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High Level Risk Forum

Strategic Crisis Management Exercises: Challenges and Design Tools

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This document has been prepared as background for session 2: Leadership in Crisis of the High Level Risk Forum. The document was prepared by Prof. E. K. Stern, (Swedish National Defence College and University of Delaware) in close coordination and with support from the High Level Risk Forum secretariat. The document draws on the materials presented at the third workshop on Strategic Crisis Management held in Geneva in June 2014 at the invitation of the Chancellery of Switzerland.

Delegates to the High Level Risk Forum are invited to:

- *COMMENT on the usefulness of Strategic Crisis Management Exercises*
- *COMMENT on the proposed approach for designing exercises for Strategic Crisis Management and on the Good Practices identified as a conclusion*
- *PROVIDE examples of strategic crisis management exercise practices that could contribute to the Toolkit on Risk Governance (TRiG)*

Any comments and suggestions will have to be received by 31 December 2014 COB.

Charles Baubion (tel: +(33-1) 45 24 13 78; email: charles.baubion@oecd.org)
Stéphane Jacobzone (tel: +(33-1) 45 24 85 56; email: stephane.jacobzone@oecd.org)

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Introduction

Background

1. Over the last decade, the history of the OECD countries provides many examples of highly stressful crises testing the abilities of societies and their leaders to withstand shocks. Earthquakes, tsunamis, hurricanes, volcanic eruptions, industrial accidents and critical infrastructure failures, threats to the food and water supply, infectious diseases, territorial and ethnic conflict, and economic turbulence have impacted virtually all of the most developed countries to a greater or lesser extent. These events have revealed fragilities and vulnerabilities not only in the prevailing institutional frameworks, but also sometimes in the ability of strategic leaders to work effectively with their staffs and organizations in fulfilling the tasks of crisis leadership (Boin et al, 2005; Baubion, 2013). Such events serve as extreme tests of the ability of societies and communities to absorb and recover from shocks (c.f. Aldrich, 2012; Comfort, Boin, & Demchak, 2010).

2. Not surprisingly, many OECD countries have developed programs and practices designed to prepare leaders for the rigors of strategic crisis management. In recognition of the importance of this function combined with the hitherto relatively under-developed nature of cooperation and exchange in this area, the OECD and the Swiss Federal Government arranged a workshop in June of 2014 to bring together government, private sector and academic experts in an effort to take stock of current knowledge and practices with an eye to improving the quality and impact of strategic crisis management exercises. A great variety of formats, designs and exercise techniques were presented. For example, participants were briefed on the Rapid Reflection Exercises conducted regularly by the Swiss Federal Chancellery, the biennial LUKEK large scale exercises conducted in Germany¹, Japanese programs for exercising Mayors of Municipalities and other local officials. The Netherlands provided a presentation about a unique, international, technology and multi-media enhanced, exercise for Heads of Government attending the Nuclear Security Summit in The Hague. A discussion-based exercise technique focusing on crisis *sense-making* and case-based scenario construction developed in Sweden² was also demonstrated at the workshop.

3. This report draws on the discussions and conclusions from that Strategic Crisis Management Workshop, and discusses the challenges involved in designing crisis management exercises for strategic leaders and in choosing design parameters and alternatives. The goal is to offer a source of reference for countries and collaborating organizations— a 'tool kit' intended to facilitate even more reflective and effective future crisis management exercise designs in the future.

Why are exercises fundamental for building capacity and “stress-testing” strategic crisis management capacities?

4. While crises have tested the ability of leaders throughout history, the changing nature of the socio-technical context has exacerbated the challenge in many respects. Trends and developments-- such as globalization, high media exposure and the information & communications revolution, privatization, politicization of crises and disasters accompanied by rising citizen expectations--- have increased the pace and complexity of crisis phenomena *and the demands placed on strategic level crisis managers and their organizations.*

¹<http://www.slideshare.net/OECD-GOV/scm-2014workshopgermany> (accessed November 26, 2014) and German Federal Office of Civil Protection and Disaster Assistance (2011), Guideline for Strategic Crisis Management Exercises . See also Baubion (2013: 16)

