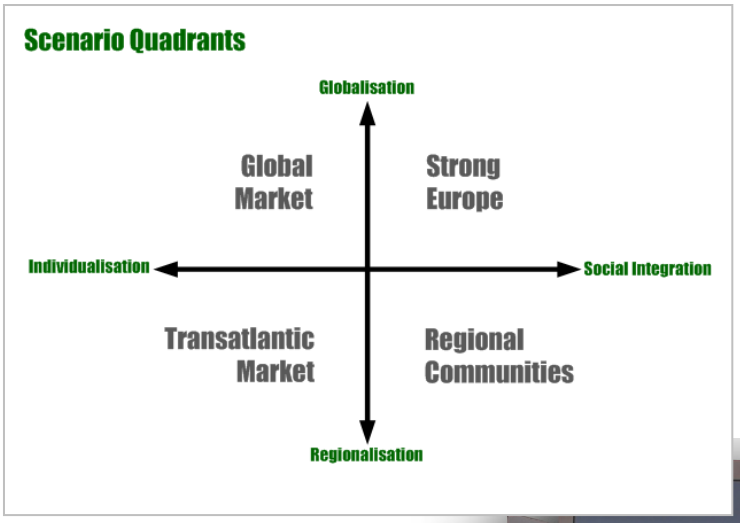


JISC infoNet

TOOLS & TECHNIQUES

Scenario Planning

Contents

What is Scenario Planning?

Scenario planning or scenario thinking is a strategic planning tool used to make flexible long-term plans. It is a method for learning about the future by understanding the nature and impact of the most uncertain and important driving forces affecting our world.

Many of the regular methods for strategy development assume that the world in three to ten years' time will not significantly differ from that of today and that an organisation will have a large impact on its environment: they assume we can mould the future. Scenario planning however assumes that the future can differ greatly from what we know today.

The method is based on creating a series of 'different futures' generated from a combination of known factors, such as demographics, with plausible alternative political, economic, social, technical, legal and environmental (PESTLE) trends which are key driving forces. The goal is to craft diverging worlds by extrapolating these heavily-influencing driving forces. The technique can also include anticipatory thinking elements that are difficult to formalise, such as subjective interpretations of facts, shifts in values, new regulations or inventions.

Predicting is difficult!

Future-gazing and making accurate predictions is notoriously fraught with difficulty. Scenario planning, by using trend analysis as its base, keeping a focus and reigning in the prediction period to somewhere around the 10-year mark, helps build tests of plausibility into the process.

Some Predictions

- **1901**
  The world market for cars is 1 million
- **1943**
  There is a world market for maybe 5 computers - Chairman, IBM
- **1968**
  There is no market for Japanese cars in the USA
- **1977**
  There is no reason why everyone should have a computer - CEO, DEC

It is a group process which encourages knowledge exchange and development of mutual deeper understanding of central issues important to the future of your organisation. Although the method is most widely used as a strategic management tool, it can also be used for enabling other types of group discussion about a common future.

The thought processes involved in getting to the scenarios have the dual purpose of increasing knowledge of the environment in which you operate and widening the participant's perception of possible future events - encouraging them to 'think the unthinkable'. For each of these worlds, appropriate action plans can be considered. Asking the key question, 'what do we need to do (now) to be ready for all scenarios?', can then inform the formulation of strategies to cope with these differing pictures of the future (or at least to address the maximum number of possibilities).

Scenarios provide alternative views of the future. They identify some significant events, main actors and their motivations, and they convey how the world functions. Building and using scenarios can help us explore what the future might look like and the likely changes of living in it.

The Evolution of Scenario Planning

Scenario Thinking has a long history. Back in the 16th Century a Spanish Jesuit theologist and scholar, Luis de Molina, was credited with introducing the concept of 'conditional future contingents' or 'futuribilia' as an explanation for free will, foreknowledge and predestination (Molina 1589, in Malaska & Virtanen, 2005 pg 12). More recently, in 1960s France, the Futurist Gaston Berger reflected in his work 'Phénoménologies du Temps et Prospectives' (trans. Prospective methodologies) on contextualising past and present events with

a view to making choices in alternative futures (Berger, 1964). Referring to Molina, the French political philosopher Bertrand de Jouvenel, took the idea of 'futuribilia' and combined 'future' and 'possible' into a new term called 'futurible' (de Jouvenel, 1967 in Malaska & Virtanen, 2005 pg 12). He defined 'futuribles' as 'a fan of possible futures', explaining that 'the mind cannot grasp with certainty... but it can conjecture possible alternatives' (de Jouvenel, 1967 in Malaska & Virtanen, 2005 pg 12).

According to Fahey and Randall (1998 pg 17) the notion of scenario development is commonly attributed to Herman Kahn during his tenure in the 1950s at RAND Corporation (a non-profit research and development organisation) for the US Government, and his formation of the Hudson Foundation in the 1960s. Kahn, described variously as a military strategist and systems theorist, is also known as the most celebrated and controversial nuclear strategist. He encouraged people to 'think the unthinkable', first about the consequences of nuclear war and then about every manner of future condition (Bishop, et al 2007 pg 10).

Kahn's insights into the benefits of using futures or indeed scenarios as strategic planning tools stretched further than military matters and Scenario Thinking began to emerge everywhere from politics and economics to public policy. These techniques were also gaining credence in the corporate world and in the 1970s both Royal Dutch Shell and the Consulting Firm SRI International contributed to the creation of a more formalised approach to Scenario Thinking that could be more readily linked with strategic planning (Fahey & Randall, 1998 pg 17).

Pierre Wack, head of Corporate Planning for Royal Dutch Shell, discovered that the oil industry was running on two very volatile assumptions; firstly that oil would remain plentiful and secondly that prices would remain low. He presented the Shell senior management with stories or scenarios that would change their perception of the need to plan for many different possible futures. In one scenario, an accident in Saudi Arabia led to the severing of an oil pipeline, which in turn, decreased production and thus supply, creating a market reaction that increased oil prices, allowing OPEC nations to pump less oil but make more money. When confronted with this possible view of the oil industry's future the senior managers decided to change their approach to strategic planning and re-think those initial assumptions that oil was plentiful and prices would remain low. On further investigation it was discovered that OPEC were in fact intending to increase their oil prices and when the Oil Shock of 1973 hit Shell was the only major Western company (or nation for that matter) that was prepared. Within two years, Shell moved from the eighth biggest oil company to the second (Willmore, 2001).

Faced with a multi-billion dollar decision about building a natural gas platform in the North Sea, Wack's protégé, Peter Schwartz, continued the Scenario Thinking campaign at Shell. At the time most natural gas came from the Soviet Union and it was with great foresight that the scenario planners at Shell established 'the Greening of Russia' scenario that investigated the possible effect on natural gas prices if communism fell and democracy and a free and opening unthreatening natural gas marketplace prevailed. While the world was shocked by the fall of communism in 1988, Shell had in fact been planning for it years before (Willmore, 2001).

