key strategic points to consider and led to the formation of a vision, an updated mission statement and eight strategic objectives (known as strategic goals). Senior members of staff, i.e. University Directorate and Deans, were identified as goal leaders for each of the respective goals. The goal leaders identified a series of SMART milestones to provide the basis for measuring and monitoring progress.

The vision, mission, objectives and milestones together with a business case, implementation plan, resource analysis and risk analysis were collated as an Internal Strategic Plan and approved by the Academic Board and Board of Governors. The internal strategic plan was then used as a basis for the development of individual school and departmental plans.

Key to the implementation of this process was the establishment of the university's SMART objectives to form the basis of school and departmental objectives. This would ensure that all school and departmental objectives were explicitly tied to the achievement of the university's strategic objectives. This resulted in a top-down and centralized

approach to strategic planning. The university elected to follow a continuous annual approach to the strategic management programme based on four key elements: appraisal of current situation and current strategy, determination of desirable objectives/strategies, setting direction and implementation. It was agreed that the university's performance against key milestones would be monitored at regular intervals through a system of performance indicator and progress reports.

By the summer of 2001, senior management at the university realized that, whilst these strategic processes were working effectively in themselves, staff were becoming overly concerned with the short-term operational objectives. Moreover, the university was reacting to changes within its environment rather than being proactive, too much attention was being placed on the actual process of planning rather than the management of strategy, and there was insufficient evaluation of the effect of the external environment.

This experience echoed Mintzberg's (1994) argument that *'it is not possible to plan and be strategic simultaneously'*. The university concluded that any move towards long-term strategic thinking and proactivity would require leapfrogging over short-term problems and planning to build a coherent strategic management framework. Such a framework should identify opportunities, clarify its business, role and aims, and take forward a long-term vision to excite and unite all staff and stakeholders.

### **Moving from long to short-term planning**

At the end of the summer of 2001 the pace of change increased as the UK government changed its agenda again and in Glamorgan's case, the National Assembly for Wales published its *Review of Higher Education in Wales*. A number of consistent themes had emerged. Institutions were expected to focus more on widening access and increasing participation, social inclusion and targeting educational underachievement. There was to

be increased attention on excellence in teaching and research, the raising of standards and employability. Institutions were to develop the full potential of communications and information technologies and e-learning. Whilst in Wales there was a push towards cross-sector collaboration and reconfiguration to be achieved, without losing sight of the impact of the globalization of higher education opportunities. At the same time the imposition of mandatory payment of tuition fees by students created an expectation that standards would rise and that greater use would be made of individualized learning and flexible programme design and delivery.

Whilst the university was aware of the scope of changes, arising within this *'turbulent environment'* (Emery and Trist, 1965) there was insufficient recognition of the relative importance and risks associated with such changes or of how such changes would affect the overall vision and mission of the institution. This resulted in a redefinition of the basis of organizational success and led to the university reacting to too many initiatives and not capturing real opportunities. This echoed empirical research undertaken by Choo (2001), who suggested that *'managers who experience higher levels of perceived environmental uncertainty tend to do a larger amount of environmental scanning and therefore end up with too many different strategies'*.

Universities undertake a diverse range of activities and have many varied stakeholders, each of whom can, with varying degrees of legitimacy, claim to own part of the institution and its outcomes. Having a thorough understanding of all aspects of the external environment and the expectations of all

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stakeholders often results in a plethora of conflicting and potentially confusing opportunities for action and consequent change of direction. An organization that seeks to exploit its knowledge of the environment risks trying to react to all such opportunities. Such an organization is likely to lose sight of its own vision and mission, ignore its own strengths and dissipate its energies. This may result in 'strategic drift', a situation in which the organization's strategy gradually loses relevance as it becomes misaligned with the demands of a changing environment (Johnson, 1987). Organizations, therefore, need to have tools or systems to evaluate the external environment against their core mission and strengths to ensure that they respond only to those external changes that will either enhance their business or represent a significant threat to it.

The key success determinants will be the extent to which staff buy into the vision, mission and strategic goals. This buy-in is likely to be enhanced if they have a sense that the university continues to concentrate and reward against its core vision and mission and is selective about new initiatives that it pursues.

The scale, depth and nature of the changes being imposed by the university's stakeholders and the need to be selective about new initiatives all contributed to the university asking itself fundamental questions about its purpose, structure and ability to manage itself in a world where competitive advantage will remain short-lived. The institution concluded that successful strategic management would require a balance to be struck between making effective responses to the external environment and stakeholder requests and maintaining reasonably consistent direction. This would mean taking control and beginning to manage, assess and create future opportunities as opposed to merely responding to them.

