

# Scenario-based strategy to enhance multi-stakeholder collaboration and strategic agility in policy organisations

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## **Abstract**

This paper discusses how a 7-step scenario-based strategising approach can be used in policy-making to engage important stakeholders in a collaborative, future-oriented decision process that makes optimal use of internal and external resources at different levels of seniority. The process ties strategy formation to the underlying purpose and mission of the organisation, while stimulating attention to key external drivers of change that the policy organisation will have to respond and adapt to. It shows how non-predictive contextual scenarios can direct attention to operating contexts that may be markedly different from the status quo, but also how the implied multi-fold options may be kept manageable by way of a Parmenides matrix which clarifies optimal paths and necessary trade-offs. The process provides a platform for articulation with stakeholder groups and the public at large in the process of future-thinking and future solution-building, with implications for improved decision-making in policy formation for public benefit.

**Keywords:** Strategic Foresight, Scenario Planning, Strategy, Decision Support, Policy

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## Introduction

Policymaking bodies and regulatory organisations have frameworks that work during periods of stability or gradual change, but when the status quo is disrupted and significant social or technology shifts occur, often rapidly and unexpectedly, such organisations can quickly find themselves in situations where their traditional strategy formation methods fail (Gavetti & Rivkin, 2007). In such situations, traditional extrapolative forecasting is unreliable (Makridakis & Taleb, 2009), and in view of this, the various tools and methods of strategic foresight have grown up to help improve management decision-making to successfully address the real strategic leadership demands implied in macro-uncertainty. In this field, scenario planning is widely considered one of the most useful approaches (Schoemaker, 1993; Kees van der Heijden, 1996) and has been proposed as the tool of choice in cases with high degrees of uncertainty in the environment (Courtney et al., 1997). Scenario planning is understood to challenge conventional thinking, permit apprehension of multiple possible futures within which decision outcomes may take place, and so assist managers identify superior courses of action that are different from the status quo and to foresee their consequences (Wack, 1985a).

While scenario planning has seen methods development and some of its most high-profile successes in company and industry situations, particularly in the formative years of Group Planning at Royal Dutch Shell (Wilkinson & Kupers, 2013). The approach from its earliest days has also seen methods development and use in policy areas, starting at the earliest iteration of scenario thinking to investigate alternative prospects for and implications of nuclear war in the 1950s and 60s for the Rand Corporation (Kahn, 1960). Scenario planning has since continuously played a role in policy formation and advocacy, including for example in national consensus-building in South Africa (High-Road vs Low-Road, and Mont Fleur), in international development, for example by the World Economic Forum, and in the hands of the “La Prospective” school in France (Godet & Durance, 2011). Many scenario practitioners and consultants move between policy and business environments, and methods development from

both environment have continuously and simultaneously informed the academic literature on scenario planning as well.

Within this literature, scenario planning is understood to fulfil or contribute to many functions, including stimulating leaders to see familiar situations in an unfamiliar way (Cairns et al. 2006), challenging conventional thinking inside the organization (Bodwell & Chermack, 2010), contributing to organisational learning (De Geus, 1988) or improving the quality of strategic conversations or decisions (Van der Heijden, 2005). Summarising various sources, Wright, Bradfield & Cairns (2013) distil three primary purposes for scenarios: enhancing understanding of causal processes, connections and logical sequences underlying events; challenging conventional thinking to reframe perceptions and challenge mindsets; and improving strategy development and decision making. In a similar vein, Varum and Melo (2010) have argued for three benefits of using scenarios, improvement of the learning process, improvement of the decision-making process, and identification of new issues and problems.” In addition to these, a part of the understood benefits of scenario planning in policy context is consolidation of aspirational views of future outcomes and consensus-building in support of such options. To this, Börjeson et al (2006) see three categories of scenarios: Predictive “what will happen?”; Explorative “what can happen?”; and Normative “how can a specific target be reached?” This normative or aspirational dimension, whereby scenarios identify and advocate for a preferred future state, including becoming a tool for communicating and promoting this outcome publicly, has also been defined by Jay Ogilvy (1992, 2002).

Among these alternative and overlapping use-definitions of scenario planning, another conceptualisation is one where scenarios help overcome three bounds that constrain managers in anticipating long-term consequences and forming future strategy (Cyert & March, 1963; Gavetti, 2012). These bounds are:

- A rationality bound, resulting from groupthink or other forms of hegemonic representations, where decision-makers perceive the world similarly and so tend to see the same opportunities, and not see other possibilities in the same way. To this,

scenarios are built on alternative assumptions of future outcomes, which encourages reframing and new ways of seeing.

