



strategis partners

Preparing for the next Pandemic

The role of scenario planning

Getting to Know the Enemy

Both private and public sector organisations can benefit from planning tools that deal with the uncertainty arising from a Pandemic. Scenarios are such tools.

SCENARIO PLANNING TO PREPARE FOR THE NEXT PANDEMIC

A pandemic is coming. It could be caused by avian flu (H5N1) or by another novel strain. It could happen next week, next year, or even ten years from now. Should a pandemic emerge, it could become the single greatest threat to your business and could remain so for up to 18 months.

H5N1 is the most powerful influenza virus seen in modern human history.

A pandemic is fundamentally different from other, more traditional business continuity threats. Plans are usually designed to help companies respond to localized threats—like fires, bombs, riots, earthquakes, and typhoons—that affect infrastructure. Once the event has occurred, it is over and, while the effects may linger, recovery can begin. However a pandemic isn't an isolated incident. It is, by definition, an unfolding emergency of uncertain duration.

A scenario-based framework is designed to build the ability of private and public sector organisations to respond to the uncertainties of a pandemic.

What are scenarios?

Scenarios explore alternative pictures of the future. They can weave together the evolution of the pandemic; as well as economic, social and political impacts, the use of technological and organisational solutions, and other aspects of a pandemic emergency in the form of a "storyline". Scenarios do not predict what the next pandemic emergency will look like precisely, but they do offer a rich set of ideas that provide the groundwork for response planning.

The natural inclination of managers is to work from what is known. Scenarios force managers to look at what is not well-known, and what cannot be controlled. Importantly, they help planners think about the larger picture. They aim to stretch thinking and question assumptions. In this way they help managers develop more robust strategies.

Examples of scenario snapshots

Think about how you would handle the following future possibilities...

Sydney, February 16, 2007: The Health Minister today attributed two deaths in Sydney and one in Melbourne to a human-to-human transmissible strain of the H5N1 virus. Although reports of the disease among humans have been accelerating from Indonesia, these are the first deaths to occur in Australia. Health officials are calling for citizens to limit all unnecessary travel until further notice...

The natural inclination of managers is to work from what is known. Scenarios force managers to look at what is not very well-known, and what cannot be controlled

Consider this unfolding scenario: At least one-third of your organisation's employees have called in sick in the past two weeks since the onset of the pandemic. Another 15 percent of employees cannot return to work due to caring for sick family members, closure of schools or closure of day care facilities. Outside the work place, key suppliers are feeling the same affect. The first wave of the avian flu has arrived, and the government cannot give a specific timetable as to when your affected employees can return to work.

Here is another scenario snapshot: Imagine that you are at work on Day 144 of the influenza pandemic. Now, much of Sydney has seen an almost complete halt in everyday routines. Hospitals are crowded with the sick, the very sick, and the very depressed people.

Supply chains have been interrupted as transport operators have closed down. Many small businesses are closing because they can't restock shelves. Hospitals are running out of basic medical supplies.

Most companies' pandemic contingency plans called for mass telecommuting, but they have had to change this strategy. With over a million people telecommuting at once, Australia's telecommunications and internet infrastructures are severely strained.

With this development, pandemic conditions are far worse than most organisations had prepared for.

A test of your organisation's resilience

A resilient organization is one that is better positioned to respond to evolving, unpredictable threats.

In the complex and uncertain environment of a sustained, evolving crisis, the most robust organizations will be those that have continuous sensing and response capabilities operating—not just plans.

A resilient organization is one that is better positioned to respond to evolving, unpredictable threats

Scenarios deal with a pandemic emergency in three ways

Firstly, scenarios provide a solid foundation for developing a strategic response to the crisis. Scenario planning helps decision makers understand the implications of worst-case scenarios, as responsible executives must. Moreover, uncertainty creates opportunities for those companies best positioned to cope with it.

Secondly, by educating managers about the alternative ways in which the pandemic emergency might unfold, it can help managers better prepare the organization to respond. They can challenge conventional wisdom constructively, and consider in depth a variety of possible futures.

Thirdly since we cannot predict how the pandemic will unfold with any precision, scenarios help decision makers adjust course in the light of events. The better the scenarios, the less frequent these surprises will be and the more successful the strategy.