With this in mind, it became apparent that the university would need to take control and develop a process of identifying strategic priorities and directions that would bring a degree of certainty in the context of accelerated change and greater uncertainty, and

which were consistent with its overall mission. In effect a tool was required to identify and manage strategic risks and opportunities.

### ***Developing creative thinking and scenario techniques to identify the key challenges***

*Learning organisations . . . work at sense of purpose as a screening device (albeit continually unfinished), realise that the environment is not in the business of doing them any favours, and above all have an insatiable inquiry and learning orientation because they know that it is the only way to survive and prosper in complex environments. (Fallon, 1993)*

If an organization understands the nature of its market and is generally aware of and responsive to changes in the environment as a whole, it can be a successful player and achieve good results. This is underpinned by Miles and Snow (1984) who contend that 'successful organizations achieve strategic fit with their market environment and support their strategies with appropriately designed structures and management process'.

Whilst this is true, Glamorgan's experience of strategic planning during 1999–2001 illustrated that it was not enough to be able to be responsive and adaptive to all changes within the external environment. It was necessary to understand clearly both the current and future organizational context and identify future options and strategies to minimize risk, maximize opportunity effectively and deliver successfully using appropriate resources. Equally important, staff had to endorse or own these options and strategies.

As a first step the institution undertook research on the different planning techniques to help identify its essential characteristics and how these might change in the future. Previously the university had relied on techniques such as SWOT, PEST and Porter's 'Five Forces' model, traditional market research and core competencies to inform the strategic analysis

and business case. Whilst these were beneficial as a means of assessing the environment within which it was operating and generating possible forecasts of the future, they did not provide a means for considering the level of uncertainty within these possible forecasts — i.e. distinguishing the known from the unknown. The techniques were also management-driven and had produced some staff cynicism about the university's vision, mission and goals.

A number of additional planning techniques were therefore explored to determine how the university could supplement these traditional techniques to provide a tailored strategy toolkit appropriate to the level of uncertainty within the external environment and also involve staff across the university. Key alternate situation analysis tools that were examined included scenario-planning exercises, game theory, decision analysis and systems dynamics models. After much thought it was decided to use scenario planning exercises to supplement the traditional planning techniques and identify key future options.

The reasons for choosing scenario planning above the other tools were primarily related to the fact that many other techniques described focused specifically on finding the *most probable future* rather than focusing on identifying strategic decisions that will be sound for all plausible futures. Hence, scenario planning was anticipated to allow the university to identify different possible scenes of the future, become more alert and focused on mission and increase its capacity to respond to unexpected changes and outcomes. This would be in contrast to merely developing predictions based on the highest probability.

Each distinct future is something from which one can learn how to reconcile mission with the environment. In the face of the unknown there cannot be predetermined answers. Thus strategy ceases to be a fixed plan but rather a learning process that leads to continuous improvement in the alignment of the organization to its environment (Schwartz, 1991). In this sense the scenario planning technique would also be a powerful tool in

assisting the university to develop itself as a learning organization.

Research indicates that scenario planning has also been used successfully in a number of other organizations. This includes Pierre Wack's highly acclaimed account of the success of scenario planning in the Shell organization (Wack, 1985a,b). It had enabled the company to anticipate the shift in the world market for petroleum in 1973. Similarly the use of scenario planning by Global Business Network, Motorola had provided a mechanism for considering the range of services and products that might emerge within the future and anticipating key opportunities and challenges that have caught other organizations unawares (Schwartz, 1996). The university was reassured by other successful scenario planning case studies and research that had resulted in positive outcomes, including Fahay and Randall (1998), Van der Heijden (1996), Van der Heijden *et al.* (2002), Mobasheri *et al.* (1989), Schoemaker (1995) and Ringland (1998, 2002a,b).

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*No matter what future takes place, you are much more likely to be ready for it — and influential in it — if you have thought seriously about scenarios.* (Schwartz, 1996)

Another key consideration was that scenario planning offered the opportunity for a wide variety of staff to become involved in brainstorming sessions. Conversely, game theory and systems dynamics models are not as accessible and could prove to be a less effective way of securing staff commitment to the university's future. Using scenario planning techniques would allow staff to understand

the current environment and likely futures — thereby enabling them to envision alternative futures and consider their implications. This underpins Mintzberg (1995), who contends that scenario planning provides a mechanism for organizations and their staff to ‘*see it through to the future*’.