- A plasticity bound where decision-makers fail to act on opportunities because they cannot view how they might achieve this, or because they lack resources and capabilities. Scenarios can take decision-makers past what is currently feasible (Gavetti & Levinthal, 2000), and may also provide the basis for engaging with and persuading the providers of resources.
- A shaping-ability bound, resulting from inability to legitimize either the conceptualization of the future environment and-or a proposed new course of action. Scenario planning can address shape-ability constraints through communication and decision participation, thus creating a shared future outlook among the strategy team. They may also provide the “cover” under which test probes or new ventures can emerge.

Addressing this particular framework, Lehr et al (Lehr, Lorenz, Willert, & Rohrbeck, 2017) have proposed a process called “scenario-based strategising” which engages direct participation from the management team responsible for setting the strategic course of action, where strategy selection is informed by a “Parmenides” matrix of goal efficacy and robustness scoring. Strategising is understood here as the ability to identify a superior course of action, different from the status quo, and foresee its consequences (Gavetti & Menon, 2016).

### **Methodological approach**

This paper is conceptual in nature, drawing on insights from over 10 years of research into corporate foresight practices and experiences in applying scenario-based strategy in firms, which has led to the development of the scenario-based strategy approach. In line with the history and practice of scenario planning, we do not draw a hard line between business and policy institutions, and see many of their organisational and decision-making challenges as

similar, and anticipate that this approach, correctly adapted, also applies in policy and development environments, and has implications for collaborative and improved decision-making in policy formation and public benefit. Therefore below we adapt, where necessary, the frameworks of the scenario-based strategy approach to policy challenges while bringing across various of the insights that apply in organisations of all types.

The scenario-based strategising approach has three main phases (see Fig. 1), including: a situation analysis assessment of external drivers as well as internal strategic objectives; a strategising phase including scenario formation and understanding the strategic implications and opportunities they present; and a collaborative decision-making phase that takes strategy forward into decision making. The three phases comprise seven steps. Solid-line arrows indicate how the outcome of one step is used as input for the next, while dotted lines indicate that one step will influence another one.

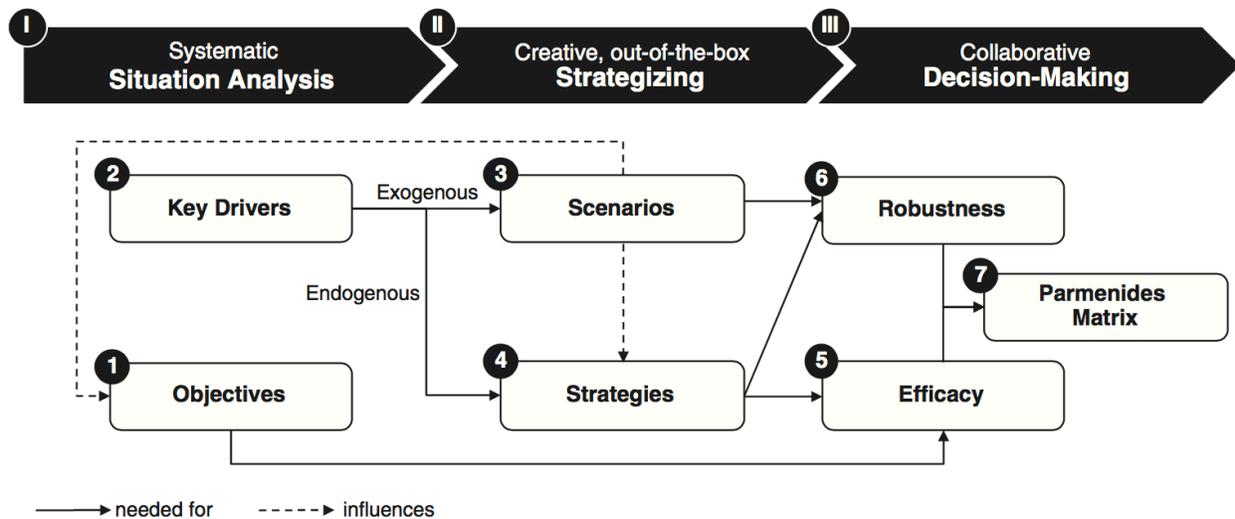


Figure 1: Steps in Scenario-based strategising

As with all foresight and planning engagements, a prior setup phase is required, whereby purpose, scope, and time horizon are assessed and agreed, and participants are recruited to the process. Time horizon is typically a rational trade-off between far future that allows for interesting and creative options to emerge and near future which enhances relevance and applicability of the findings. Weighting the participant group with externals is also a trade-off: it allows breadth and diversity of backgrounds which enriches the scenario work. However this may come at the cost of efficiency and a process that is tightly harnessed to the needs of decision-makers.

