Horizon Scanning

Bringing Strategic Insight to National Security Policymaking

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INTRODUCTION

The Australian Government has recently undertaken a number of concrete initiatives to enhance national security policy coordination. At the time of this publication's completion, some had been implemented – such as the 'All Hazards National Assessment' on Australia's near-term security challenges, and the coordinated national security budget.[1] Others, such as a national security capability plan, are still working towards maturity; while the progress towards the adoption of a risk-based approach to national security policy and planning remains unclear.[2] Together, these new approaches to planning and prioritising will make important contributions towards establishing a comprehensive framework for national security policymaking in Australia.

This paper proposes horizon scanning as an additional analytic method that is arguably essential to future-oriented thinking about Australia's national security challenges. After first reviewing publicly-available information about the evolving Strategic Policy Framework (SPF, 'the framework'), this paper examines horizon scanning as a potential method that could fill an important gap in the framework. This will include a discussion of the meaning of horizon scanning, its value proposition, and how it is distinguished from related methods and processes such as intelligence. From there, the paper will identify different elements of a horizon scanning system and use a morphological analysis to develop system options to suit Australian conditions. While this paper has been significantly informed by the Australian and international literature, the findings have also been informed by practical experience in horizon scanning together with roundtables with horizon scanning experts from the Australian Government and the Australasian Joint Agencies Scanning Network.[3]

This paper argues that it will be essential to incorporate horizon scanning into the SPF to engage fully in a risk-based approach to assessing potential new threats and opportunities in the strategic environment. The paper derives design options for a horizon scanning system, and recommends options for conducting this in the specific context of national security. Since the SPF is still evolving, the morphological analysis technique used in this paper will allow readers to consider new options as other elements of the framework become known, and as the preferences of senior decision-makers become clearer.

THE EVOLVING STRATEGIC POLICY FRAMEWORK

The Prime Minister's first National Security Statement of December 2008 announced a number of important changes to the structure and processes of national security policymaking, one of which was a 'Strategic Policy Framework' (SPF). This framework was intended to 'guide and coordinate effort across the national security community by setting priorities, allocating resources and evaluating performance'.[4] The aim was to set national security priorities in an

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[1]   Allan Gyngell, "National Security Lecture - The University of Canberra, 28 May 2010".
[2]   Kevin Rudd, "The First National Security Statement to the Australian Parliament".
[3]   The author thanks the participants of these roundtables for their insights and helpful advice, especially Brett Peppler and Kate Delaney. For more on the Australasian Joint Agencies Scanning Network, see http://www.ajasn.com.au/login.
[4]   Rudd, "National Security Statement": 35.

'informed, accountable, and whole-of-government manner'[5], and would include periodic Prime Ministerial statements, centralised priority setting, a coordinated budget process and an evaluation mechanism.[6] The Government's intention was clearly to introduce some of the planning processes used in other contexts, such as defence, into a broader national security context. In doing so, a number of complex challenges have been highlighted that make a future-oriented posture for national security planning essential.

The complete structure of the SPF has not been made public at the time of writing, but elements of it have been described or can be safely assumed. Those already described or announced elsewhere include an annual All-Hazards National Assessment, which examines changes in Australia's security environment over the following three to five years.[7] This assessment, which is coordinated by the Office of National Assessments (ONA), is developed to inform draft national security priorities and national intelligence priorities for consideration by Cabinet.[8] This is logical and highly relevant work, especially because judgements about political change, economic fortunes, threat intentions and even some aspects of capability that look into the future lack the precision needed for decision-making.

The national assessment would be complemented by periodic performance evaluations of all national security agencies.[9] These evaluations would, in turn, be used to inform the Coordinated National Security Budget (CNSB). This budget submission has now been through four iterations and has been used to complement individual portfolio budget submissions. Perhaps most importantly, the CNSB has been used to provide an overview of proposed 'spends and saves'; to group proposals according to a broad set of priorities; and to provide some advice on the relative importance of each.[10]

Another major initiative is the National Security Capability Plan. This plan, which was announced in July 2011, aims to 'ensure Australia's national security community agrees on both the critical security risks facing our country and the capabilities required to respond to those risks in the future'.[11] This plan would help non-Defence agencies identify current and emerging gaps in their equipment, training, and support (loosely grouped as 'capability'), while simultaneously gaining a clearer picture of what resources would be available to respond to natural disasters or other major national threats.

Taken together, these initiatives form a reasonable basis for approaching different aspects of the challenge involved with assigning resources to promote national security interests. However, some elements are missing. Perhaps these have not been publicly announced yet, and perhaps they are under development. Allowing for this uncertainty about government intentions, identifiable gaps remain in developing a way to prioritise effort to meet challenges to those

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5   Ibid: 36.
6   Duncan Lewis, "Australia's National Security Framework": 3. See also Australian National Audit Office, *Management of the Implementation of New Policy Initiatives: Australian Federal Police*, ANAO Report No 29 201-11 (2011); Appendix 5.
7   Gyngell, "National Security Lecture": 8.
8   Ibid: 8.
9   Rudd, "National Security Statement"; Lewis, "Australia's National Security Framework": 3.
10   Australian Government, "Budget Paper No. 1, Statement 1: Budget Overview"; and Gyngell, "National Security Lecture": 8-9. On the role of the CNSB, see Dr Margot McCarthy, "National Security: Past, Present and Future": 11-12.
11   Robert McClelland, "Security in Government Conference 2011: Welcome and Opening Address": 1-3.

interests, and a way to assign resources to achieve objectives. These tasks are the province of risk assessment and strategy respectively.