### Scenario planning exercises

Scenario planning (Schwartz, 1991) has risen to prominence in recent years through its success as an instrument for first helping managers address different mental models implicit in their strategic thinking and second helping management and strategic planning teams to ‘*think creatively and innovatively and question assumptions about the future*’. Using Schwartz’s model the university began to undertake an in-depth analysis of its current and future situation. Initially, focusing on the current vision and mission of the university, questions were asked such as:

- Where is the university going?
- What is the key strategy?
- How do we plan to deliver that strategy?
- What internal/external events might influence us or force us to change?
- Under which circumstances might we become incredibly successful?
- Under which circumstances might we be at risk?

Initially such questions were put to governors, senior management and heads of schools and departments to determine the key issues and to explore their ideas on the university’s long-term direction. They were also asked to identify appropriate strategic goals to address such issues. A range of background analysis and information was used to supplement these questions. The analysis and information was collected using traditional planning techniques, namely the following.

### Market analysis

A key market analysis, internal situation analysis and brand perception exercise was

undertaken to provide an understanding of the current student population, demographic statistics of current students, and trends in student population and tastes. It also provided data on market trends in course portfolios, stakeholder perception of the university, and its strengths and weaknesses.

### PEST analysis

An in-depth analysis of the HE environment was undertaken, focusing on the political, economic, social and technological factors that could affect it over the next 20–25 years and identifying key issues that could affect the delivery of the University of Glamorgan’s strategy.

### SWOT analysis

The results of the marketing analysis and the PEST environmental analysis were collated to identify key strengths, weaknesses, opportunities and threats for the university.

The results of all three exercises were then summarized into a paper entitled *Glamorgan in Changing Times*. The paper identified a number of key environmental issues that could have a possible impact on the successful delivery of the vision and mission. These were the changing nature of the student body, student needs and expectations; the changing nature of the workplace (including new methods of teaching and learning delivery and student support); the new paradigm for teaching and learning and competition from new providers, e.g. corporate universities. The paper also raised the profile of the changing nature of research funding including Research Assessment Exercise, the commercialization of knowledge and research, and the impact of changes from business and industry. Finally the paper explored the impact of the Welsh Assembly’s emerging agenda (including local government and funding bodies in Wales), and the impact of the government’s White Paper on Higher Education in England.

Using these key issues as a base, a series of workshops were held for all staff. The aim of

the workshops was to obtain views on the key driving forces that would pose a risk or opportunity over the next 20 to 30 years and to define possible scenarios on where and what the university would be in the year 2025. The workshops began with a scenario exercise where all participants were asked to close their eyes and imagine it was the year 2025. They were then asked to imagine:

- What type of jobs they would be doing and how their current jobs might change?
- What would the university look like?
- Would it still have a campus?
- What types of students would there be?
- What would they be studying?
- How would they be studying?

A number of further scenario exercises were then used to encourage staff to think about the university in 2002 and to consider how it could change in the next 20 to 30 years. In particular, participants were encouraged to think about a series of 'what if' questions relating to the primary functions of the institution:

1. What if the introduction of tuition fees resulted in a substantial fall in recruitment?
2. What if the funding councils announced that universities have to become independent organizations?
3. What if the levels of aspiration with our local community suddenly increased?
4. What if we increased our level of collaboration with our partner colleges?
5. What if employers' expectations of the university changed considerably over the next 20 to 30 years?
6. Would any of these overwhelm us or would we perceive them as opportunities/challenges?
7. How will we manage any change?

Underpinning the research on the cognitive perspective of the strategy process (Eden and Ackermann, 1988; Johnson and Johnson, 2002), the outcomes of the workshop discussions revealed a number of differences of interpretation concerning the nature of the

institution, its core competencies, its current strategic priorities and future prospects. A number of workshops were held in order to develop a consensus. At the end of the workshop exercises it was widely acknowledged that the nature of the student body would change considerably over the next 20 years. The population is ageing and the traditional UK student market for higher education is saturated. All staff agreed that the UK market would increasingly be local in character and the university's industrial and declining Valleys hinterland would need to become more dominant in our recruitment if the government's targets for participation were to be met. Whilst the university had already made a fundamental commitment to help regenerate the Valleys, staff were concerned that the barrier to a substantial widening of participation and increasing recruitment would lie not in the university's policies and practices but in lower than average aspiration, personal confidence and attainment, and a fear of accrual of large-scale debt.