**Step 1: Objectives.** In the first step, objectives and goals are defined. These may be derived from the existing mission or vision of the unit, where these are specific enough to serve as guide to strategic direction and to the steps that follows. In a policy environment these goals will depend on the organisation concerned, but may be taken to include a spectrum of economic and societal outcomes desired, such as poverty reduction, gender equality, climate stability, access to education, public transport facilitation, etc., where the specific set of objectives relates closely in each case to purpose of the organisation undertaking scenario-based strategy.

**Step 2: Key drivers.** The aim of the second step is to identify external drivers of change. This is normally based on a horizon scanning base or organizational “radar” equivalent, which may involve experts from other sectors, and is best done on a continuous basis rather than for one specific decision event. Frameworks such as PESTLE model may help ensure coverage of factors or change. To identify most influential drivers, a cross-impact analysis may be employed (Heger & Rohrbeck, 2012) and the list may be divided into predetermined elements and critical uncertainties (Kees van der Heijden, 1996) whereby the scenarios will then focus on alternatively exploring the most important uncertainties that decision-makers face in achieving their objectives.

**Step 3: Scenarios.** The most important external drivers of uncertainty form the basis of the scenario architecture, the point being that different scenarios explore (while not predicting) how one or more important uncertainties may play out to shape the contextual, exogenous environment in different ways. Scenarios are narrative descriptions of more than one (avoiding

prediction) contextual future situation that an organisation may face. In this the goal of scenarios is to expand the mental model of managers to what could plausibly happen, to stimulate thinking as to whether and how to prepare for these plausibilities, and in the strategy phase which follows, the organisation considers how it would alternatively act to achieve its goals in these different plausible future environment. In another equally commonly used form of scenario-building, so called “normative” scenarios (Ogilvy, 2002) may be created, the purpose of which is to highlight better vs. worse future outcomes and guide decision-makers and their stakeholders to these outcomes.

**Step 4: Strategies.** In this analysis, strategy is understood as a process of inference, resembling multiple hypotheses formation and the selection of one or more alternatives from an infinite range of options, and is oriented to team-based rather than individual strategy formation (Calabrese & Costa, 2015; Gavetti, 2012). Following real-world practice the scenario-based strategizing approach recognises strategic options may or may not be influenced by strategic implications of the scenarios. If the process incorporates scenarios, that is, systematically addresses and stimulates alternative strategies, the rationality bound of decision-makers can be eroded. One useful method here may be morphological analysis (Ritchey, 1998), constructing strategy on a basis of options, rather than as a variation of existing strategies, and in this directly addresses the plasticity bound referenced above.

**Step 5: Efficacy evaluation.** With a set of scenarios and their implied alternative strategies, decision-makers will have succeeded in overcoming rationality bounds. However, this may come at the expense of exposing a wide and complex decision-making space. To narrow this towards optimal choices, decision-making is refined by an efficacy evaluation and a robustness evaluation (next step). In the efficacy evaluation, decision-makers evaluate to what extent a derived course of action in fact supports the different goals defined in Step 1, and eliminate low-performing alternatives on this basis.

**Step 6: Robustness evaluation.** In this step, decision-makers assess the robustness of the remaining proposed strategies under the different scenarios, a step known as wind-tunnelling (Van Der Heijden, 2002) asking whether a proposed course of action holds up to a given

scenario (leading to a gap analysis if it does not) or which strategy is best for a particular scenario? A robustness “score” may be calculated for each strategy, although more commonly in practice a strategic conversation is stimulated and robustness is assessed through discussion.

**Step 7: Parmenides Matrix.** Once steps 5 and 6 have been carried out, results may be plotted on a Parmenides Matrix (see Fig. 2), with goal efficacy on one axis and robustness on the other. In the upper right quadrant are strategies that strongly support objectives and which are robust across different scenarios. Strategies in the upper left quadrant will be effective depending on favourable contextual environment scenarios emerging. In the absence of strategies in the top-right quadrant, a trade-off between the more effective options (upper left quadrant) and more robust options (lower right) will be illuminated for strategic discussion.