THE SCENARIO PLANNING PROCESS

The core of the scenario process

The core of the scenario process is firstly to understand key drivers of change, and then to determine which of those are predictable and which are uncertain. The uncertainties which are most influential are used as the basis of the scenarios. Next the scenario team spends time exploring the implications of those scenarios.

The difference between a best- and worst-case scenario may come down to how well governments, organizations, and individuals control people's exposure.

The core of the scenario process is firstly to understand key drivers of change, and then to determine which of those are predictable and which are uncertain

Questioning our assumptions

The pandemic response plans of some organisations might depend upon crucial, but unexamined assumptions such as:

- Core staff do not contract the virus
- Communication systems are working well
- Contingency Plan are in place—and working
- Access to accurate information, and human and material resources is generally available.

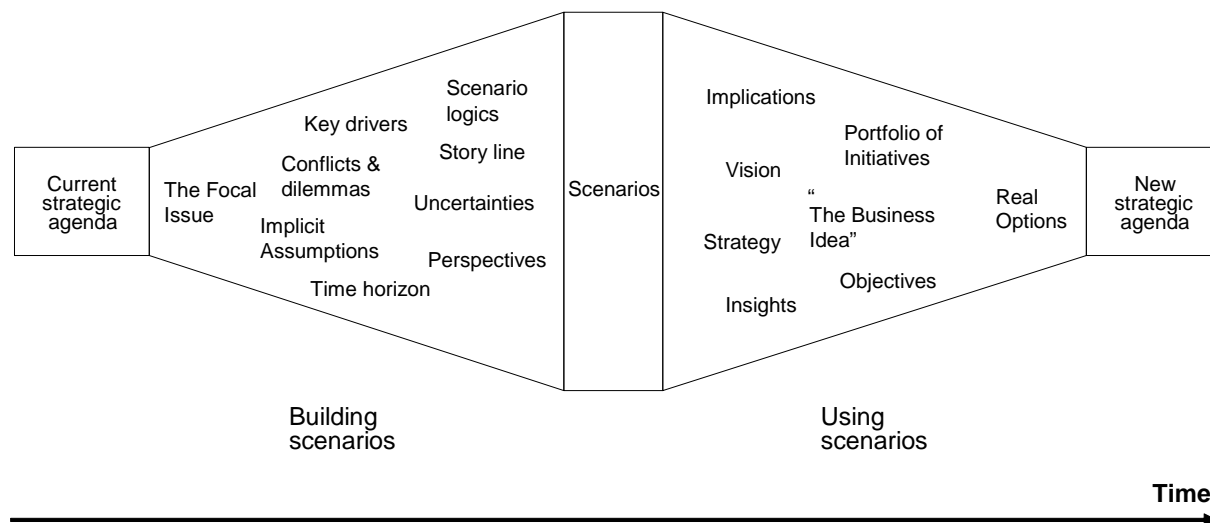
A key role of scenario planning is to identify the implicit assumptions; then ask: what if they're wrong?

The focal issue for the scenarios

When developing scenarios, it is important to begin with a specific decision set or issue that the group will need to think hard about. For example the focal issue could be: how should your organisation maximise its readiness to deal with a pandemic within the next 1 to 2 years?

Figure 1 shows there are two main phases in scenario planning: building scenarios and using scenarios.

Figure 1 – The process of building and using scenarios



Building scenarios

For purposes of building scenarios, here are some issues to think about:

- The nature, onset and spread of a pandemic
 - Will it be the avian flu? Where will it emerge from? How much of the population will be affected? What could be the mortality rate?
- Number and duration of pandemic waves
 - How long will it last? The pandemic is not likely to be a short, sharp event leading immediately to a recovery phase. It may last for a period of up to 12 or 18 months with cases occurring in “waves” within the community
 - During these waves up to 30-40% of the community may become ill with influenza with additional members of the community required to care for them
- Absenteeism
 - At the height of the pandemic absenteeism may be as high as 50%. Absenteeism reasons include illness, staff remaining home to look after ill family and children in the event of school closures
- Public response
 - Public fear is an underappreciated part of the threat, and this development may occur on a progressively larger scale in the pandemic’s advanced phases.

At the height of the pandemic absenteeism may be as high as 50%

Public fear is an underappreciated part of the threat

In building our scenarios, there will be insights to be obtained from studying previous pandemics.