A wide range of possible changes, opportunities and threats were then identified against each of the above issues. Throughout this process staff were encouraged to consider both the predetermined elements (those that are given as fact, e.g. demographic statistics) and the critical uncertainties (those that the university has no power over or 'unknown outcomes or directions', e.g. the popularity and future of e-learning). Predetermined elements are those developments and logics that work in scenarios without being dependent on any particular chain of events (Schwartz, 1996). There were a number of elements identified as being important in the strategic direction of the university that would remain the same regardless of other changes or developments within our external environment — demographic statistics, the university's financial resource and the composition of the local community.

There were also a number of uncertain elements and trends that the university knew could change or develop within the next few years, namely — student trends, needs and



expectations, the student marketplace, the impact of ICT and e-learning, the impact of collaboration, and employer needs and expectations. The process of identifying these predetermined elements and critical uncertainties underpinned research led by Burt *et al.* (2003), whose case study on the role of scenario thinking to identify environmental discontinuities and manage the future highlighted:

*The initial act of identifying what about the future was predetermined and what was uncertain, was an enlightening experience for the participants, leading to the realisation that not everything about the future was uncertain. There are elements of the environment which would continue relatively unchanged for the duration of the next twenty years either because of inertia, because they were already 'in the pipeline', or because of deep and slow changing systematic relationships.*

### Composing scenarios

Following an analysis of the key driving forces, predetermined elements and critical uncertainties, a number of possible future scenarios were developed.

*Further opportunities for growth in higher education are substantial, and some of these opportunities for growth may also be lucrative. So while the purposes and directions of colleges and universities may be defined and limited by external sources, the possibilities for a focused niche are profound.* (Rowley and Dolence, 1997)

To ensure that the future scenarios were as accurate as possible and reflected key elements and uncertainties, a university Strategic Forum was created to discuss and develop ideas and in part, identify possible niche markets. The group consisted of a representative from each school and department and was chaired by the Head of Humanities and Social Sciences. A number of meetings were held to

examine the driving forces identified within the *Glamorgan in Changing Times* paper and through the staff workshops, their predetermined elements and the critical uncertainties.

A member of the senior management team and an expert within the field of the 'driving force' (Schwartz, 1996) were then invited along to discuss these predetermined elements and uncertainties and provide their views on possible future scenarios. For instance, the Pro Vice-Chancellor Academic and the Head of the Centre for Lifelong Learning were invited along to give their views on possible future scenarios related to the 'changing nature of the student body, student needs and expectations'. An example of a possible future scenario identified is shown in **Figure 1**.

### Translating the scenario planning into key strategies

Once the scenarios had been developed, the key questions that had been put to governors, directorate and heads at the beginning of the exercise were then reconsidered, namely: Where is the University going? Where does it want to be in the next 25 years and how does this vision compare to each of the above scenarios? What is the likelihood of the university achieving its vision in each of the above scenarios? What are the potential risks?

The vision and mission were then analysed in relation to the different scenarios in order to identify key risks and consequences. A series of numbers were given to assess the likelihood of the potential risk and the likely impact of each of the potential risks. The overall risk rating was then assessed using the matrix illustrated in **Figure 2**.

Following an analysis of the risk factors associated with the future scenarios, it became clear that the first part of the vision to be a premier UK modern university and the second part to advance within the wider international context, the economic, social and cultural priorities of Wales would continue to be appropriate ingredients to take the university forward within the changing environment.

The University of Glamorgan Accredited College Network

The National Assembly divides Wales into regions and the University of Glamorgan decides to introduce a University of Glamorgan Accredited College Network brand as a means of bringing all of its Partner Colleges under one brand name. Each of the Associate Colleges are allocated franchises in the Accredited College Network of Wales system to cover each of the regions of Wales. This eliminates duplicate programmes, as well as some specific degree programmes, to ensure efficiency of delivery.

All community colleges and local schools join the franchise system. As the system becomes more efficient, the Accredited College Network closes freestanding campuses and leases space in local supermarkets.

The University develops an educational debit card for all students, entitling them to a certain number of hours of online education.

The Supermarket centres are staffed by salespeople who sell a specific body of content knowledge, available over the University of Accredited College Network computer system, and educational enhancements, such as do-it-yourself building a PC.

The student swipes the debit card in the computer and is connected with a program monitored by online 'faculty'. The University continually offers education specials for credit.