Further Reading

Shell site on Scenario Planning
http://www.shell.com/home/content/aboutshell-en/our_strategy/shell_global_scenarios/what_are_scenarios/what_are_scenarios_30102006.html

It is not surprising then that Shell began to lead the commercial world in Scenario Thinking and by the 1980s most large organisations were beginning to take a more strategic approach to planning for the future (Diffenbach, 1983). Large corporations began to take notice of Schwartz's techniques and the apparent success of Scenario Thinking in a business context and in recent years scenario planning techniques have been emerging in every sphere from industry to academia.

Potential Uses

Scenario thinking can be used at several levels within an organisation, and in many different contexts, whether for specific projects or for overall strategic management. Some of the approaches are outlined here.

Scenario Planning: Key Characteristics

A methodology for strategy development useful for organisations, programmes or projects acting in a highly dynamic environment taking complex and often risky decisions

Provides rigour as well as opportunities to draw upon the creativity of those involved, resulting in new views and interpretations on important external developments

Typically involves the development of visual representations of possible futures

Creative yet structured approach is popular with marketing managers, programme managers and product developers that are looking for new markets, ideas, services or projects

Create a stimulating, joint context

Discussing scenarios with colleagues within your organisation or in the wider sector can lead to new insights on strategy or direction and can also flag up possible constraints that might be encountered.

The scenarios included in this resource can be used to answer questions about:

- Needs and added value of the programme (from the perspective of each scenario)
- Programme goals and organisations
- Constraints and obstacles

For this use you need to concentrate on the 'Generate Options' step.

Risk analysis

Generic and specific scenarios can be used to identify risks at a project, service or technology level. The risk analysis can start with generating comments from a diverse set of stakeholders in the different scenarios. If the stakeholders do not participate in the workshop a separate brainstorm on their profile and a warming up exercise living through new beliefs and values should be incorporated into the workshop. In order to secure a broad holistic analysis the workshop facilitator should prepare a list with potential problem categories. A proper (full-blown) risk analysis combines elements of the workshop generate option (risks from the perspective of several stakeholders and identifying potential actions to minimise risks) and test options (impact analysis of the risks and wind-tunnelling action).

Generate ideas

For some projects and services the 'Generate Options' step will lead to more creative ideas.

Other projects/services might need a more focused programme working on a scenario specific design of the educational process and scenario specific profiles of future user groups (staff and students). Based on these processes and profiles they will identify (select, model) scenario-based requirements for services, software, technologies etc (scenario-based design).

Testing or 'wind-tunnelling'

Project results can take several forms - they can be ideas, requirements, solutions. Results can be tested using generic or specific HE scenarios. In a test workshop project members use the scenarios to identify possible improvements, new possibilities and constraints (risks). The most valuable insights are used to improve the project results. In order to run a successful test it is essential to have a list with specific and clearly defined options. (Again, for rough generic ideas we recommend the use of generic, Level 0 scenarios. For specific ideas we prefer the use of one of the sets Level 1-3). This process can grow to a formative evaluation of projects.

Scenarios can be used as:

- 'containers' or receptacles for the topics/issues (or drivers) and the 'string' or groups of related activities
- tests for consistency - making iterations to ensure contents are viable and that they are internally consistent. The scenarios can be refined over a period of time as participants in the process develop their ideas

There are a number of benefits that can be gained from scenarios including the additional insight they can offer as well as the variety of perspectives on what the future could be.

Successful Scenario Planning

Scenario Planning sits alongside a number of other tools that can be useful in the strategic management process and some of these are featured in our Tools and Techniques library.

Other core infoKits that can usefully use this technique include Risk Management (the scenarios being used to identify possible risks), Portfolio Management (the scenarios being used to shape your portfolio) and Change Management. Our Change Management workshops include a rich computer simulation model which can be used to investigate different scenarios for a specified problem. Scenario Planning can also be used to complement other approaches such as contingency planning and sensitivity analysis.

Related resources

Tools & Techniques Library
http://www.jiscinfonet.ac.uk/tools

Risk Management infoKit
http://www.jiscinfonet.ac.uk/InfoKits/risk-management

Change Management infoKit
http://www.jiscinfonet.ac.uk/infokits/change-management

Portfolio Management infoKit
http://www.jiscinfonet.ac.uk/infokits/portfolio-management

Contingency Planning
http://www.jiscinfonet.ac.uk/infokits/project-management/contingency-planning

Sensitivity Analysis (Wikipedia entry)
http://en.wikipedia.org/wiki/Sensitivity_analysis

Change Management workshops
http://www.jiscinfonet.ac.uk/events/change-management-workshops

Ten Tips for Successful Scenarios

1. Stay focused
2. Keep it simple
3. Keep it interactive
4. Plan to plan and allow enough time
5. Don't settle for a simple high, medium and low
6. Avoid probabilities or 'most likely' plots
7. Avoid drafting too many scenarios
8. Invent catchy names for the scenarios
9. Make the decision makers own the scenarios
10. Budget sufficient resources for communicating the scenarios

(from 'Plotting your Scenarios', Ogilvy and Schwartz)

...and some traps to avoid

- Don't treat scenarios as forecasts
- Don't construct scenarios based on too simplistic a difference - such as optimistic and pessimistic
- Make the scenarios global enough in scope
- Ensure you focus the scenarios in areas of potential impact on the enterprise
- Treat scenarios as an informational or instructional tool rather than for participative learning and/or direct strategy formation
- Ensure adequate process for engaging management teams in the scenario planning process
- Don't stint on the imaginative stimulus in the scenario design
- Use experienced, or at least well-briefed, facilitator(s)

Scenario Sets

In 2007, JISC contracted CIBIT (http://www.cibit.com/) to develop a scenario toolkit based on their existing work across European business, adding an education and more specifically IT perspective to their generic scenarios by running a series of pilot workshops and synthesising participants' contributions.

The outputs from this pilot work have been further synthesised and are presented here to download and use. In addition, JISC infoNet ran their own event to provide a final detailed layer in narrative/story format which further detailed thoughts on the wider learning landscape (as opposed to just considering Higher Education) and what services might look like in each of the four futures. The various collated 'scenario sets' are

available to download here, as are packs for each quadrant (covering all levels) (packs comprise zip files containing PDF format documents).

You can take whichever level of detail you want as a starting point, depending on the scope and scale of the problem you're looking to address. The 'Level 0' outputs are derived from the material collated by CIBIT from a range of European business, and these form the generic foundations of the other scenario sets. Level 1 synthesises thoughts from the JISC pilot workshops on the characteristics of the Higher Education environment in each of the generic scenarios, and Level 2 further drills down to consider the nature of IT in each of these HE worlds. The final detailed narrative, Level 3: 'The Tanfield Scenarios' documents the output of the JISC infoNet event, which was held in June 2007 on the world's oldest railway at Tanfield in County Durham.

You can download a pack of summary slides (http://www.jiscinfonet.ac.uk/tools/scenario-planning/summaries.zip) providing a high-level overview of each quadrant at each of the four levels.