While this paper does not aim to describe the case for either activity,[12] a precursor effort to both is needed to allow planners and policy officials to think across time. This facility and activity is essential because significant lead-time is needed to plan and develop capability, and avoid surprise, as Defence describes in its 2009 White Paper:

> …decisions taken in one decade have the potential to affect, for good or ill, Australia's sovereignty and freedom of action for decades to come. And, should we require defence capabilities in a crisis or conflict, they cannot be acquired overnight.[13]

Indeed, Defence tends to think in 20–30 year timeframes while planning. This lead-time is needed because (defence) capital equipment is expensive, often takes a significant amount of time to plan and build, and remains in service for a long time. Time is also required because reorienting organisations towards new priorities and challenges means new training, new doctrine and often new human capital development plans. Again, surmounting these challenges takes time. As a result of the temporal realities, capability planners need to be very cognisant of the way strategic objectives, as well as threats and opportunities, may change in the future. This gaze will need to extend well beyond the usual timeframes for routine government decision-making: it will be inherently subjective and fall within the providence of professional judgement. However, it is possible to think across time, especially in areas such as demographic change, technological development, environmental change and, to some extent, resource forecasts. One way to develop the long-term, strategic insight necessary is to adopt an activity such as horizon scanning.

'A THIN WISP OF TOMORROW'

The human desire for certainty, said Lord Hennessy, means governments place great importance in feeling for the 'thin wisp of tomorrow'.[14] Lord Hennessey goes on to identify past actions taken in the British defence community to help gain these insights, and concludes his speech by asserting a duty of governments to try to identify trends and what they might mean. This is reasonable, and horizon scanning was one method he recommended for this purpose.[15] However, before we react to his exhortation, it is worth describing what horizon scanning is and is not, identifying its value proposition and success criteria, and describing the challenges of employing it to assist decision-makers. This brief analysis will show that many choices need to be considered before horizon scanning is implemented on a significant scale in any government.

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[12] Some initial cases have been made for both planning activities: see Alan Dupont and William J. Reckmeyer, "Australia's national security priorities: addressing strategic risk in a globalised world", *Australian Journal of International Affairs* 66, no. 1 (2012); Michael Evans, "Towards an Australian National Security Strategy: A Conceptual Analysis", *Security Challenges* 3, no. 4 (2007); and Carl Ungerer, "The case for an Australian national security strategy", in *Policy Analysis 84* (2011) for broad outlines of such proposals. Significantly, more work needs to be done before these ideas could be put into practice.

[13] Department of Defence, *Defending Australia in the Asia Pacific Century: Force 2030* (2009): 15.

[14] Lord Hennessy of Nympsfield, "The Horizon Scanners' Craft", (2011): 2. Lord Peter Hennessy is a distinguished British historian of government and national security. He credits Ferdinand Braudel for this description.

[15] Ibid: 11.

The method described as horizon scanning is a deliberate or purposeful strategic planning activity where emerging changes and developments are analysed to identify events, trends and drivers (collectively, 'factors') that may shape an organisation's future operating environment and so its policy, research and strategic agendas.[16] As such, horizon scanning is often a directed activity that seeks and analyses information concerning priority questions facing senior leaders about their external operating environment.[17] These parameters mean that horizon scanning is best used as part of an ongoing strategic planning process, or as a way to obtain insights into plausible factors that might influence decisions with long-term consequences. It is not, however, the only input to decision-making and, as later sections of this paper will discuss, its utility and product needs to be appraised with a cold eye.

While horizon scanning could be conducted in many ways, a typical activity involves four stages:

- **Preparation.** This stage focuses on two concurrent activities. The first involves scoping and team building. The former should develop the basic parameters for the scan, including the purpose of the scan, the time frame under consideration, the data presentation format, and the overall project plan. The second activity involves generating buy-in from senior management and contributors to the scan.[18] Without solid and broad support, proponents should consider the value of going forward with the scan, even if they have sufficient resources to begin the project.
- **Data collection.** The data collection stage involves a project team 'scanning' for relevant information. Once relevant data is identified, it is catalogued and evaluated for impact by the scanning team. If a permanent scanning team is established, this search stage will be continuous. The key output of this stage is a database of reports identifying events, trends, drivers and possible wildcards. This stage may be conducted in a number of different ways. Data collection might be an active single task or conducted as part of routine work by relevant people in an organisation. It could also be periodic and aimed at a particular product or decision, or it could be an ongoing collection effort that serves many purposes. The data collection and indeed the whole scanning process might be directed or undirected, with the distinction being the narrowness or otherwise of the questions asked by senior management.
- **Synthesis.** Many users of horizon scanning suggest exposing the collected data to a multidisciplinary expert audience. In this stage, experts debate and ultimately categorise the events, trends, drivers and wildcards identified by the scanning

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[16]   For samples of the wide variety of definitions of horizon scanning see W.L. Shultz, "The Cultural Contradictions of Managing Change: Using Horizon Scanning in an Evidence-based Policy Context", *Foresight* 8, no. 4 (2006); and Raphael Popper, "New Horizon Scanning Concepts, Practices and Systems", in *2nd DSTL Scanning Conference* (2011): slide 6. Chun Wei Choo identified other modes of horizon scanning, including those with less formality or structure than the method defined in this paper envisages ("The Art of Scanning the Environment", *Bulletin of the American Society for Information Science*, Feb/Mar (1999): 22-23.

[17]   Beat Habegger, "Horizon Scanning in Government: Concept, Country Experiences, and Models for Switzerland", (2009): 8-12. Decision-makers might also look to use horizon scanning to help form questions.

[18]   Ben Ramalingam and Harry Jones, "Strategic Futures Planning: A Guide for Public Sector Organisations", Overseas Development Institute: 33, stress the importance of getting support from the entire organisation. This seems excessive, as only certain parts of most government organisations are likely to be interested in this kind of work and not view it as a distraction. Identifying exactly which parts are interested is an important part of the scoping task.

team. The typical scanning report includes a preliminary assessment of implications, and highlights interdependencies with other reports. This process can involve a workshop event that brings the experts together. The process of evaluating and categorising data can also be iterative, employing scenarios, a 'Delphi Survey' or similar survey model to refine the expert judgements.

- **Presentation, decision and aftercare.** Ultimately, horizon scanning must result in action designed to position the organisation for future challenges. Some may use horizon scanning to develop scenarios about the future, which can lead to 'strategic conversations' about likely threats and opportunities. In other circumstances, the direction of change can be inferred from the key trends and drivers and this can cue research. An aftercare program, which might include follow-up presentations about the results or further work based on questions raised, will help to derive the maximum value from the scanning effort.