**Figure 1.** Possible scenario developed to reflect the changing needs of students.

Likelihood	
One	Very Unlikely
Two	Unlikely
Three	Possible
Four	Probable
Five	Definite
Impact	
One	No action required
Two	Corrective action required
Three	Significant disruption. Recovery takes < 1 year
Four	Severe disruption. Recovery takes > 1 year
Five	Termination of business

The overall risk rating was then assessed using the following matrix:

<b>5</b>	5	10	15	20	25
<b>4</b>	4	8	12	16	20
<b>Likelihood</b>	3	6	9	12	15
<b>3</b>	2	4	6	8	10
<b>2</b>	1	2	3	4	5
<b>1</b>	1	2	3	4	5
	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
	<b>Impact</b>				

1-4	Low risk
5-9	Medium risk
10-25	High risk

**Figure 2.** Likelihood and impact of risk.



This is because it addresses the increasing need for a local and Welsh focus and also the need to maintain its reputation if it is to succeed in an increasingly competitive arena. The scenarios did, however, indicate that the ability to attract and retain sufficient students would be a key risk to the future realization of this vision. This key risk would also be dependent upon a number of uncertainties that may or may not have an impact on student demand. It therefore became apparent that successful delivery of the university's strategic vision would ultimately depend upon the effectiveness of the ability to attract and retain sufficient students and to manage both the internal and external risks associated with this.

This meant that the institution would need to implement a successful change management programme that focused specifically on the changing needs and expectations of students and associated stakeholders, together with the key influences on student choice and demand over the next 20 to 30 years. This is underpinned by Daniel (1999), who stated that the very essence of a university's strategy should start with the student and focus on arranging an effective learning environment for individual study. Following from this, an Internal Strategic Plan was written to take forward the vision and mission and eight strategic goals for the next five years (2003–2008).

The scenario planning exercises reinforced senior management's intuition that the first goal 'to attract and retain sufficient students' was the single most important university goal. The exercises underlined that for a university like Glamorgan, student recruitment underpins all of the other strategic goals, including enhanced research performance, community regeneration and new information systems. This is because it provides turnover and income, an economic multiplier to the community, and generates an activity — academic innovation — that of itself generates new business opportunities. It both underpins and provides a virtuous spiral for new investment and activity.

The scenario planning exercises also enabled the identification of a range of outcomes against the uncertainty surrounding the strategic goal 'to attract and retain sufficient students', which in turn prompted more options for future recruitment, e.g. accredited college network and widening access in the Valleys. It also encouraged the university to expand its flexibility and identified crucial new learning themes in areas of capability where it had not previously placed attention and resources. Some key examples of this included development of an Awards Portfolio Group, identification of areas for investment, the *GATES* project (the establishment of local community centres acting as gates for opening up higher education to non-traditional students), merger plans with the University of Wales Institute, Cardiff and Merthyr Tydfil FE College, and the birth of *E-College Wales*.

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*Scenario planning  
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***Identifying key outcomes: the use  
of scenario planning as a tool  
in strategy formulation***

When the university began its initial strategic deliberations in 1999, it anticipated following Chandler's (1962) model where the strategic goals were identified and resources and action plans put into place to deliver them. However, it has seen its strategic programme move on to take a much more incrementalist view of planning — using scenario planning as a means of attempting to understand the external opportunities and threats and match these to the organization's capabilities. The adoption of this type of scenario planning has resulted in increased staff involvement and responsibility. In carrying out the various steps of the scenario process, staff were able to move their thinking about the contextual environment

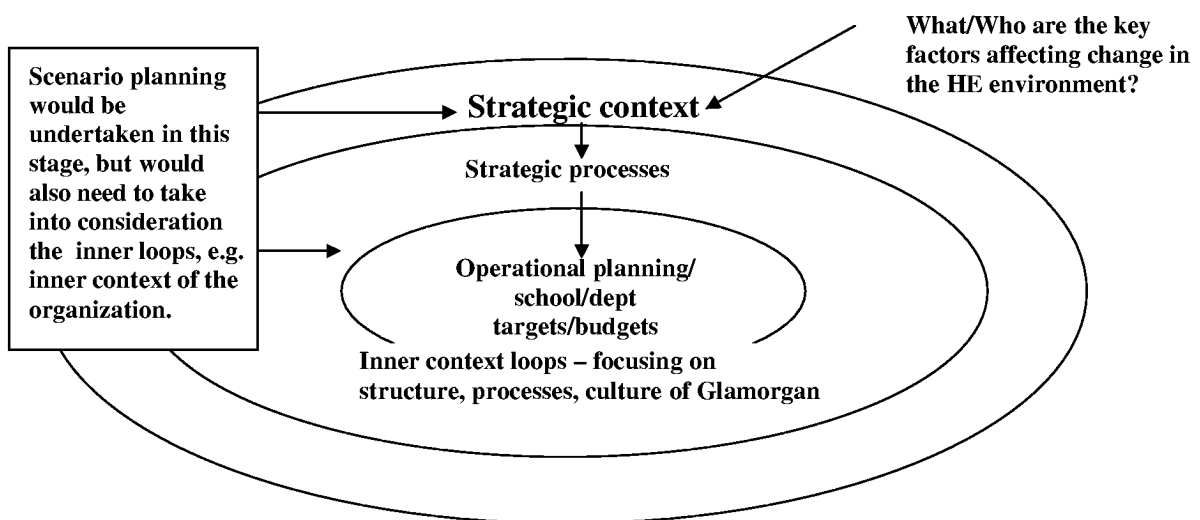
and its possible evolution in ways that would not have been possible using traditional planning techniques alone (Burt *et al.*, 2003).