By way of example as to the further use of these scenario 'beds', JISC infoNet subsequently used the Tanfield outputs as the basis for a workshop (http://www.jiscinfonet.ac.uk/workshops/ecdl-2007/index.html) at the European Conference on Research and Advanced Technology for Digital Libraries, using the technique to consider the strategic implications of emerging technologies and pedagogic approaches for the library community.

The Scenario Sets

Level 0 | Four Futures For Europe: *Generic scenarios compiled from a 2004 European scenario study*
http://www.jiscinfonet.ac.uk/tools/scenario-planning/set0.zip

Level 1 | HE Scenario Skeleton: *Synthesis from the JISC pilot workshops*
http://www.jiscinfonet.ac.uk/tools/scenario-planning/set1.zip

Level 2 | IT in the HE Scenarios: *Further exploration of the role and nature of IT in the HE scenarios*
http://www.jiscinfonet.ac.uk/tools/scenario-planning/set2.zip

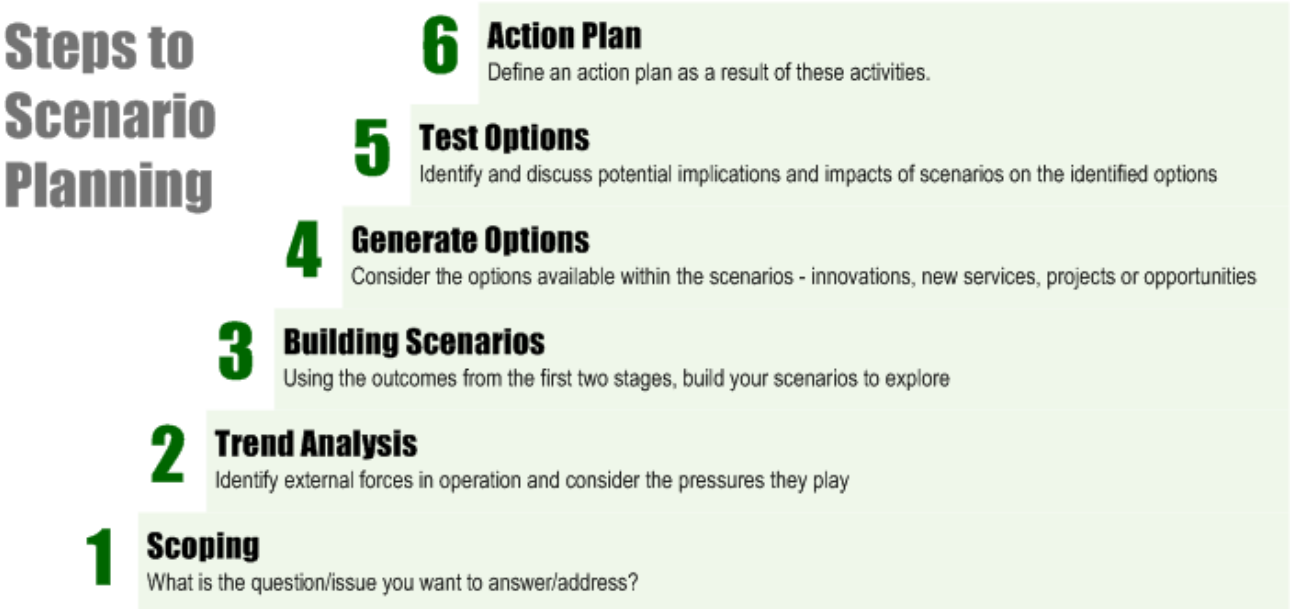
Level 3 | The Tanfield Scenarios: *Narrative outputs encompassing the wider role of learning providers and the nature of lifelong learning*
http://www.jiscinfonet.ac.uk/tools/scenario-planning/set3.zip

You can also download the resources by ***quadrant***
http://www.jiscinfonet.ac.uk/tools/scenario-planning/quadrants

However you use these materials, or even if creating your own scenarios from scratch, bear in mind these outputs are not forecasts but simply a sketch of a possible future, the intention being to get you to 'think outside the box' and consider the fit of your strategy into these future possibilities. As with any future-gazing, factors in the present can radically change future possibilities - so make sure you keep reappraised of your trend analysis to verify the plausibility of your scenarios.

'How To...': A Step-by-Step Guide

There are a number of approaches to scenario planning and the wide range of literature available covers a range of suggested steps which vary in number and priority but there is a high degree of commonality which we've incorporated into this step-by-step guide. There are a range of activities and techniques referred to that you can apply to the tasks, and we've covered some of the best ones in the subsequent 'Applying Creativity' section. Some steps also include downloadable workshop structures for you to take away, tailor and use.



Scoping

What is the question/issue you want to answer/address?

Before you launch into a scenario planning exercise it is vital that you scope the situation first. By going through a scoping exercise you will be able to ascertain whether or not your situation and what you are trying to achieve are best suited to being applied to a scenario planning activity.

You may discover, for instance, that your issue involves only small changes or a few elements in which case it may be useful to apply a method other than scenario planning - which traditionally considers situations on a larger scale. The core issues and problems to be addressed can be identified at this stage. Identify the key decision factors (what would you like to know about the future in order to make a decision?). You will also be able to identify the emphasis of the process on the testing of existing ideas, the generating of new ideas, or the integrating of elements into a coherent strategy.

Spending time from the outset on identifying where you are and what you are hoping to get out of an exercise such as this can bring benefits at later stages. You may find it useful to stage a 'mini' workshop or conduct a small number of interviews within your organisation in order to define what you want out of the situation and what your ambition is for it. You can also identify what your playing field or solution space is going to be and set out the quality aims of the project. It is also useful to agree on the overall assumptions that will be made for the basing of the scenarios.

Trend Analysis

In order to make any kind of prediction of what might happen in the future it is important to have an understanding of what is happening now - within the sector, the country or globally. The best way to do this is to monitor and analyse trends and scan the current environment. There are a number of tools available to support you in this activity - a particularly useful one is PESTLE (Political, Economic, Social, Technological, Legal and Environmental) analysis to help you to identify the different forces in play in a particular situation.

We use PESTLE analysis in a number of our resources and further background is available in the tools catalogue.

Related Resource

PESTLE Analysis
http://www.jiscinfonet.ac.uk/tools/pestle-swot

The PESTLE approach can be known by a number of different acronyms including PEST, STEP and SEPTED (socio-cultural, economy, politics, technology, ecology, demographics) but generally they all follow a similar framework and identify similar issues. The analysis can prove to be a very useful tool as it offers a wide ranging framework from which to build the scenarios.

It is important that the analysis and scanning activities are as thorough as possible in order to identify and measure the impacting factors that need to be considered and to provide the best possible conditions in which to generate the scenarios.

Hold comprehensive interviews/workshops about how participants see big shifts coming in society, economics, politics, technology, etc. Assess to what degree these trends will affect your situation. Describe each trend and how and why it will affect the organisation. You may find that using a technique such as brainstorming works well in recording group thinking and generating quantities of ideas in this type of analysis exercise.

Once the forces have been identified it is useful to rate them in order to gauge their potential influence and impact - it may be that your organisation cannot influence what is happening but it may well feel the impact when it does.