The ideal method for finding relevant factors is to seek and identify 'weak signals' portending new developments or change. These signals may come from many sources, but they are very unlikely to be from sources normally considered, such as newspapers, books or government publications. Instead, scanners will look for 'hits', new information of relevance in the more speculative and non-reviewed 'grey' literature of blogs, early reports of new scientific ideas or theoretical debates, trend-watching publications, and even fiction writing. From there, solid reasoning and argument is applied to identify possible matters of importance to the commissioning organisation.

The way these insights are used within an organisation can vary. For some, scanning products will promote conversations about the future and help to focus senior decision-makers on emerging challenges.[19] Horizon scanning might also be used as a way to identify threats and opportunities in a business, research or policy-related context. For others, horizon scanning can be about communication: internally to engage all levels of the organisation in thinking about the future, to generate new questions about the organisation's future, and to communicate with external audiences in ways that build collaborative links or awareness.[20] In the last form, communication is about shaping expectations and preparing an agenda. These 'hard' uses are clearly designed to position an organisation for the future, but they are not the only potential uses.

Other authors have pointed to the use of horizon scanning as a tool to build strategic thinking capability in an organisation; as a way to build networks; as an agent for change; and for mutual learning.[21] These 'softer' uses appear to address some other priority needs for the Australian Public Service (APS), particularly as the recent 'blueprint for reform' described a perceived lack of strategy and innovation across the APS. According to the blueprint, employees do not feel equipped to develop strategic policy and delivery advice, collaboration is not a routine way of working, and the immediacy of day-to-day activities prevents employees from focusing on

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19 See Kees Van Der Heijden, *Scenarios: The Art of Strategic Conversation* 2nd ed., (2005); Maurits Butter et.al, "Scanning for early recognition of emerging issues; dealing with the unexpected", (SESTI, 2010): 5.

20 Butter et al, "Scanning for early recognition of emerging issues"; A. Havas, et al. "The impact of foresight on innovation policy-making: recent experiences and future perspectives." *Research Evaluation* 19, no. 2 (2010): 101-2; Kristian Gustafson, "Strategic Horizons: Futures Forecasting and the British Intelligence Community", *Intelligence and National Security* 25, no. 10 (2010): 602.

21 Habegger, "Horizon Scanning in Government": 9; Wendy Schultz, "The cultural contradictions of managing change": 5.

emerging issues and producing forward-looking policy analysis.[22] This is considered to be a major deficiency of the APS.

Despite some potential to help address this deficiency, horizon scanning has limitations. For one, it is an inexact art that may not generate significant insights or action: success depends upon the skill and creativity of those involved, and the willingness of senior leaders to use the product. The vast amount of information available can make review, analysis and retrieval a daunting task. This factor makes an agreed methodology and technological support essential for the project, and can make horizon scanning a resource-intensive activity unless it is well-focused and supported.[23] The rapid pace of change in some areas, especially technology, can also reduce the impact of scanning outputs by making the scan 'perishable'. Lastly, horizon scanning also relies heavily on participants identifying the linkages between events and envisaging the implications of change for the organisation. As a consequence, it can be easy to claim too much for horizon scanning, and it is essential to establish some criteria for success.[24]

Some of these criteria are straightforward. The scan must fill a need ideally, one identified and valued by senior leadership. The scan itself must be responsive to client needs, which entails being aware of how these needs will change over time, and making changes to products or focus as the emerging situation dictates. The involvement of appropriate stakeholders in the process in some way possibly as full participants, but perhaps in a review, debate or analysis function is another criteria which will likely help to build broad support for the final product. Most of these criteria are relatively tangible and can be measured, but they only fill part of the bill.

Any scanning effort will also rely upon some less tangible or elusive success criteria that will probably be hard to create or estimate in advance. Among these will be the relative and intangible criteria best described as 'senior leaders' satisfaction': a criterion that often relies on the subjective judgment of those being supported by the scan. Closely tied to this, the scan must produce insights that are considered plausible by users. While this might seem tangible at first, the credibility of this type of product can be difficult to measure except in hindsight. Also important, but simultaneously also awkward to measure, is 'influence'. Ideally, one would like to be able to illustrate how a well-timed scanning product shifted the debate or unearthed a previously unseen opportunity. But attributing influence to a scan might prove difficult in instances in which 'good ideas have many parents', and claiming success could lead to resentment. Even more difficult to achieve will be a situation that futurist Richard Slaughter describes as a 'legitimising process'. Indeed, it is the absence of this condition that undermined one of the most well-resourced efforts in horizon scanning and futures analysis, known as the Australian Commission for the Future (ACF).[25] While the task of defining and then achieving these success factors might be inhibiting, one factor that would certainly undermine a horizon

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[22] Advisory Group on Reform of Australian Government Administration, *Ahead of the Game: Blueprint for the Reform of Australian Government Administration*, (2010): 41.

[23] In terms of support, information technology is especially important to reducing search effort and matching new information to users.

[24] For instance, O. Da Costa et al., think horizon scanning can perform roles across the policymaking system, including deep roles in implementation. See *The Impact of Foresight on Policy-Making: Insights from the FORLEARN Mutual Learning Process*, (2006): 372-6.

[25] Richard A. Slaughter, "Lessons from the Australian Commission for the Future: 1986-98", *Futures* 31, no. 1 (1999): 93-4.

scanning effort is the perception that it is merely replicating other efforts to provide advice to senior leaders about the environment of their future challenges.[26]

This description of horizon scanning and its challenges, and the warning about duplication, should lead to an obvious question from national security practitioners: how does this activity and product differ from intelligence? Indeed, the close relationship between the two has led some to suggest that horizon scanning should be the responsibility of intelligence agencies.[27] But while closely related – especially in as far as intelligence agencies might conduct horizon scanning – these two processes or products have conceptual and practical differences.