It is clear that the events taking place within the environment will require universities to reconsider their strategic thinking and their actions to effect strategic change. The use of scenario planning allowed the case study institution to begin to think more creatively, innovatively and self-critically about its assumptions about the future. Scenario planning has also provided a context for thinking clearly about the impossibly complex array of factors that are currently reshaping the higher education environment. This included the Welsh Assembly Government's Agenda and Strategy for Wales, the White Paper on HE, the globalization of HE and the changing needs of students, employers, business and industry.

The use of scenarios has also allowed the university to envision the possible and also think long-term about where it could be. This in turn helped its staff appreciate the appropriateness of the strategic vision and mission, thereby engendering increased staff commitment. There is now a general enthusiasm about the future of the university, how it will evolve to exploit future challenges and how it will impact on its local community. If it is to be successful at delivering its strategic vision it needs to be prepared for and able to react

before unfavourable events take place. Scenario planning has proved to be a sound method as it has allowed the university to identify key uncertainties and put into place strategies to deal with them. One example here is the new *Teaching and Learning Strategy*. The strategy focuses specifically on the diverse nature of the student body and covers all aspects of teaching and learning from traditional classroom based to e-learning and distance delivery. Scenario planning has also provided a means by which the institution is able to identify key trigger events and warning signs that, if tracked, may indicate which future scenario is more likely to be realized. However, scenario planning cannot operate in isolation from all the other processes that occur when organizations make choices. It has to be built in as part of the overall strategic planning processes, as illustrated in **Figure 3**.

Figure 3 illustrates the general process of strategic planning at the University of Glamorgan. The general concepts and direction are established in the outer loop and then delivered and realized in the middle and inner loops. These middle and inner loops together form the internal context and consist of the structures, cultures, processes, behaviours and norms of the university. Whilst scenario planning has proved to be a very important tool for the outer loop in identifying strategic



**Figure 3.** Scenario planning in context (Challenge Forum, 2002).

context, it must also take into consideration each of the inner loops if it is to be successful and effective. This is to ensure that the scenarios take into consideration the importance of the dynamic interplay between the inner context of the organization as well as the outer context. Pettigrew (1988) describes this 'inner context' as referring to the structure, culture and political context within the organization and argues that accounts of strategic change that concentrate overly on the outer context (wider economic, social, political factors) are necessarily incomplete.

### Conclusion

Scenario planning at Glamorgan has proved to be an effective tool for four reasons. First the exercises involved a large number of staff across the organization and gave staff a context within which to consider the university's future and its external environment. Second the scenarios challenged the university to be explicit in its strategies and its long-term aiming point. Third the model is open to challenge from forces that are both innate to it and located in the outside world. Finally the model provided a vehicle for challenging management and staff 'mental models' (Schwartz, 1996) about the university and its future. Thus it allowed the surfacing of key issues and unspoken assumptions about future student markets, student needs and expectations. This approach of placing more emphasis on the role of middle and lower management in building strategic direction differs from much of the strategy research and best practice in the 1970s and early 1980s. Much of it had followed Ansoff (1965) and other approaches (Schendle and Hofer, 1979), which had relied solely on perceptions of the top managers for insight into an organization's strategic intentions.

Thus one of the strengths of the scenario process is that it can help to generate a unified view of an organization in its future because it creates multiple futures and offers multiple ways in which to react to them. However, it

also provides an opportunity for staff to participate in building strategic direction. Moreover, scenario planning has allowed the university to build increased mutual understanding between management and staff and therefore more effective strategic conversations which can in themselves lead to continuous organizational learning about key decisions and priorities. The experience and outcomes of the University of Glamorgan scenario planning have echoed research undertaken by Metabridge Ltd. (1996), which stated that scenarios should definitely not be confused as predictions. At the beginning a number of staff had raised concerns about 'how can we as a university predict the future' and had displayed a negative attitude towards the process. However, this changed quite considerably when they realized that the scenario planning was being used as a vehicle for helping all staff to learn about the future and to identify early opportunities and challenges for the institution rather than to make definitive predictions.