Building Scenarios

Once you have undergone all of the preparatory work you are in a position to begin to build the scenarios.

In this case, you may want to use one of the various levels of detail already presented here as the Scenario Sets, given they build from a generic, well-accepted set of global scenarios, up through higher education and ICT to lifelong learning and learning providers. You can use them either as they stand or add further refinement or a particular topical slant to them.

If you are refining these, or building your own scenario set, you can at this stage produce several examples of worst case and best case scenarios - it's often quantity rather than quality that is useful at the initial stage as you can refine, amend and reduce as a result of discussions in your group as you go along. You may find that a brainstorming or similar technique can help at this stage. There are several approaches to scenario building available; we find the following approach useful.

Workshop Plan

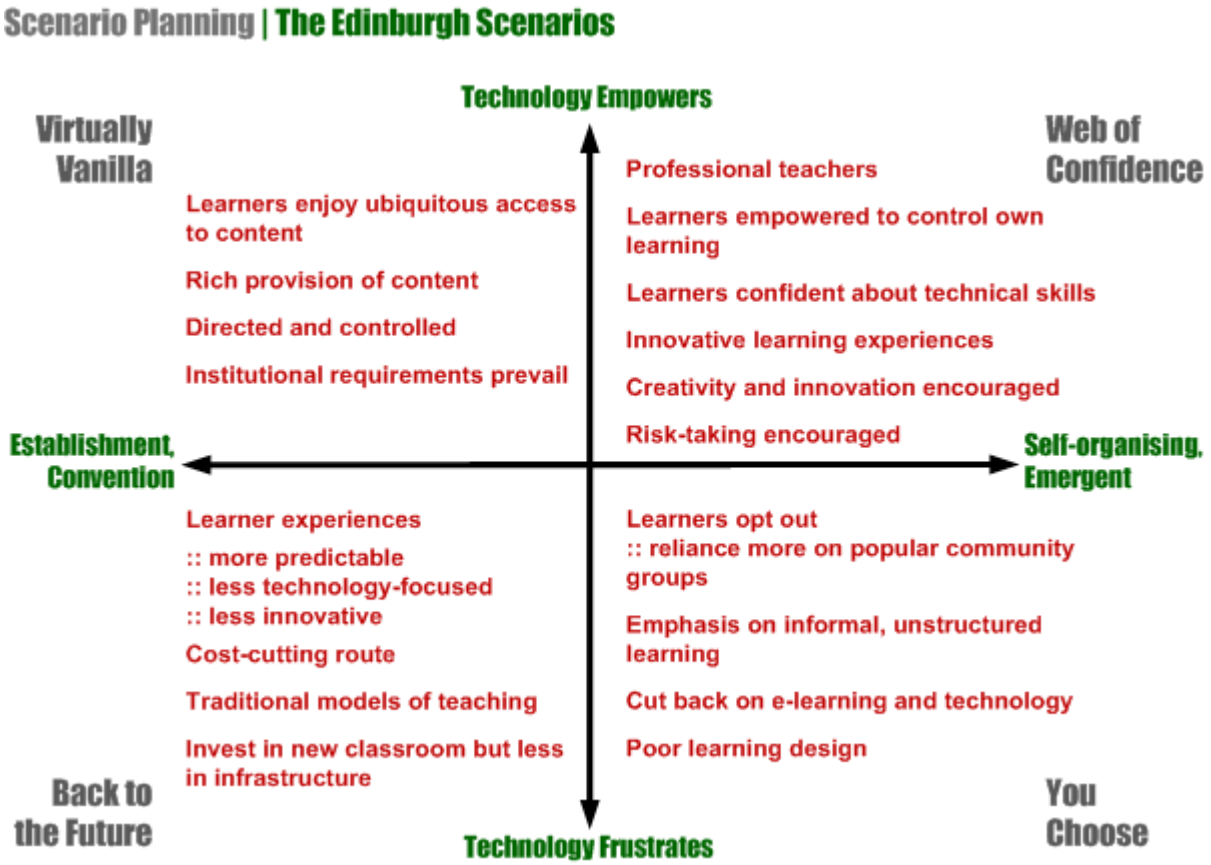
We recommend running a workshop-type event if you are developing or enhancing existing scenario sets. A suggested workshop plan is included here.
http://www.jiscinfonet.ac.uk/tools/scenario-planning/develop-scenarios-workshop.doc

The scenarios are constructed by identifying the main driving forces behind the trends identified during the trend analysis stage. Each driving force has an opposing force, therefore effectively forming a pair. The two most important pairs become the axes that carve out the scenarios resulting in 4 scenarios.

The trends are then mapped onto the scenarios. In order to give a realistic dimension to the scenarios, and help the participants feel actively engaged, you can apply a mix of storytelling, visualisation and enactment

techniques. Immersion into the scenario by participants is the best way for the potential impact and consequences of it to be experienced.

The example below shows the 'Edinburgh Scenarios' - four global perspectives that could inform the future of e-learning which were developed by an international panel.



Generate Options

In this stage options are generated for each of the identified scenarios. The team involved in the scenario planning activity can, depending on the scope of the project, identify new and innovative services, technologies, markets, partnerships or processes that can be applied to the scenarios.

There are a number of activities that can help support this exercise, the News Headlines activity can be an ideal way to stimulate ideas and think about the issues involved and the potential influences and impacts.

Generate options to:

- Define new services, courses, products
- Select new technologies
- Focus skills development
- Develop new strategies

One useful technique to help you map the options generated and move into testing their feasibility is to use the **COCD Ideas Matrix**, named after the Belgian foundation who created it (*Centrum voor de Ontwikkeling van het Creatief Denken* - http://www.cocd.be/).

Ideas are classified as follows:

Blue ideas. Normal ideas, standard procedures - you don't require a separate workshop/activity to come up with these.

Red ideas. Original, innovative but realistic in ambition.

Yellow ideas. Very creative and inventive but not yet feasible.

This method is very similar to the Boston Matrix (http://www.jiscinfonet.ac.uk/tools/boston-matrix) approach, which can be used as an alternative.

Activity Plan

- After a short introduction to the scenarios and activities based around 'living in the scenarios', break into four groups.
- Each group works with only one scenario in a 'mini-workshop'.
- Brainstorm the essentials of the scenario.
- Generate options for this scenario.
- Run an optional second round using brainstorming/brainwriting techniques to get even more ideas.
- Identify the best ideas (5-7 ideas).
- Present a short elaboration of the ideas in an 'elevator pitch' or information market format.

Download a more detailed workshop plan here - http://www.jiscinfonet.ac.uk/tools/scenario-planning/generate-options-workshop.doc

Test Options

Identify and discuss potential implications and impacts of scenarios.

Having generated new or existing strategy elements, services, technologies, markets, partnerships or processes to link to the scenarios it is then important that they are tested (or 'wind-tunnelled') for robustness. The central question to be answered is 'how well will these ideas work out in the four scenarios'.