While there is no clear consensus about the definition of intelligence, a brief examination of two attempts to define it does help to illustrate the distinctions between intelligence and horizon scanning:

> [Intelligence is] information that enables you to protect your interests or maintain a valuable advantage in advancing your interests over those posing threats to them.[28]

> Reduced to its simplest terms, intelligence is knowledge and foreknowledge of the world around us – the prelude to decision and action by US policymakers.[29]

These definitions characterise intelligence as forward-looking, decision-oriented information. While horizon scanning also shares these characteristics, intelligence tends to support decisions about immediate concerns and threats to interests, lives or property, especially when formulated as 'current intelligence'.[30] Intelligence also tends to place classified information at the centre of assessments, mainly because its aim is to expose secrets such as others' intentions or immediate capability. This is not the role of horizon scanning. While it can help inform current decisions, horizon scanning tends to look for emerging trends that, because of their ambiguity and speculative nature, do not meet the standard of evidence or probability expected of intelligence.[31] The type of information used in horizon scanning is generally (perhaps mainly) obtainable in the 'open source' (i.e. public) literature where the broad directions of societies are canvassed. Given these similarities and differences, national security policymakers, especially those involved in long-term assessments, strategy, risk assessment or capability development, will want access to both kinds of information in their advice and decision-making processes; keeping the two separate has the distinct advantage of helping to ensure that neither is confused with the other.

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[26]   Jonathon Calof and Jack Smith, "Critical Success Factors For Government Led Foresight", in *Third International Seminar on Future-Oriented Technology Analysis* (2008): 7. The authors list other critical success factors for horizon scanning which, on the face of them, place a significant emphasis on a favourable political climate and using early success to promote the process.

[27]   Gustafson, "Strategic Horizons": 591.

[28]   Robert Cornall and Rufus Black, *2011 Independent Review of the Intelligence Community Report* (Canberra: Commonwealth of Australia, 2011): 6.

[29]   Central Intelligence Agency, "A Consumer's Guide to Intelligence", (Washington, DC: CIA Office of Public Affairs, 1999): vii.

[30]   Described in the US context as a 'tyranny' by Jeffrey R. Cooper, *Curing Analytic Pathologies: Pathways to Improved Intelligence Analysis*, (Washington DC: Centre for the Study of Intelligence, 2005): 32.

[31]   The use of horizon scanning in current decisions is well described in terms of 'thinking in three time horizons'. See Mehrdad Baghai, Stephen Coley and David White, *Alchemy of Growth* (London: Orion Business, 1999).

The value of horizon scanning can be expressed in two ways. The first is a general proposition, which claims that the long-view nature of horizon scanning will help leaders to become less reactive. A well-conducted scan will achieve this because there is latitude for the scanners to explore so-called weak signals and develop narratives about long-term trends. Since this search does not merely concern threats, horizon scanning can help to illuminate possible opportunities, be they in the form of new technology or even changing attitudes. Perhaps the most valuable aspect of this proposition for time-poor senior leaders is the way in which high-quality scanning product provides them with the space, structure and distilled information to be able to discuss the organisation's future and its priority challenges. As has been noted by others, such as Ross Babbage of the Kokoda Foundation and the authors of the APS Reform Blueprint, increasingly crowded decision agendas have impinged on the amount of time available to consider longer-term matters.[32]

A second, more specific element of the value proposition for horizon scanning for Australia's emerging SPF derives from its product. When done well, horizon scanning should provide a view of the broad trends, weak signals and possible events beyond the 3-5 year view of the current All Hazards National Assessment. This could allow those using horizon scanning product to make decisions about an organisation's future even if only in terms of highlighting detailed research needs well before the trends emerge as time-critical challenges.

Based on the existing long-range gap in the assessment used for the SPF and these value propositions, it is clearly worth considering horizon scanning as another analytical tool for this framework. The scanning method is suggested as a potentially useful tool because it can provide decision-makers with targeted advice about, and deliberative space to consider, trends and drivers that will likely shape the future. Given the nature of the SPF, it is safe to assume that such advice would need to be developed and presented as part of a process that is led, resourced, conducted and analysed within government, probably with some involvement from experts outside the official community. But there are many, many ways that such a process and its products could be designed and packaged as discrete options for a suitable system. Efforts to visualise and explain such options would be well served by an analytical tool that presents elements of a problem comprehensively, describes many options clearly, and is flexible enough to cope with changed parameters and still remain useful. One such tool is morphological analysis. The next part of this paper will apply this method to the challenge of articulating some broad options for a horizon scanning system that will suit the purpose of the SPF.

OPTIONS FOR A HORIZON SCANNING SYSTEM

Faced with the challenge of designing a rocket system, Swiss astronomer Fritz Zwicky broke the known system down into parameters (component parts) and the differing values for these parameters (conditions) and presented these as a comprehensive matrix. The matrix was then used to investigate the relationships created when the values of each parameter are combined into a prospective system. The result was a range of internally consistent options that could be

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[32]   Ross Babbage, *Strategic decision-making: optimising Australia's national security planning and coordination for 2015* (Canberra, Kokoda Foundation, 2008): 6-9; Advisory Group on Reform of Australian Government Administration, *Ahead of the Game*: 21.

employed to satisfy the problem at hand. This method became known as (General) Morphological Analysis.[33]

In this paper, morphological analysis will be employed to identify options for the potential ways to design a horizon scanning effort for the SPF. The parameters for this particular horizon scanning system have been selected after a literature review and discussions with expert roundtables, and grouped following the architectural axiom 'form follows function'. The aim is to identify the key parameters of form and function that decision-makers will need to consider as they review any proposal for a horizon scanning system. Within each parameter a number of different values have been identified in an effort to provide a comprehensive coverage of the way each parameter could be performed within this system. The result of this exercise is shown in Table 1. Since there are just over 1.6 million possible combinations in this table, the next process involves identifying and discarding inconsistent value combinations to produce a smaller (but admittedly still very large) number of potential options for a candidate system.

The matrix begins by identifying the function variables, which essentially describe the purpose and expected outcomes of the scanning effort, and placing these across the top row. The key variable, and indeed the key decision, is the first: whether the scan is based on a broader government effort or whether it will be a stand-alone effort focused on national security. There are significant advantages for both, and neither, of itself, assumes that the eventual scanning product will be open source or classified.[34] Indeed, as will be described later, the main advantage of nesting the scan in a broader whole-of-government effort is the breadth of expertise and literature that could be covered. This might also constitute an economical measure, as the overhead costs are shared among many. Still, the scan will need to create product relevant to the concerns of senior national security officials: a broader effort might compromise that focus if the responsible team is not careful. The broader effort might also make it more difficult to use classified inputs to the scan, which might be seen as highly detrimental to the intended outcome.