Scenario planning has proved to be a very effective method for the university to take a strategic view of its long-term direction whilst at the same time acknowledging that the environment is unpredictable so that almost any forecast or plan could rapidly be overtaken by events, e.g. the forecast that there will be an increased demand for continuous professional development offerings could rapidly be overtaken by developments in 'corporate universities'. Similarly the forecast to widen participation in the Valleys areas could be overtaken by the introduction of higher tuition fees and reduced government support for students from low income families.

Scenarios are living processes and their success in aiding strategic planning and management at the University of Glamorgan can be largely attributable to the involvement of staff with their imaginations and ideas about the future and their capacity for lively constructive debates and discussions. As Schwartz (1996) stated: '*Scenario planning needs to be intensively participatory or it fails. The staff ownership and involvement in the process*

*ensured that all scenarios developed presented an imaginable coherent future and they all took into consideration variables of interest and potential impact on directions.'*

The establishment of the university Strategic Forum was also a critical success factor because it enabled groups of staff and experts on some of the external challenges to come together and challenge customary assumptions and frameworks. The composition of the key influence diagrams proved to be a beneficial aid in this process because it helped the forum to visualize interconnections and identify possible future maps. However, whilst the involvement of staff has benefited the university, involving too large numbers of staff can have a disadvantage. This is due to the fact that more often than not the resultant scenarios are, in part, formed from people's view of the present. Thus if there are some staff who are negative about the current direction and status of the university the scenarios could provide unrealistic views of the future, which in turn may result in the development or affirmation of the wrong strategies. It is therefore important to ensure that a wide mix of staff are involved in the scenario thinking and that expert views and inputs are also encouraged, e.g. through a mechanism like the university Strategic Forum.

Using the scenario methodology has helped the university to overcome the shortfalls inherent in the traditional approaches to analysing the environment by engaging staff in a learning process.

### **Biographical notes**

*Michael Connolly* was appointed Head of the School of Humanities and Social Sciences in 2000, having previously been Director of the Business School at the University of Glamorgan. Previously he was Head of the Department of Public Administration and Legal Studies at the University of Ulster. Michael has published widely in the field of public policy and administration and has held a number of grants from a range of prestigious organizations. His current main research interests lie in

public sector leadership and regional development and he was one of the founding editors of *Public Money and Management*. He is a member of the Editorial Board of *Local Government Studies* and *Public Money and Management*. Michael has been actively involved in a range of public sector organizations, holding such positions as board member and vice chair of a hospital trust.

*John O'Shea* was appointed Academic Registrar at the University of Glamorgan in 1989, having previously been the Assistant Academic Registrar. Previously he was the Assistant Registrar at Hatfield Polytechnic and an Executive Officer with the Advisory Conciliation and Arbitration Service in London. John has published in *Management and Higher Education* on the topic of e-learning and has written many papers on e-learning and strategic management.

*Leanne Richards* was appointed Manager of the Strategy Office at the University of Glamorgan in 2000 having previously been the Senior Administrator. Prior to that she worked in the University's Centre for Lifelong Learning as the coordinator for the development of information strategy. Leanne took up this post following the successful completion of her degree. Her main research interests lie in the process of strategic management and development in higher education.

### **References**

- Ansoff HI. 1965. *Corporate Strategy*. McGraw-Hill: New York.
- Ansoff HI. 1988. *Corporate Strategy*. Penguin Books: London.
- Burt G, Bradfield R, et al. 2003. *Limitations of traditional approaches to understanding the environment and the role of scenario thinking to identify environmental discontinuities and manage the future*. Unpublished paper presented at an EIASM Organisational Context Workshop, June 2003.
- Chandler AD. 1962. *Strategy and Structure*. MIT Press: Cambridge, MA.
- Child J. 1972. Organisational structure, environment and performance: the role of strategic