This is an iterative process and can often offer a better understanding of the way that ideas can be further developed and implemented. A suggested approach for establishing this is to first brainstorm the issues and possibilities and then follow this up with structured discussion within the team or group in order to ask appropriate questions and seek answers in order to identify and rate enabling and constraining factors. The results can then be summarised in an 'option table'. The example overleaf shows the use of a 5-point grading scheme, using + and - to denote positive or negative consequences (i.e. the scale is ++, +, 0, -, --).

An alternative approach to the 5-point scale is the use of the Boston Matrix (http://www.jiscinfonet.ac.uk/tools/scenario-planning/boston-matrix).

Activity Plan

Set up a workshop for participants to test the options generated in the previous stage (new products, services, strategies, etc) against each of the scenarios.

Depending on time, number of participants, scope, number of options to test, etc, there are a number of options you have about how to organise the group. For smaller groups they could work as one collective team testing each option against each scenario in turn. For larger scale, you could divide groups into scenarios, so they test each option against their given scenario, or into options, where they test their given option against each of the scenarios (this does require knowledge of each scenario as a pre-requisite).

The intended outputs of such a session are to have created an Options Matrix (or equivalent, such as the Boston Matrix) for each option against the four scenarios. Added value is achieved if you can also improve the definition and detail of the best options along the way.

Download a more detailed workshop plan here - http://www.jiscinfonet.ac.uk/tools/scenario-planning/test-options-workshop.doc

Example of a test result

Energy-saving Options	Scenarios: Cautious World	Future Unlimited	Satisfied Citizens	Challenging World
Household consumption savings	++ hot issue, saving money	0 people don't care	++ ecological consciousness, saving reasons	+ reduction of costs
Savings in building blocks & service centres	++ official saving policies	0 installation of new technologies, but no cost reasons	++ ecological consciousness very important	+ cost reduction, also with new technologies
Energy audits	++ saving & competition reasons	+ cost cutting measures due to high consumption	++ environmental policies, advantages by labels	+ modern energy management, labels
Taxation and subsidies	++ saving policies, EU regulations	+ new income for governments, no subsidies	+ taxes on heavy energy use, new technology subsidies	+/++ national regulations

Household consumption savings option:
Example summary of a test options debate.

Cautious World:

Consumers willing to save energy because they're sensitive to ecological consequences but they don't have that much money to spend. A majority (80%) will respond to government energy promotion campaigns if the investments are small and payback time is short.

Future Unlimited:

Energy bills for most households no big issue. Energy saving can only be sold if the design is consistent with the consumer's lifestyle. Government campaigns will only reach a limited group of consumers (eco-consumers and the poor). In this world, integrated energy systems will have more success because they deliver a more comfortable living environment.

Satisfied Citizens:

Consumers are also very willing to save energy because they are sensitive to ecological consequences of energy use. A majority of consumers (70%) will respond to messages from energy promotion campaigns.

Challenging World:

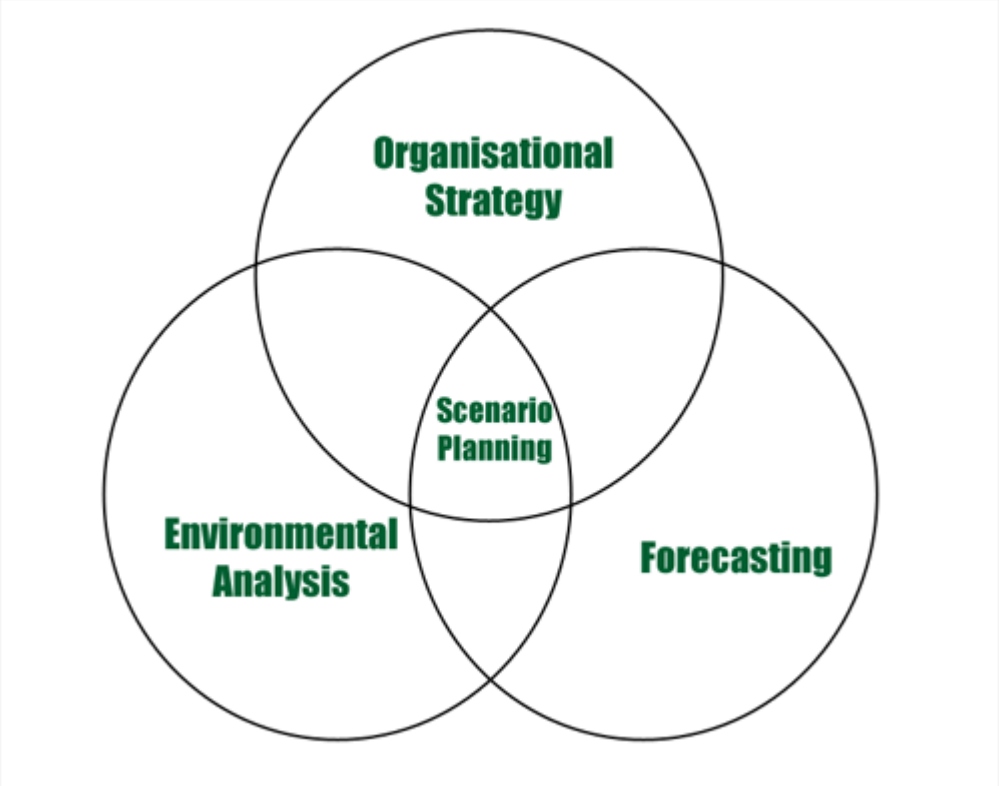
Almost all consumers are open to ways to save money, although saving strategies for households that need big investments and long payback periods are unpopular because of the economic situation.

Action Plan

What should we do (or not do) to be successful in this scenario?

Having worked your way through the other steps it should now be possible to establish an action plan in order to move forward. The action plan will be defined based on the test results, the internal ambitions of the organisation, as well as the strengths and weaknesses that have been identified.

Typically, your scenario planning activity fits neatly in the overlap between organisational strategy, environmental analysis (your PESTLE) and more definite elements of forecasting (such as planned student numbers or likely grant allocations), although there may be less obvious connection with these if using the technique for a more localised issue or project.



If you have undertaken Scenario Planning as a strategic tool, you can therefore use your resultant action plan as a mechanism to influence your operation towards achieving your strategy - this is an area that JISC infoNet will be addressing over the coming months; more about this in the 'Moving Forward' section.