As the earlier discussion explained, support for a horizon scanning effort, including resource commitments and direction, needs to derive from an appropriate level of responsibility. In this instance, there are numerous plausible options for a sponsor or commissioning authority ranging from ministerial level, through to more junior officials, to a mixed board of official and invited external members. This authority will become the focus of the scan output: their questions and priorities will guide the scan effort and be the principal measure for determining the scan's success or otherwise.

The type of product and release policy refines the purpose further by providing guidance on the expected presentation of scan reports. It is important for this detail to be decided early because scanning organisations with significant contributions from non-national security agencies might find it difficult to manage a classified scan.

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[33] Tom Ritchley, "General Morphological Analysis: A general method for non-quantified modelling", Swedish Morphological Society: 2-7.

[34] Both the US Director of National Intelligence (http://www.dni.gov/nic/PDF_2025/2025_Global_Trends_Final_Report.pdf) and the UK Ministry of Defence (http://www.mod.uk/DefenceInternet/MicroSite/DCDC/) publish horizon scanning documents in the public domain.

Table 1: Crafting options: elements of a horizon scanning (HS) system

		HS System Function Parameters						HS System Form Parameters				
		Purpose	**General method**	**Reporting frequency**	**Sponsor**	**Release policy**	**Type of product**	**Hosting Responsibility**	**Scanning team participants**	**Outreach**	**Team structure**	**Aftercare**
		a	**b**	**c**	**d**	**e**	**f**	**g**	**h**	**i**	**j**	**k**
Parameter Values	1	Scan for all national policy fields	Active	Bi-yearly major report	Ministerial	All reports released publicly	Synthesised scan reports	Central agency	Intelligence only	Public conference	'Centre of Excellence'	Dedicated team
	2	Single-purpose scan for all National Security fields	Passive	Yearly report with additional short reports	Secretary-level	Selected (declassified?) reports made public	Multi-subject reports	General Policy department	All government only	Close network conference and seminars	Dedicated team	Follow-up by individuals
	3	HS specific to National security strategy framework		Frequent short reports	Deputy Secretary-level	Reports released only to a closed network	Single-subject reports	National Security policy department	Government and non-government participants	Classified conference and seminars	Small core	Nil
	4			Timed to meet needs	Below Deputy Secretary	All product classified		Intelligence agency		No conference or seminars	Individual coordinator	
	5			One-off effort	Board including non-government members			Public-private joint venture (government with University, Think tank, incorporated company			Virtual team (network)	

The 'function' of the horizon scanning system influences the choice of variables that define the 'form' of the organisation tasked with the scan. The form variables include the hosting responsibility, which will have an important impact upon how the scan might be undertaken and candidates who could participate. Following this, the next two variables concern the team structure and the question of who will participate in the team. The last two variables considered are outreach and 'aftercare', which includes follow-up activities such as presentations and written explanations of the findings, and preparations for the next product. These last variables will have implications for participation, resourcing and communication.

The parameter values chosen for Table 1 have been selected with the aim of producing a scan suitable for informing national security policy officials. This means some possible values have been omitted, such as a scan conducted wholly outside government. A few others can also be omitted from further consideration because it is possible to make some assumptions about the type of system that government would *not* want for this scan. The first to be discarded is a passive option for conducting the scan, which reflects an assumption about government preferences for organisation and accountable outcomes.[35] A 'Centre of Excellence' model is also discarded due to the fiscal constraints that are likely to unnecessarily limit the appetite for new Australian Government initiatives for a number of years to come.[36] 'Classified only' product is also discarded, mainly because this is likely to be impractical if a broad focus for the scan is chosen, or significant non-government expertise is involved in the activity. Along the same lines, a scanning group involving 'intelligence only' participants is also discarded because broader participation will most likely lead to better results.[37] These few emissions have reduced the number of possible options by two-thirds from the original possible grouping: still an impractical number to describe in detail, but a good indication of the broad nature of the horizon scanning task and the ways in which it could be approached.

With this breadth in mind, two possible options will be sketched below. Each option aims to be internally consistent and to provide a genuinely different approach. While only one value has been selected for each parameter in most cases, a second value is sometimes used to show the subtle distinctions that could be made when assembling viable options. Some additional decisions that need to be made about the scanning system will also be presented after each option is explained.

The first is *Option 1: Plug-in and Collaborate.* The purpose behind this option is to produce an active whole-of government scanning effort that satisfies a number of policy areas, with national security being only one. As this is a government-wide effort, and potentially not only limited to the Commonwealth, the assumed size of the resources available and the numbers of team participants that could be mustered in support are considerable. While the resources are assumed to fall short of the 'centre of excellence model', an effort of this size and expertise means that the scan could attempt to produce a single, multi-field report and produce additional

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[35] The active/passive distinction drawn in this paper may indeed be too stark, especially where technology can enable better searching and data matching (discussion with Brett Peppler).

[36] Habegger, "Horizon Scanning in Government": 17-20 describes an initiative such as this by the Singaporean Government.

[37] For example, see Ibid: 23; and examples of 'participatory scanning activities', often utilising Web 2.0 technologies such as iKnow (http://community.iknowfutures.eu/). Another project, the multinational scanning project SESTI (www.sesti.info) is based on a consortium of international universities.

short reports on topics of most interest to the steering board, or, alternatively, more frequent reports that could satisfy a broader range of priority subjects.

The large number of stakeholders means this type of scan should be managed from the top levels of government. While ministerial-level involvement was seen as an impediment in one review because political alignment compromised the credibility of the scan,[38] there is no credible benefit in circumventing the need to secure ministerial support for an effort involving a significant amount of resources. Still, ministerial steering is another matter. In this option a steering board at the Departmental Secretary / Deputy Secretary level is envisaged because these officials control significant resources and understand ministerial priorities. There would also be the opportunity to involve non-government officials on this board, which might help to include broader perspectives in the tasking directives.