- choice, sociology. *The Journal of the British Sociological Association* 6: 1–22.
- Choo CW. 2001. Environmental scanning as information seeking and organizational learning. *Information Research* 7(1) [Available at: <http://InformationR.net/ir/7-1/paper112.html>] © the author, 2001. Updated: 24th September 2001.
- Daft RL, Weick KE. 1984. Towards a model of organisations as interpretation systems. *Academy of Management Review* 9: 284–295.
- Daniel J. 1999. In *Higher Education Through Open and Distance Learning*, Harry K (ed.). Routledge: London.
- Dill WR. 1958. Environment as an influence on managerial autonomy. *Administrative Science Quarterly* 2: 409–443.
- Eden C, Ackermann F. 1988. *Managing Strategy: The Journey of Strategic Management*. Sage: London.
- Emery FE, Trist EL. 1965. The casual texture of organisational environments. *Human Relations* 18: 21–32.
- Fahay L, Randall RM (eds). 1998. *Learning from the Future: Competitive Foresight Scenarios*. John Wiley & Sons: New York.
- Fallon M. 1993. *Change Forces*. The Falmer Press: London.
- Fallon M. 1999. *Change Forces — The Sequel*. The Falmer Press: London.
- Hannan MT, Freeman J. 1977. The population ecology of organisations. *American Journal of Sociology* 31: 929–964.
- Hofer CW, Schendel D. 1978. *Strategy Formulation: Analytical Concepts*. West Publishing Co.: St Paul, MN.
- Johnson G. 1987. *Strategic Change and the Management Process*. Blackwell: Oxford.
- Johnson P, Johnson G. 2002. Facilitating group cognitive mapping of core competencies. In *Mapping Strategic Knowledge*, Huff AS, Jenkins M (eds). Sage: London.
- Lawrence PR, Lorch JW. 1967. *Organisations and Environment*. Harvard University Press: Boston.
- Levine S, White PE. 1961. Exchange as a conceptual framework for the study of interorganisational relationships. *Administrative Science Quarterly* 5: 583–601.
- Metabridge Ltd. 1996. *Strategic thinking with scenarios*. <http://www.metabridge.com/assoc/stratscen1a.html>
- Miles RE, Snow CC. 1978. *Organisational Strategy, Structure and Process*. McGraw-Hill: New York.
- Miles RE, Snow CC. 1984. Fit, failure and the hall of fame. *California Management Review* 26: 10–28.
- Mintzberg H. 1994. *The Rise and Fall of Strategic Planning*. Prentice Hall: New Jersey.
- Mintzberg H. 1995. Strategic thinking as seeing. In *Developing Strategic Thought*, Garratt B (ed.). Harper Collins: London.
- Mobasheri F, Orren LH, Sioshani FP. 1989. Scenario planning at Southern California Edison. *Interfaces* 19(5): 31–44.
- Pettigrew A. 1988. Introduction: researching strategic change. In *The Management of Strategic Change*, Pettigrew A (ed.). Blackwell: Oxford.
- Pfeffer J, Salancik GR. 1978. *The External Control of Organisations — A Resource Dependence Perspective*. Harper and Row: New York.
- Porter ME. 1980. *Competitive Strategy: Techniques for Analysing Industries and Competitors*. Free Press: London.
- Ringland G. 1998. *Scenario Planning: Managing for the Future*. John Wiley & Sons: Chichester, UK.
- Ringland G. 2002a. *Scenarios in Business*. John Wiley & Sons: Chichester, UK.
- Ringland G. 2002b. *Scenarios in Public Policy*. John Wiley & Sons: Chichester, UK.
- Rowley DJ, Dolence MG. 1997. *Working Toward Strategic Change: A Step-by-Step Guide to the Planning Process*. Jossey Bass Wiley.
- Schendel DE, Hofer CW (eds). 1979. *Strategic Management*. Little, Brown: Boston.
- Schoemaker PJH. 1995. Scenario planning: a tool for strategic thinking. *Sloan Management Review* 36(2): 25–40.
- Schwartz P. 1991. *The Art of the Long View: Planning for the Future in an Uncertain World*. Currency Doubleday: New York.
- Schwartz P. 1996. *The Art of the Long View: Paths to Strategic Insight for Yourself and Your Company*, 2nd edn. Currency Doubleday: New York.
- Van der Heijden K. 1996. *Scenarios: The Art of Strategic Conversation*. John Wiley & Sons: Chichester, UK.
- Van der Heijden K, Bradfield R, Burt G, Cairns G, Wright G. 2002. *The Sixth Sense: Accelerating Organisational Learning with Scenarios*. John Wiley & Sons: Chichester, UK.
- Wack P. 1985a. Scenarios: uncharted waters ahead. *Harvard Business Review* Sept/Oct: 73–90.
- Wack P. 1985b. Scenarios: shooting the rapids. *Harvard Business Review* Nov/Dec: 131–142.