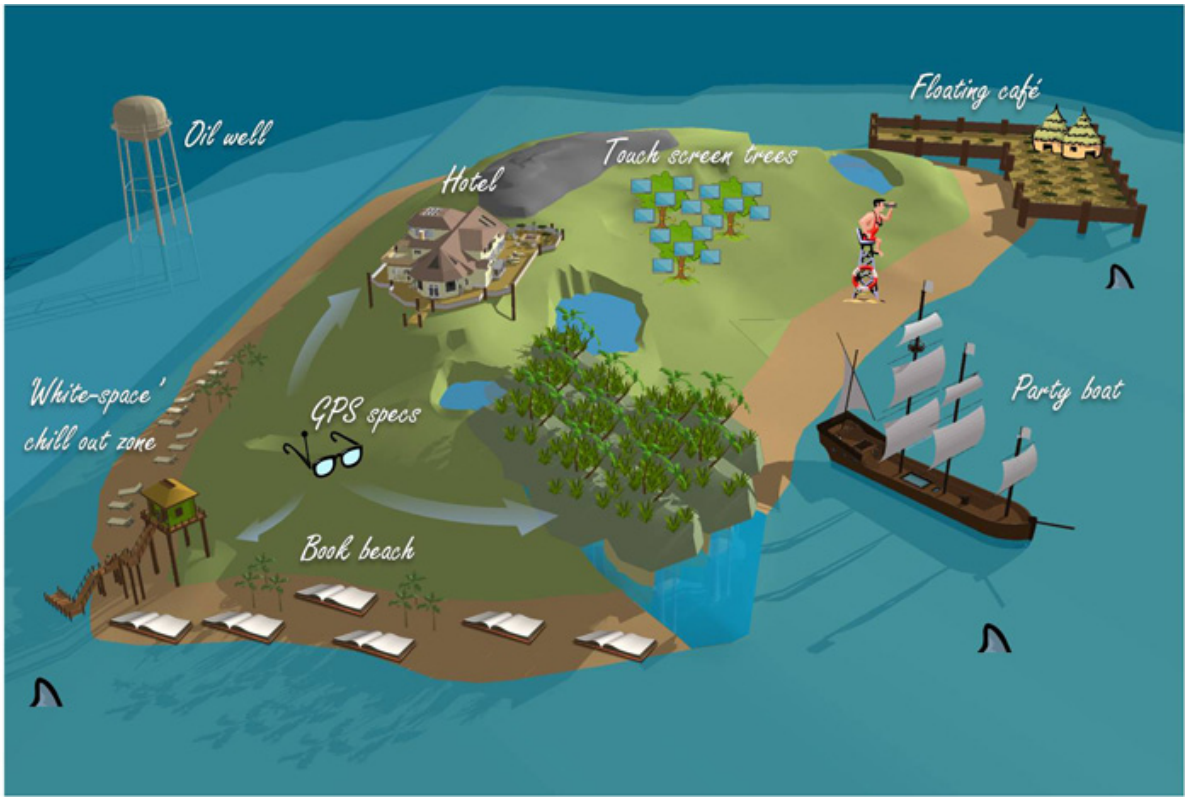
Applying Creativity to the Scenario Process

Creating scenarios can involve participants using a mix of storytelling, visualisation and enactment techniques. By fully engaging in the process and, to some extent, living it participants can really begin to understand the consequences of a scenario.

Scenarios should have elements of plausibility in them as well as, perhaps, some level of 'discomfort'. They can be a development and projection of smaller issues and challenges that occur in the present day.

Scenarios can help to identify and anticipate potential weaknesses and shortcomings in terms of flexibility and ability to react to developments and challenges. Scenario Planning can be used to consider potential issues and situations in a context that provides the luxury of careful thought and iterative planning rather than 'firefighting' at the point at which a weakness unexpectedly makes itself known.

There are a number of approaches that can be taken and tools that can be used in the process and this section highlights some of our favourites.



The image above was produced as an output from the ECDL Workshop (http://www.jiscinfonet.ac.uk/workshops/ecdl-2007/index.html), based around libraries in the digital age. It gives a visual representation of one particular group's thoughts on a 'library of the future' after carrying out the metaphor activity. By thinking creatively about the topic the group quickly built up an understanding of the library's requirements and the environment containing them i.e. the island informs us that the reading area (book beach) should be relaxed, comfortable and spacious. It can also help you to identify particular risks i.e. other institutions poaching your best students (represented by sharks in the image).

Brainstorming

Brainstorming activities can be a useful approach to take for generating and developing scenario ideas. Brainstorming encourages participants, in pairs or groups, to make large numbers of suggestions with no restrictions on the extent to which creativity and imagination can be applied. These suggestions can then be collated, combined, expanded, refined and prioritised as appropriate.

A useful brainstorming technique involves the use of Post-It Notes. It may be that at the outset of the session some topics have already emerged and been recognised as a result of any initial environmental analysis - these can be identified on Post-Its using a different colour marker pen perhaps.

Participants in the exercise use the Post-It Notes to write down additional ideas. The Post-Its can be used to complement or develop issues and ideas. Participants stick the notes on the wall - randomly at first - and then moved and grouped together as the exercise plays out. Post-Its are ideal for this type of exercise as they can be easily and regularly moved without losing their ability to stick. In order to ensure a successful exercise it is vital that participants feel comfortable about sharing ideas and making themselves heard in the group. This technique is ideal for those who have not encountered scenario planning before as it offers the opportunity to become actively involved very quickly.

Brainwriting

Brainwriting is a similar technique to Brainstorming. Participants work in small groups of up to 3 people. Questions are posed and individuals generate as many answers as possible. The answers are then passed on to the next person who uses them as a trigger for their own ideas. You can use plain paper or flip charts on the wall to collect the answers, with each sheet or chart collecting answers for a different question.

The activity consists of rounds.

Round 1 involves the first brainwriting activity (maximum of 5 minutes).

Round 2 onwards involves the passing on of ideas to others as triggers for further ideas and answers. These rounds should last approximately 1-3 minutes each and this stage should take a maximum of 30 minutes.

The penultimate round does not involve writing, instead it involves connecting the ideas and putting question marks next to those suggestions that are not understood.

The final round is a question and answer session based on the ideas generated (maximum of 30 minutes).

News Headlines

Using news reports can be a useful foundation on which to develop scenarios and generate different options. It is also a useful background in preparing a PESTLE analysis by scanning external influences. Depending on your starting point and scope this could vary from looking at global press, national press, regional influences or sector-specific pieces (for example, using the Times Education Supplement or the THES) and could also comprise printed or web-based materials, or a mixture of both.

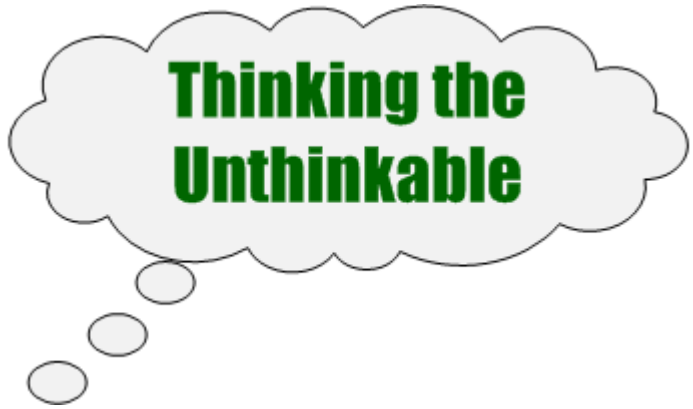
For use in constructing your PESTLE analysis, look for major stories or common threads throughout your collated materials - for example, news of forthcoming or proposed legislation that may impact your operating environment, either directly or indirectly.