With non-government involvement at the steering and probably participation levels, the scan would also best be conducted in an 'open' style so that security classifications are not a factor, at least not until the final stages of analysis. Ways to achieve this style might include inviting non-government experts to join the sponsoring board; forming a 'joint venture' hosting arrangement, perhaps in a university; and developing the ability to share some, if not most, of the product. This option does not preclude additional classified analysis conducted solely within government for the specific purpose of informing the SPF or the like, although such product is likely to come late in the process and bring an additional cost overhead.

The broad nature of such a scan lends itself to the host being a central agency to ensure that the whole-of-government perspective is met. However, the joint venture model is another way to achieve this, as any venture could be specifically established to fulfil that mandate. In the Australian context, the Australian National Institute for Public Policy (ANIPP) at the Australian National University might be a sound joint venture partner, or the informal Australasian Joint Agencies Scanning Network (AJASN) might be augmented to enhance its ability to coordinate this large activity.

Significant outreach and aftercare is envisaged for this option. This could include conferences or working groups to develop product, and publicly released analysis to inform and advise. In time, the scan might be seen as a public good that would inform other sectors of the community. The scan products could also provide a valuable contribution to, and so entree to, international scanning efforts.

The participants suggested for this option include government and non-government experts based on a core staff and a network of experts. This model is considered to be the most appropriate way to harness national and international talent in this effort, and to ensure that the best possible sources of information and expertise are available to the scanning team. The team itself would be relatively small, perhaps four to ten people, depending on the resources available across government and the frequency of products; it would be capable of coordinating input from the scanning network's member agencies and be ultimately responsible for meeting the steering board's priorities.

The key advantages of Option 1 include its ability to co-opt and consult leading thinkers regarding emerging trends, which is likely to make available the widest possible array of data

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[38]   Slaughter, "Lessons from the Australian Commission for the Future": 3.

and analysis. This option also spreads costs over many participants, or allows for easy collaboration with existing security and non-security horizon scanning activities, such as the AJASN. If such an approach is acceptable, the resource implications of this option could be relatively small, with central agencies encouraging national security agencies to participate in the network. An additional layer of analysis for national security purposes might be needed to ensure fitness for purpose, but this is likely to involve a relatively small number of people to act as a core to manage a separate product suitable to inform selected SPF activities, such as the National Security Capability Plan or similar.

The main disadvantages include the breadth of focus, which could mean that national security agencies are involved with tangential work. The time schedule for delivering scan reports would probably need to be more generic, and therefore might not suit specific customers such as national security officials. Its openness might also inhibit some discussions concerning particular countries or technologies, especially if classified information would help in understanding the related trends. Importantly, the assumed efficiencies of this approach might also be lost if an additional, dedicated effort is still required to meet the needs of the SPF. Despite these possible drawbacks, the *Plug-in and Collaborate* options could provide an effective interim step, or actually be the best option where resource constraints dominate considerations.

Option 1: Plug-in and Collaborate

		HS System Function Parameters					HS System Form Parameters				
	Purpose	**General method**	**Reporting frequency**	**Sponsor**	**Release policy**	**Type of product**	**Hosting Responsibility**	**Scanning team**	**Team structure**	**Outreach**	**Aftercare**
	a	**b**	**c**	**d**	**e**	**f**	**g**	**h**	**i**	**j**	**k**
Parameter Values	Scan for all national policy fields	Active	Yearly report with additional short reports	Secretary-level	Reports released only to a closed network	Synthesised scan reports	Central agency	Government and non-government participants	Small core	Close network conference and seminars	Small core
			Frequent short reports	Deputy Secretary-level		Multi-subject reports	Joint venture: Govt and other				Individual coordinator
				Board including non-govt members							

Option 2 is a *Bespoke System for the SPF*. While collaboration with other horizon scans will occur at different stages of bespoke scan, the purpose of this system is to meet the specific needs of the SPF and is structured accordingly. This means that the sponsors, host and scanning team members would be drawn primarily, and perhaps solely, from government.

The products of this scan would be structured, focused and timed to meet the key input needs of the SPF, and these would not be released publicly (at least, not without extensive revision to remove classified information or findings). Given the aim and more closed nature of the activity, the sponsoring group could be formed from the second or third-tier of senior officials and hosted from either a policy agency or a central agency: a likely candidate is the (appropriately resourced) Department of the Prime Minister and Cabinet. The scan product would be an important input to specific SPF activities, such as national security statements, the National Security Capability Plan or other similar activities. This would allow the scan to produce classified products on very sensitive matters. The product of this scan would complement intelligence analysis such as the shorter-term annual 'All Hazards National Assessment'.

Given the specific nature of this scan, a scanning team of 4-10 core government participants would be needed; once again, the comprehensiveness and frequency of the products would have a strong influence on the resources needed. This team could, of course, be augmented with short-term secondees. In contrast to Option 1, this team would be resourced from within the subset of Commonwealth agencies with responsibilities for national security. Regardless of the actual size of the core team, a very wide range of relevant agencies should be involved in some way. This could involve up to seventeen Commonwealth government agencies; more if State and Territory governments also participate. External experts should be consulted widely, although sharing product or process activities could be problematic if security classifications are imposed on the product or process activities.

The need for outreach and aftercare is probably more limited in Option 2, and would be focused on internal, i.e., national security, audiences. It would be possible to use product in some, more closed international situations, perhaps in cooperation with close security partners. The main advantages of Option 2 are its focus and responsiveness. While scan participants would be free to look where they need to and consult external sources, the intended product would be clearly focused on national security and delivered within resources allocated to the task. The ability to conduct work at a classified level is greater with this option than with Option 1. Indeed, some might ask why this would not be conducted within an intelligence agency: the best response to this is that, despite the more closed nature of this work, hosting the scan in an intelligence agency would be a difficult option to manage due to the earlier described desire to differentiate scanning from intelligence as well as practical matters such as the closed nature of intelligence IT systems and significant vetting processes that are required before people can work in this environment.[39]

The responsiveness of this option is another important advantage over Option 1. While the bespoke option involves a large number of national security agencies, the number of agencies involved in a whole-of-government effort might easily exceed twice or three times that number. Identifying the optimal time to deliver product would be a challenge. Another advantage might come from the ability to maintain a relatively simpler tasking process. The principal disadvantages of this option reflect the advantages of Option 1: coverage and cost. With the scanning team probably being drawn from a narrower base of expertise, it is possible that some trends external to mainstream national security analysis might not receive due attention or not be analysed by experts. Of course, there are ways to mitigate this disadvantage, and experienced scanners are likely to consult and cast their information nets very widely. On the surface, this option is likely to be more expensive than Option 1, with the full cost being shared among the national security agencies. While some current scanning activity would be leveraged, this is essentially a new task that will require new staff effort.