What can we learn from history?

The closest the world has come to a pandemic crisis in recent times was the SARS (severe acute respiratory syndrome) crisis of 2003. Over five months, about 8,000 people were infected by a novel human coronavirus. About ten percent of them died. Once SARS emerged in rural China, it spread to five countries within 24 hours and to 30 countries on six continents within several months.

The SARS experience teaches a critical lesson about the potential global response to a pandemic influenza. Even with the relatively low number of deaths it caused compared to other infectious diseases, SARS had a powerful negative psychological impact on the populations of many countries.

SARS provided a taste of the impact a killer influenza pandemic would have on the economy. Warwick McKibbin of Australian National University estimated the economic impact of the six-month SARS epidemic on the Asia-Pacific region at about US\$40 billion. And this impact would be tiny compared to that of a 12- to 36-month worldwide influenza pandemic.

Key drivers of change

The next step in building the scenarios is to identify the key drivers of the pandemic emergency. From the list of key drivers a consensus is developed on what drivers are most important and what drivers are most uncertain. For example, important drivers include those shown in following Table 1. These cover environmental, social, resources and technology, economic and financial, political and regulatory drivers of a pandemic's impact.

Table 1 – Examples of a Pandemic's Drivers

Category	Some Drivers of a Pandemic's Impact
Features of the pandemic	Fatality rate Way of transmission Speed of contagion Time of year Origin of virus
Social impact	Level of anxiety Social norms and responses Level of mobility Personal hygiene
Resources and Technology available	Availability and effectiveness of vaccine and anti-viral medicines Availability of key supplies for mass transit operations Capability of employees to work remotely Technological solutions to the crisis
Economic and Financial impact	Loss of economic output Panic in financial markets
Political and Regulatory changes	Government policy changes Quarantine regulations

Conflicts and Dilemmas

Scenarios are a way of describing how the tensions in conflicts and dilemmas play out as the pandemic emergency unfolds. Table 2 following contains examples of these.

Scenarios are a way of describing how the tensions in conflicts and dilemmas play out as the pandemic emergency unfolds

Table 2 – Examples of conflicts and dilemmas in a pandemic emergency

Examples of Conflicts and Dilemmas
Your customers' expectations versus achievable service level in a pandemic
Investor expectations versus community expectations
Care of staff versus care of the general public
Service availability versus operational quality
Accuracy of information versus need to act
Reduced revenue versus Incurred cost
Customer perception versus the facts
Manpower versus quality of service

Assembling the scenario logics

Each scenario plot should be different, yet relevant to the focal question. The Appendix to this Paper describes the four kinds of structural logic which can be used to assemble the scenario plot-lines.

Keys to building good scenarios

The key to building good scenarios is to keep centred on the focal issue. Scenarios should also capture some surprises, maintain plausibility, and take a broader view of the future risks and opportunities.

The naming of the scenarios is also an important signal to communicate the core idea in the scenario. Successful, pertinent naming means that the scenarios become embedded in the organisational thinking in a way which can have substantial learning benefits.

Using the scenarios

Once scenarios have been crafted, the most crucial step begins: testing your organisation's action plans against the scenarios, addressing the following questions. What actions are common to all scenarios—the “no regrets” strategy? What actions work under one scenario, but are very risky under another scenario? What is the formula for success across the range of scenarios?

A key question is: what real-time sensing and coordinating mechanism will we use to respond to events we can never fully anticipate?

For each scenario questions such as the following need to be addressed:

- How well is the organisation prepared now for this scenario? What gaps and deficiencies need to be fixed?
- Should services be restricted under this scenario?
- What alternative operations policies or new procedures are needed?
- How can we source replacement supplies which may be difficult to obtain under this scenario?
- What kinds of disaster drills are necessary, and how thorough should these disaster drills be?
What's our response if one component of the response plan goes down? What's our response if two components go down?
- How best can we communicate with employees and external organisations under this scenario?
- How can we locate personnel in the event of communications outages?
- What are the potential impacts to our market and customer segments, and profitability?