You can use news headlines with the scenarios themselves in a workshop environment (or perhaps online by means of wiki or blog-based technologies) by asking participants to address a particular scenario, scanning news items to provide 'evidence' of the plausibility of that particular scenario.

An outline suggestion for such an activity is given here. For best results (depending on scope of the exercise and number of participants involved) it is advisable to run this as a 'pre-workshop' activity so that material can be collated over a period of time beforehand, say a week - this has the added advantage of encouraging engagement with the scenarios as well as familiarisation with the overall concepts and process.

Activity Plan

1. Pre-allocate different scenarios to workshop participants
2. Ask participants to collect 5-10 news items that support the influences present in their given scenario
3. Ask them to bring these items (printed if from web) to the workshop
4. At the workshop, participants gather the news headlines together within their scenario groups and display the headlines on a wall or appropriate surface (10-15 minutes)
5. Participants can then choose a couple of the headlines and share their thoughts on what they found remarkable about them, what touched them most, and why (10-15 minutes)
6. The group is then asked to step back in order to get an overview of the display and then asked the questions, 'What are your blind spots?' and 'What was new and surprises you?' (5 minutes)
7. Having spent time on real-life headlines the group participants are then asked to use their imaginations and suggest intriguing headlines for 10-15 years in the future (10 minutes)
8. An optional follow on to this would be that the group then selects three of the headlines to develop further and make even more 'colourful' and imaginative (10 minutes)



Scenario planning works best if participants are able to 'think outside the box', to coin a phrase. In our everyday working environments this can be difficult to achieve, so it is a good idea to run your activities in a different setting - somewhere away from the everyday grind, perhaps even a little unusual (such as the JISC infoNet event on a steam railway!).

The activity here is especially useful if participants are too focused on certainties and find it difficult to visualise situations beyond their experience. The exercise begins with a question for the group on the certainties related to an issue. The exercise is illustrated with an example below. Note we refer to '2.0' rather than the more restrictive 'Web 2.0', another way to widen the creative scope.

Activity Illustration

Question: 'What are our biggest certainties with regard to 2.0 - what will we definitely see in 2.0?

- This question is immediately followed by a short brainstorm on identified certainties. A flip chart can be used to record these suggestions (5 minutes)
- Individuals then identify for themselves their top 3 certainties from the list (2 minutes)
- Everyone in the group then votes by a show of hands on the certainties on the list and scores are recorded next to each certainty (2 minutes)

The second part of this activity involves the participants having to imagine that an all-knowing Oracle had visited and explained a few things about the issue being discussed - in this case 2.0 - including that the certainty that had received the highest score from the group does not actually happen, in fact the opposite happens.

- The group is then asked to brainstorm possible explanations for why this happened. Suggestions are written on a flip chart (5 minutes)
- The group then focuses on identifying a realistic explanation that could have a big impact (2 minutes)

Metaphors and Stories

Using metaphors (words or images) as a way of aiding the process can prove quite fruitful for generating ideas and adding a bit of colour to proceedings. The outputs from your session could even feature the metaphors or themes woven into a narrative story-telling approach, which can really help to immerse participants in an unfamiliar world.

Activity Plan

- After suggesting a particular theme, the exercise begins with a concentration exercise for the participants (2-3 minutes) - a 'brain dump' of words/images relating to the given theme
- This is followed by an individual creativity exercise where participants use the collated outputs to come up with their own metaphors (5 minutes)
- In groups of 4 select 1-3 intriguing metaphors from the suggestions made by individual participants (5-10 minutes)
- In groups of 4 define characteristics. This is about speed and quality - there should be no discussion at this point. Participants should be as specific as possible and use elements such as feeling, sound, smell and appearance. After 5 minutes of this activity participants then spend another 5 minutes balancing negative and positive associations. (10 minutes total)
- The next step is translating the characteristics to the scenario. The facilitator identifies 3 characteristics (specific and hard to translate) - these could include, for instance, smell and colour. The group can also pick two characteristics. Then the facilitator asks the group to brainstorm on what for example the colour 'red' says about the social, economic, political climate in the scenario. It is essential that people start the brainstorming from the chosen word (red in this example) and not from the scenario. (10-15 minutes)
- All individuals of the group are invited to select 10 characteristics that help to visualise the heart of this scenario. (5 minutes)

Alternative activity

A 30-minute alternative is to present one generic scenario at a time in a maximum of 5 minutes each. Match categories of metaphor with scenario characteristics.

- Group holds short brainstorming session of answers focussing on speed and quantity. Suggestions are written on a flip chart (stop after 5 to 7 answers - given in a maximum of 5 minutes).
- Repeat the steps for the other scenarios.

Some popular metaphor or theme categories include:

- Food and drink
- Sport
- Music
- Fashion
- Leisure time
- Popular new occupation
- New taboo
- Animal or plant
- Painting, play, etc
- Cartoon heroes
- Fairy tales
- Means of transport

Sources of Inspiration

Using sources of inspiration can help when working through scenario planning exercises by allowing participants to engage with thoughts about which they are particularly enthusiastic - this could include things they most dislike as well as like! The technique can be used in conjunction with the metaphor or theme approach, or the news headlines exercise.

Activity Plan

Participants are told the following:

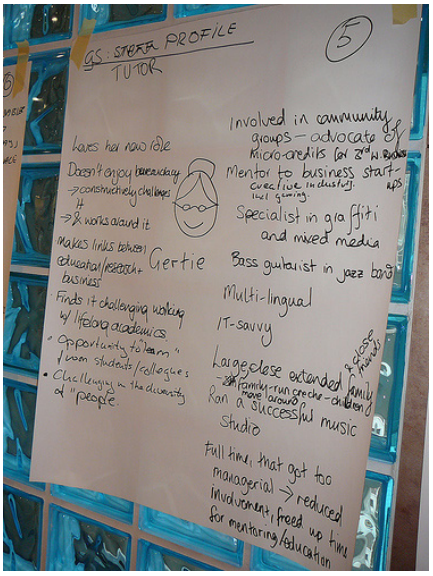
"You have been invited by your director to spend the next six weeks on an exotic island. You will build scenarios with some colleagues. What book, CD, DVD (film, play), painting or sculpture would you bring along to inspire you while thinking about the distant future?"

Individuals think through some of the issues. Post-Its can be used for jotting down ideas. (2-3 minutes)

The individual ideas are collected on flip chart and participants give a short explanation of what inspires them about a particular object. (10-15 minutes).

Participants are asked to consider "What are the characteristics of the book, CD, film, etc (or a main character) that you would like (or hate) to see in a future world" (10-20 minutes).

'Personal lives': Profiling target groups



Another excellent way of encouraging immersion in the various future worlds is to use the scenario sets (either the ones we've produced, or a further detailed iteration of these, or your own) as a background to considering how particular people and roles might be shaped in that world. Even in the most unpopular scenarios participants can really engage with the task and profile some real detail about their characters; this could be presented in a variety of ways (e.g. writing a blog, creating a storyboard) and often uses a timeline (for example, to profile 'a day in the life of...').