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[39]   The desire to promote a large degree of engagement with non-government sources expertise in a scan is not a reason for recommending against using an intelligence agency as a host, because Australian intelligence agencies are becoming adept at seeking advice from external sources.

Option 2: Bespoke System for the SPF

	HS System Function Parameters						HS System Form Parameters				
	Purpose	**General method**	**Reporting frequency**	**Sponsor**	**Release policy**	**Type of product**	**Hosting Responsibility**	**Scanning team**	**Team structure**	**Outreach**	**Aftercare**
	a	**b**	**c**	**d**	**e**	**f**	**g**	**h**	**i**	**j**	**k**
Parameter Values	Scan specific to national security SPF	Active	Timed to meet needs (i.e. of SPF)	Deputy Secretary-level	Reports released only to closed network	Synthesised scan reports	National Security Policy dept.	Government only participants	Dedicated team	No conference or seminars	Follow-up by individuals
				Below Deputy Secretary			Central agency		Small core		

On balance, the optimal solution for the national security community is Option 2 because it is focused; it is most likely to be responsive to the needs of the SPF; and, unlike Option 1, classified product can be intrinsic to the main process. This makes it possible for the bespoke option to use existing scanning efforts that are currently being undertaken by national security agencies. Also, the 'openness' advantage of Option 1 could be diluted by skillful collaboration with existing non-security scans, and by counseling the scanning team to search widely. Furthermore, there is nothing to preclude the bespoke option planning team from joining the AJASN, which would also serve to ensure breadth in research and engagement with a broad audience.

Further variations could be made to this model. For instance, the purpose of Option 2 could be expanded to support all planning across the national security policy area, such as supporting future defence, border security or counter-terrorism white papers. Such a scan would certainly be extensive, but in all probability less focused and more expensive than the existing Option 2 proposal because a larger scanning team might be required. However, this broader purpose could absorb some existing scanning efforts and so help to reduce duplication. Another variation could involve hosting the Option 2 model through a joint venture arrangement with an institution such as the Australian National University's National Security College. This option may offer the scan the best of both worlds because the National Security College is already established as a joint venture and includes staff seconded from the public service. Information security would, however, be more complex than Option 2 currently assumes.

Further tinkering with aspects of product, team and process in both options are feasible, although some aspects would have resource implications. For example, additional products, or a thorough aftercare plan which involves engagement with a variety of audiences, would almost certainly require more resources than Option 2 currently envisages. Changes to engage more groups or sources of expertise in the scan process, such as expanding the board to include non-government experts, are also possible, and might be attractive to senior decision-makers if openness and communication are vital.

In addition to these broad considerations of function and form, decision-makers will need to consider a range of other matters. Settling the time dimension, for instance, will be an important decision. Many scans or futures activities tend to operate in the 20–30 year time band, and this

seems like the kind of range for capability or similar planning activities.[40] But such a timeframe might not suit other purposes, such as risk management or strategy. Information connectivity will be another key decision, and will be determined largely by the level of security needed for the scan data and product. As the earlier mention of success factors suggests, evaluation is best built into the scanning system, and this process and criteria should receive significant attention from the outset. Even earlier still, officials with potential responsibilities for a horizon scanning initiative should conduct a needs analysis to identify exactly what is currently being done in this space, and importantly the type of help that senior officials want with regards to making decisions about the balance of attention and resources concerning Australia's future national security challenges. They would not want to grasp and present a 'wisp' of the future that does not make a material contribution to helping senior officials to meet the challenges faced by their respective organisations, and the nation at large.

CONCLUSION

The Australian Government's evolving national security Strategy Planning Framework enters new space. It has, for the first time, taken a broad view of Australia's national security challenges, and resolved to enhance coordination and develop detailed plans about the future in areas such as capability development. Some elements of the Framework and its supporting tools have already been identified and all seem logical and achievable, with significant effort and goodwill. One missing element is a tool like horizon scanning, which this paper contends is very important as a planning activity because it can cover many issue areas and take an extended view of Australia's security challenges over time.

The value of undertaking horizon scanning in the national security space is clear, particularly in the general way it helps to provide senior officials with space to think expansively about the future and be less reactive to trends. More specifically, horizon scanning will also provide value in terms of filling a gap between the existing shorter-term All Hazards National Assessment and the big drivers that will unfold beyond 3–5 years hence. As the expert workshops consulted as part of this project show, different parts of government are already taking advantage of methodologies such as this to support decision-making today. What is needed now are possible ways to create a horizon scanning system that will suit both the SPF and the needs of the Australian Government.

This paper has suggested two broad options that essentially differ in the way they support different groupings of national decision-makers. Option 1, which was based on promoting a whole-of-government and perhaps even broader scanning network, was described as having significant advantages in terms of the range of expertise it could muster and the openness of its processes in support of essentially all policy decision-makers. In contrast, the narrower focus of the bespoke Option 2 would provide national security decision-makers with a laser-like focus on their needs and those of the SPF. Both options would be feasible and both could produce a result if implemented after a careful needs assessment and with real support from senior leaders.

Still, the focus and responsiveness of Option 2, if tempered with a deliberately collaborative attitude towards non-security scanning efforts, makes it a superior yet probably marginally more

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[40]   Ramalingam and Jones, "Strategic Futures Planning": 32-3.

expensive option: this should be developed further if Australia's national security community accepts the value proposition of horizon scanning. Whether Option 2 either provides the best fit at the time of decision or is the most attractive choice will depend upon the preferences of those decision-makers and the weight they place on the various technical, resource and 'small-p' political factors that are difficult to assess from a distance. For instance, some excluded variations might become more attractive, such as an extensive and expensive 'centre of excellence' model, if the government's fiscal priorities change. These uncertainties help to make morphological analysis a useful tool because it provides decision-makers with a further menu to build a system that suits their needs, without necessarily having to return to the drawing board.