Once scenarios have been crafted, the most crucial step begins: testing the company's action plans against the scenarios

FROM SCENARIOS TO ACTION

Designing your portfolio of initiatives to build resilience

At the heart of using scenarios is the development of a “portfolio of initiatives”. They drive a company’s pandemic response by building resilience and flexibility. The portfolio could comprise new capital expenditure, building new capabilities, as well as establishing new alliances and initiating closer dialogue with key stakeholder organisations.

New investments

In light of the scenarios, some new capital investments may be identified, such as an advanced communications facility. Other planned investments might be considered for deferment.

Investing in “real options” might also be valuable. Real option thinking recognises the value in response initiatives due to their inherent flexibility to deal with an uncertain requirement. Examples include:

- Stockpiling essential supplies to maintain operations
- Staging a series of disaster drills to learn about operational performance under adverse conditions
- Conducting pilot trials before the full-scale introduction of new processes or equipment, and
- Licensing a technology in case it proves to be superior to a current alternative.

Capabilities needed at the individual level, the group or departmental level, and the organisational level, are described below.

What’s needed at the individual level?

Resilience grows when individuals can exercise behaviours such as judgment, discretion, and imagination; when they have the ability to make and recover from mistakes, and when they have the opportunity to observe role models who demonstrate these behaviours.

Employee morale boosters would be needed, as well as improved monitoring of employee health.

What’s needed at the group or departmental level?

Teams who acquire new skills, master new situations, and improve competence are more likely to handle challenging conditions and be higher performing over the longer term. They are more likely to recognise and deal with the complexity of the pandemic emergency and may be more motivated to persist in the face of obstacles and adversities.

But exactly how does this happen?

Teams composed of at least some individuals with broad expertise may be better able to grasp variations in their environments and to see specific changes that need to be made. They may also be better at coping—especially when they perceive they have the capability to act.

At the heart of using scenarios is the development of a “portfolio of initiatives”. They drive a company’s pandemic response by building resilience and flexibility

When assessing the team or departmental level of resiliency to a pandemic, emergency a number of areas should be investigated:

- Who are the core people required to keep the essential functions of the business running and what alternatives are available?
 - Succession planning—identifying opportunities for cross training or multi skilling of staff where appropriate in order to create a larger internal resource base to draw on
 - Sharing of human resources between similar organisations - Identifying other organisations with similar skills sets and undertaking cross training
 - Utilising retired staff to access knowledge and experience not otherwise available
- If particular services have been outsourced, determine whether there is internal capability to deliver such services even if at reduced levels
- Identify the critical breaking point
 - The critical breaking point is where an organisation can no longer maintain a viable service in a safe manner; for example due to loss of staff or resources
 - The importance of identifying the critical breaking point is that it would allow your organisation to monitor the decline in service. Where the service is non-essential, consider suspending operations; or where the service is essential, explore measures that will lessen or offset the impact.

What's needed at the organizational level

Resilience depends on organizational processes aimed at enhancing an organization's overall competence and growth—including the ability to learn and to learn from mistakes. Those processes require quick feedback, flexible knowledge transfer, and resource allocation to deal with situations as they arise.

On the other hand, structures that inhibit growth and flexibility, such as rigid job descriptions and centralization, have been found to have a negative effect on resiliency.

So how do organisations improve their ability to respond to evolving, unpredictable threats? The following are some examples:

- Reviewing decision making authority to improve flexibility and speed
- Networking of groups and teams across the corporation, rather than maintaining a strict hierarchy
- Operating effectively with a dispersed workforce, for example through increasing the level of empowerment
- Building cross trained generalists rather than narrowly focused specialists
- Ensuring that employees are guided by simple yet flexible rules, not rigid procedures.

A pandemic will also require organizations to work together in ways that have not yet been tested. For example, much closer coordination and contact with medical suppliers and health services may be needed.

Structures that inhibit growth and flexibility, such as rigid job descriptions and centralization, have been found to have a negative effect on resiliency

CONCLUSION

To build your organisation's resilience, a pandemic scenario planning program is designed to achieve the following outcomes:

- Overall, to anticipate the future pandemic risk environment and design a response strategy to tackle the full menu of uncertainties
- To uncover the driving forces shaping the disruption, and to identify the uncertainties impacting the success during the pandemic
- To develop and explore scenarios that include a diversity of perspectives – including external and internal expertise
- To identify the portfolio of initiatives for effective pandemic emergency response using these scenarios.