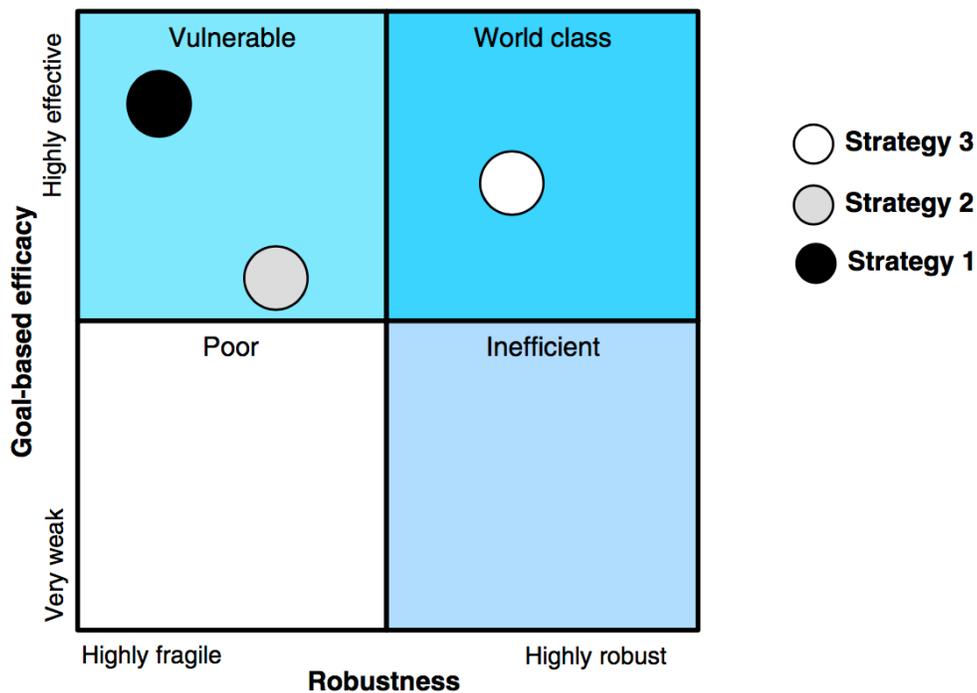


Figure 2: A Parmenides matrix

## **Participation of senior actors and top management**

One particular feature of the 7-step approach is how the steps imply that not all types of participant need to be involved at all stages, and particularly when and how senior decision makers should be involved. It is assumed that the more senior actors are involved, the higher the legitimacy of the project, scope and scale of other participant buy-in, and greater the likelihood that emergent decisions and proposed new courses of action are legitimised. However, in reality, full participation from the senior echelon is rare, and delegation of many scanning, scenario, or strategic inputs is the norm. It is reasonable to see that external experts are more fruitfully involved in assessment of drivers and creation of scenarios while internal stakeholders are more directly involved in the objectives, strategy, and decision-making steps. Therefore the matter becomes where delegation of tasks is appropriate, and where does it fundamentally compromise the quality of the process.

In order to assess this, we create a high-level overview of the categories of actors who are likely to be involved in scenario-based strategy formation and implementation, which are:

- A. Elected officials and political appointees
- B. Senior civil servants (leadership)
- C. Junior civil servants (analysts and programme managers)
- D. External research analysts, think tanks
- E. Agencies, stakeholder groups, lobby groups
- F. The public

With reference to Fig. 1, the Objectives stage, including project origination, support and sponsorship, requires participation from senior decision-makers as well as stakeholder groups and where appropriate the segment of the public affected. This is where the main parameters of the strategic decision are set, and buy-in is effected. For step 2, determining Key Drivers of external change via radar and trend processes, here experts and analysts are required,

internally and-or externally, who may also source information from stakeholder groups. Step 3, Scenarios, is prepared by analysts but a workshop allows to involve senior management as well as typically in a separate workshop external experts and stakeholders. Elected officials may be briefed already at this stage to build early legitimacy of exploratory and revisionist thinking. Step 4, Strategies, begins formulation of the alternatives that are open to decision-makers, and here senior internal leadership as well as their counterparts in external agencies, when employed, is required. By steps 5 and 6 senior decision-makers internally and externally are central to the process, and in step 7, the Parmenides matrix, all the groups who were involved in the origination and purpose of the process are required, in collaboratively coming to final decisions. This is particularly true where there is benefit in group decision-making methods that also work across hierarchical levels. This allocation of roles to steps in the process may be tabulated as follows:

STAGE	STEP	INVOLVEMENT					
		A	B	C	D	E	F
Situation Analysis	1. Objectives	x	x			x	x
	2. Key drivers			x	x	(x)	
Strategising	3. Scenarios	(o)	(x)	x	(x)	(x)	
	4. Strategies		x		(x)	(x)	
Decision-Making	5. Efficacy		x		x		
	6. Robustness		x		x		
	7. Parmenides matrix	x	x			x	x

A=Elected officials and political appointees, B=Senior civil servants (leadership), C=Junior civil servants (analysts and programme managers), D=External research analysts, think tanks, E=Agencies, stakeholder groups, lobby groups, F=The public  
x=participates, (x)=Informed through workshop/briefing, no full participation, (o) optional involvement

One further, related benefit of the 7-step approach is to break the strategy process into smaller steps of cognition and development, which inter alia refocuses participants' attention from a possibly overwhelming macro agenda, or from a constraining effect of organisational politics where some solutions are advanced or held back because they promote or dangerously cross

vested interests. While there is never any guarantee that such constraints will be mitigated, progressing systematically through a series of steps plausibly suggests that process may in some cases break down organisational shape-ability bounds, as defined above. Eroding the shape-ability bound is also effected by allowing group-based decision making and raising confidence in it via the Parmenides matrix.

## **Results, discussion and implications**

In 1955, Gaston Berger, French futurist and associate of the ministry of education observed that the political debate both in the public and among the politicians was overly focused on the means (policy instruments) and too little on the desired ends (policy objectives). In particular in periods of transformational change, the problem was particular pronounced, whereby even small steps appear difficult to agree to, while big leaps are required to reach the desired future state (Berger, de Bourbon-Busset, & Massé, 2008). Furthermore, in public policy, the objectives are typically more versatile, complex and often conflicting, which may prevent policy strategy alternatives being recognised in the first place, or decision towards a consistent strategy becoming realised. Adopted strategies might also lack sufficient ambition and may become even internally inconsistent and conflicting if and when compromise among stakeholders redefines the originally consistent strategy.

Adapting the 7-step scenario-based strategizing method forged and tested in the business environment, is offered as a way to allow policy makers to make the same breakthroughs in seeing and engage with future-oriented challenges and opportunities in a more productive way, particularly in overcoming the three cognitive bounds that hold back future thinking, venturing, and renewal.

Understanding there is more work to do, particularly in customising the scenario-based strategizing approaches for different organisational environments, the process offers the following benefits to leadership in policy organisations seeking to enhance strategic agility in navigating the future:

1. A close focus on objectives, which ties the strategy formation to the underlying purpose and mission of the organisation and societal goals
2. Attention to key external drivers of change that the policy organisation will have to respond and adapt to, and maintaining this continuous driver and trend radar even outside of the formal strategy process, to provide early warning of strategic challenges or opportunities
3. Use of non-predictive contextual scenarios to explore the limits of plausibility within the time period, and force attention to operating contexts that may be markedly different from the status quo, requiring strategic renewal.
4. A way to embrace real uncertainties faced while keeping the options manageable. While the scenarios and strategy steps open options, the efficiency and robustness steps narrow towards best choices, and the Parmenides matrix clarifies best ones or necessary trade-offs.
5. Creating a shared future outlook by way of articulating key drivers and scenarios, leading to shared understanding of and “ownership” of the imperatives that underpin the decision process, as well as a platform for collaborative decision-making.
6. Opportunity for articulation with stakeholder groups and the public at large in the process of future-thinking and future solution-building, both on entry to the future-navigation process and in final strategic decision-making.
7. A way to break future thinking and strategy formation into process steps, to mitigate the personal or organisation resistance to major leaps of change in thinking or action.
8. Best, realistic use of human resources by way of limiting the involvement of senior leadership to the phases where it is critically necessary, and similarly calling on other input sources in phases where they can be most optimally used.

Another overarching benefit is the creation of reusable strategizing elements: a) the change drivers, b) the scenarios, c) the strategy options. Creating them will often require more effort when compared with other methods of strategy development, but their availability for re-use creates important effort-reduction in subsequent strategy development instances and increases the transparency and traceability of strategic decision making.

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