BIBLIOGRAPHY

Advisory Group on Reform of Australian Government Administration. *Ahead of the Game: Blueprint for the Reform of Australian Government Administration* (Canberra: Commonwealth of Australia, 2010).

Australian Government. "Budget Paper No. 1, Statement 1: Budget Overview." Available http://www.budget.gov.au/2010-11/content/bp1/html/bp1_bst1-13.htm, accessed 1 July 2012.

Australian National Audit Office. "Management of the Implementation of New Policy Initiatives: Australian Federal Police." (Canberra: Commonwealth of Australia, 2011).

Babbage, Ross. *Strategic decision making: optimising Australia's national security planning and coordination for 2015* (Canberra, Kokoda Foundation, 2008).

Baghai, Mehrdad; Stephen Coley; David White, Alchemy of Growth (London: Orion Business, 1999).

Butter, Maurits; Miriam Leis; Cristiano Cagnin; Vicente Carabias; Totti Könnölä; Victor van Rij; Joachim Klerx; Petra Schaper-Rinkel; Effie Amanatidou; Ozcan Saritas; Jennifer Cassingena Harper; Lisa Pace. *Scanning for Early Recognition of Emerging Issues; Dealing with the Unexpected* (SESTI, 2010).

Calof, Jonathon, and Jack Smith. "Critical Success Factors for Government Led Foresight" in *Third International Seminar on Future-Oriented Technology Analysis* (Seville: 2008).

Central Intelligence Agency. *A Consumer's Guide to Intelligence* (Washington, DC: CIA Office of Public Affairs, 1999).

Choo, Chun Wei. "The Art of Scanning the Environment", *Bulletin of the American Society for Information Science*, Feb/Mar (1999): 21-24.

Cooper, Jeffrey R. *Curing Analytic Pathologies: Pathways to Improved Intelligence Analysis* (Washington DC: Centre for the Study of Intelligence, 2005).

Cornall, Robert, and Rufus Black. *2011 Independent Review of the Intelligence Community Report* (Canberra: Commonwealth of Australia, 2011).

Costa, O. Da, P. Warnke, C. Caglin, and F. Scapolo. *The Impact of Foresight on Policy-Making: Insights from the Forlearn Mutual Learning Process* (Sevilla: Institute for Prospective Technological Studies, 2006).

Department of Defence. *Defending Australia in the Asia Pacific Century: Force 2030* (Canberra: Commonwealth of Australia, 2009).

Dupont, Alan, and William J. Reckmeyer. "Australia's National Security Priorities: Addressing Strategic Risk in a Globalised World." *Australian Journal of International Affairs* 66, no. 1 (2012): 34-51.

Evans, Michael. "Towards an Australian National Security Strategy: A Conceptual Analysis." *Security Challenges* 3, no. 4 (2007): 113-30.

Gustafson, Kristian. "Strategic Horizons: Futures Forecasting and the British Intelligence Community." *Intelligence and National Security* 25, no. 10 (2010).

Gyngell, Allan. "National Security Lecture - the University of Canberra, 28 May 2010." Available http://www.ona.gov.au/about-ona/for-the-record.html, accessed 1 July 2012.

Habegger, Beat. "Horizon Scanning in Government: Concept, Country Experiences, and Models for Switzerland." Zurich: Centre for Security Studies, 2009.

Havas, A; D. Schartinger; M. Weber. "The impact of foresight on innovation policy-making: recent experiences and future perspectives." *Research Evaluation* 19, no. 2 (2010): 91-104.

Lewis, Duncan. "Australia's National Security Framework." Available http://www.ona.gov.au/history/australian-intelligence-community.html, accessed 1 July 2012.

McCarthy, Dr Margot. "National Security: Past Present and Future." (Canberra: Department of the Prime Minister and Cabinet/National Security College, 2012). Available http://www.dpmc.gov.au/national_security/speeches/2012-06-15_past_present_future.pdf, accessed 12 July 2012.

McClelland, Robert. "Security in Government Conference 2011: Welcome and Opening Address." (Canberra: Commonwealth of Australia, 2011), available http://www.ag.gov.au/Documents/Speaker%20Presentation%20PDF%20-%20Security%20in%20Government%20Conference%202011%20-%20The%20Hon%20Robert%20McClelland%20MP.PDF, accessed 1 July 2012.

Nympsfield, Lord Hennessy of. "The Horizon Scanners' Craft." (London: Chatham House, 2011).

Popper, Raphael. "New Horizon Scanning Concepts, Practices and Systems." in *2nd DSTL Scanning Conference* (Shrivenham UK: UK Ministry of Defence, 2011).

Ramalingam, Ben, and Harry Jones. "Strategic Futures Planning: A Guide for Public Sector Organisations." Overseas Development Institute, availablehttp://www.odi.org.uk/resources/details.asp?id=216&title=strategic-futures-planning-public-sector-organisations, accessed 12 July 2012.

Ritchley, Tom. "General Morphological Analysis: A General Method for Non-Quantified Modelling." Swedish Morphological Society, available http://www.swemorph.com/ma.html, accessed 2 July 2012.

Rudd, Kevin. "The First National Security Statement to the Australian Parliament." (Canberra: Commonwealth of Australia, 2008).

Schultz, Wendy. "The Cultural Contradictions of Managing Change: Using Horizon Scanning in an Evidence-Based Policy Context." *Foresight* 8, no. 4 (2006): 3-12.

Slaughter, Richard A. "Lessons from the Australian Commission for the Future: 1986-98." *Futures* 31, no. 1 (1999): 91-99.

Ungerer, Carl. "The Case for an Australian National Security Strategy." *Policy Analysis 84*: Australian Strategic Policy Institute, 2011.

Van Der Heijden, Kees. *Scenarios: The Art of Strategic Conversation* 2nd ed. (Chichester UK: John Wiley and Sons, 2005).