Activity Plan

Define one to three specific targets groups in your scenario (students, staff, even institutions) and organize a brainstorm to get a clear profile.

Profiling person (20 minutes):

Imagine a qualified, enthusiastic teacher (fitting in your scenario) thinking about improving his/her course/teaching. Newly-appointed on the job:

- Name, age, gender, personal situation
- Lifestyle
- Outside job activities as family man, community member, civilian
- Former job and why he/she left
- What does he/she think about his/her job.

Profiling professional life. (20-30 minutes) Identify:

- Short brainstorm on biggest changes in learning process
- Short brainstorm on biggest changes in the working day, week, year, (choose a suitable period)
- Which (important) problems does he/she encounter in and around his/her job
- What are his/her activities
- How are they executed
- Who helps (other roles and relations)?
- For what problems will he/she consider the use of e-teaching?

Make the storyboard (optional). (15 minutes).

Present the stories (optional). (15 minutes).

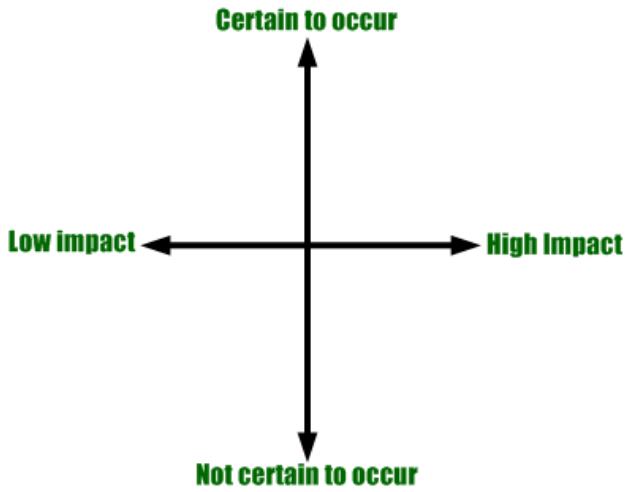
Timeline

This technique utilises a story-telling approach to help participants test scenario plausibility and by considering the timeline, and to get buy-in by addressing the question 'how could this happen?'.

Activity Plan

- Participants are asked to identify the biggest differences between the current world and the future scenario (2-3 minutes)
- Participants then explain the change, identifying 3-5 causes for each change (answering questions like 'why does the majority buy expensive ecological food?') (5-10 minutes)
- Select the main causes from the group of causes (5-10 minutes)
- Identify common causes and repeat the process of answering appropriate questions (5-10 minutes)
- Draw a draft timeline (10 minutes)
- Finish the timeline using colourful (tabloid) paper headlines (optional) with a short explanation (10 minutes)
- An additional step could involve plotting the identified events onto a certainty matrix (the vertical axis running from 'certain to occur' down to 'uncertain to occur' and the horizontal range from low impact to high impact)

Certainty matrix



Moving Forward

Establishing scenarios and moving forward with them is not the end of the exercise. You cannot afford to 'rest on your laurels' and assume that because you've undergone the exercise once that you don't need to worry about it too much for the next few years. Always bear in mind that scenarios do not represent truths - they are based on what we know about what is happening and the application of imagination in order to predict what might happen in the future.

It is vital that you monitor trends to assess whether what you have predicted actually materialises and if not then you need to consider how the original scenarios need amending. If you do not then any advantage you may have experienced initially may quickly erode as a result of things not going the way that you had anticipated and planned for. It is important therefore that the action plan is amended to reflect any changes that may have an impact.

Scenario Planning can help you in all kinds of ways to 'think the unthinkable' and be better prepared for what **might** be round the corner. In a time where increasingly agile strategies are the order of the day it can prove a useful tool for considering a diverse range of possible futures.

Between 2007 and 2009, the JISC infoNet service is undertaking a major work programme looking at **Strategy Planning and Implementation** (http://www.jiscinfonet.ac.uk/strategy-planning) across our sector, and providing tailored outputs to promote good practice as well as assistive tools and techniques to help organisations along. The Scenario Planning material will form a small part of this resource in its context as a strategic planning tool, and will therefore be closely linked to these new materials - so watch this space!

Further links

JISC Users and Innovation Programme, [http://www.jisc.ac.uk/whatwedo/programmes/programme_users_and_innovation.aspx].

Richards, L., O'Shea, J. and Connolly, M. Managing the concept of strategic change within a higher education institution: the role of strategic and scenario planning techniques. Strategic Change. Issue 13: 345-359. Wiley, 2004 [available from http://www.odl.rutgers.edu/e-leadership/pdf/Managing%20the%20Concept%20of%20Strategic%20Change.pdf]

Wikipedia Entry on Scenario Planning [available from http://en.wikipedia.org/wiki/Scenario_planning]

Bibliography and References

Beery, J., Eidinow, E. and Murphy, N. (Editors) The Mont Fleur Scenarios: What will South Africa be like in the year 2002? Deeper News Vol 7 No 1. California: Global Business Network.

Berger, G. (1964) Phénoménologies du Temps et Prospectives, Paris: Presse Universitaires de France.

Bishop, P. Hines, A & Collins, T. (2007) The Current State of Scenario Development Foresight Vol 9, No. 1, March 2007

de Jouvenel, B. (1967) The Art of Conjecture. New York: Basic Books de Jouvenel, H. (2004) Invitation à la Prospective An Invitation to Foresight. Futuribles, Perspectives, Special Issue 88 pages.

de Molina, L (1589) Liberi arbitrii cum gratiae donis, divina praescientia, providentia, predestinatione et reprobatione Concordia, known simply as Concordia, Lisbon, 1589 [available from http://www3.nd.edu/~afreddos/papers/molina.htm]

Diffenbach, J, (1983) Corporate Environmental Analysis in Large US Corporations. Long Range Planning Vol 16 No 3 pp 107-116

Fahey, L. & Randall, R.M. (eds) (1998) Learning from the Future: Competitive Foresight Scenarios. New York: John Wiley & Sons

Godet, M. (1987) Scenarios and Strategic Management. London: Butterworth Scientific.

Godet, M. (2006) Creating Futures: Scenario Planning as a Strategic Management Tool, 2nd edn. London: Economica-Brookings.

Kahn, H. & Weiner, A. (1967) The Year 2000: A Framework for Speculation on the Next Thirty Years. New York: Macmillan.

Krawczyk, E. & Ratcliffe, J. (2004) Imagine Ahead - Plan Backwards: The Prospective Methodology and its Application in Urban and Regional Planning. In: Conference of Irish Geographers, 7-9 May, 2004. National University of Ireland, Maynooth, Ireland.

Malaska, P. & Virtanen, I. (2005) Theory of Futuribles Futura 2-3 pp 10-28 [available from http://lipas.uwasa.fi/~itv/publicat/Futuribles.pdf]

Willmore, J. (2001) Scenario Planning: Creating Strategy for Uncertain Times Information Outlook [online] 9.1.2001 [available from http://www.encyclopedia.com/doc/1G1-78544351.html]