A pandemic brings into play the reputation of companies. It can alter a company's strategic position fundamentally. It can torpedo the reputations of companies that have been caught unawares.

But through planning rigour and innovative thinking, it can create a valuable reputation-building opportunity by highlighting the preparedness of your organisation to deal with the major challenges of a pandemic.

Benefits of a scenario-based approach

The outcome of scenario planning is not just better anticipation but better decisions. Through a scenario-based approach, your organisation can benefit in the following ways:

- Anticipation of the major challenges of the next pandemic
- Development of a sustainable service strategy during the emergency
- Reduced costs and higher revenue than might otherwise be the case
- Effective engagement with stakeholders on sensitive issues
- Maximisation of your organisation's valuable reputation, through an enhanced ability to anticipate and respond.

For managers and executives, scenario thinking is a valuable aid to build support for new initiatives. Scenarios help communicate with peers and with top management and the Board as to how the risks and uncertainties play out, and can be dealt with.

Within the management team, they can foster openness to new ideas and different perspectives, and can help re-shape core planning assumptions before they become outdated or just plain wrong. Key success factors are uncovered, leading to an enhanced ability to succeed in the face of a pandemic emergency.

Planning rigour and innovative thinking can create a valuable reputation-building opportunity by highlighting the preparedness of your organisation to deal with the major challenges of a pandemic

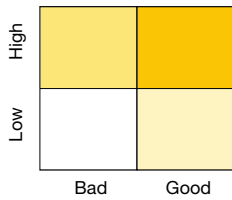
APPENDIX
ASSEMBLING THE SCENARIO LOGICS

Each scenario plot should be different, yet relevant to the focal question. Figure A1 shows the four kinds of structural logic which can be used to assemble the scenario plot-lines.

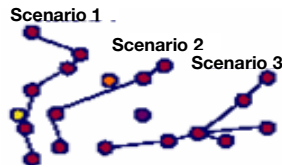
There are four kinds of structural logic which can be used to assemble the scenario plot-lines

Figure A1 - The four kinds of structural logic to assemble scenarios

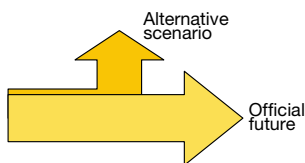
1. Deductive



2. Inductive



4. Incremental



3. Normative



1. The deductive approach. Here the idea is to prioritise the long list of key drivers of change in order to find the two most critical uncertainties which then become the axes of a 2 x 2 scenario matrix.

2. The inductive approach. The inductive approach identifies individual future events or trends, and develops larger stories around these elements. The key to induction is to cluster different events that are typical of an overarching theme, and so develop a consistent picture.

3. The normative approach. The normative (or goal-oriented) approach, involves first setting up some future context or scenario that is either desirable to achieve or avoid, and then asking what sequence of events might lead to the realisation of this objective.

4. The incremental approach. In the incremental approach the team maps out “the official future pandemic scenario” and then looks for ways that the future could deviate from that path. This may involve reversing a few critical assumptions that underpins the official future.



strategis partners

About the Author

Jay Horton, Founder and Managing Director of Strategis Partners, is a leading adviser to Companies and Governments in Asia and Australia on strategic management issues, including scenario planning, capital investment decision making and real options analysis, and corporate strategy.

During his twenty year management consulting career, he has worked with clients in Australia, Canada, China, Japan, Hong Kong, New Zealand and South East Asia.

Jay has played a number of leadership roles, including as a Partner of PricewaterhouseCoopers, McKinsey & Company, and Managing Director of management consultancy ORG Pty Ltd.

Jay is a regular guest lecturer at the Australian School of Management, the Sydney University School of Business & Economics, Australian School of Business at the University NSW, and the Macquarie Graduate School of Management.

Jay's qualifications include Master of Economics from Australian National University, a Bachelor of Engineering from James Cook University, and Fellow of the Australian Institute of Company Directors. He is a member of the Institute for Operations Research and Management Science.

Contact us

Sydney:

Level 57, MLC Centre
19-29 Martin Place
Sydney, NSW 2000
Phone: +612 9238 6886
Fax: +612 9238 6887

Hong Kong:

Level 19, Two IFC Tower
8 Finance Street
Central, Hong Kong
Phone: +852 2251 1625
Fax: +852 2251 1618