²

5. Crisis can usefully be conceptualized crisis in terms of three subjective criteria: threat, urgency, and uncertainty (Rosenthal, 't Hart, and Charles 1989; Stern 2005; cf. Hermann 1963). Crises tend to arise around threats to core societal or organizational values—the things people care most about. Mistakes and missteps can be very costly for leaders and those they lead. Crises typically exhibit high degrees of uncertainty regarding the nature of the unfolding threat, the contours of an appropriate response, or the possible ramifications of various courses of action. Such uncertainties make it difficult for leaders to understand, decide and communicate about crises. Furthermore, crises are associated with a sense of urgency. Events are perceived as moving quickly and there are fleeting windows of opportunity to influence their course. Additional time pressure stems from the relentless pace of the 24-hour news cycle. Decision makers and their organizations must cultivate the capacity to diagnose situations and formulate responses under severe time pressure.

6. Thus, crises force strategic level decision makers to make some of the most consequential decisions in public life under the most difficult of circumstances. In order to rise to such challenges, leaders, their teams, organizations and those of key partners must be prepared to cope with the rigors and trials of contemporary crisis management. It is increasingly recognized in many OECD and other countries that crisis/emergency/disaster management represents a field of specialised expertise.. One approach is to emphasize the need to educate and develop a cadre of professionals equipped to manage or facilitate the management of crises and emergencies (Stevens, 2013). Such a profession could depart from military, medical, legal, or other professional models. Professionalization entails the identification of a body of knowledge, core skills, and standards, including a code of ethics. Suitably specified, this can be helpful; care must be taken, however, to prevent the emergence of a static orthodoxy and excessive homogeneity. However, professionalization is, in fact, one aspect of what is a more complicated equation.

7. When facing major crises, partnership between political leaders and “professionals” is essential. This means that political leaders who are not “professionals” must also be educated as to the nature of crisis management, informed of what is required of them in crisis, familiarized with crisis planning and organization, and equipped to engage in meaningful communicative interaction with others inside and outside of their organizations. Individual and collective crisis management skills are best acquired and honed through hands-on practice. While there is no substitute for real life experience, well designed and executed exercises allow leaders to hone their skills, familiarize themselves with (and identify gaps in) crisis planning, make mistakes (and hopefully learn from them) when lives , legitimacy, and societal welfare are not on the line.

8. As noted in the UK Cabinet Office Guidance for Emergency Planning and Preparedness Exercises

Planning for emergencies cannot be considered reliable until it is exercised and has proved to be workable, especially since false confidence may be placed in the integrity of a written plan. Generally, participants in exercises should have an awareness of their roles and be reasonably comfortable with them, before they are subject to the stresses of an exercise. Exercising is not to catch people out. It tests procedures, not people. If staff are under-prepared, they may blame the plan, when they should blame their lack of preparation and training. An important aim of an exercise should be to make people feel more comfortable in their roles and to build morale.³

9. As we will see, there are a wide variety of powerful exercise designs and techniques (both traditional and technology enhanced) suitable for practicing and developing strategic crisis management skills and stress-testing individuals and organizations.

³ <https://www.gov.uk/emergency-planning-and-preparedness-exercises-and-training> (accessed Nov. 26, 2014)

10. The report first discusses the rationale, types and purposes of Strategic Crisis Management Exercises as part of building the right skill set for Strategic Crisis Management. The paper discusses the challenges in involving leadership, engaging partners from the private sector and developing international crisis management exercises. Finally, it presents the parameters and options for scenario development, including case-base scenarios and options for involving and working with leaders.

Strategic Crisis Management Exercises

Evolving exercises practices over time

11. Recognition of the need to practice and rehearse national and local level responses to rapidly emerging threats has a long history among the members of the OECD and comparable countries. During the Cold War, preparations for military and civil defence/civil protection were conducted on both a unilateral and a multi-lateral basis (e.g. under NATO auspices). Over time, such exercises have evolved in keeping with the evolving risk, security, and European institutional landscapes. These exercises have taken a variety of forms and have developed along varying trajectories in different countries. Often, and for reasons that will be discussed below, much of the emphasis has been on developing capability and practicing skills, processes and procedures associated with operational/tactical level crisis management. In the course of the efforts a body of knowledge and a community of practice have emerged.

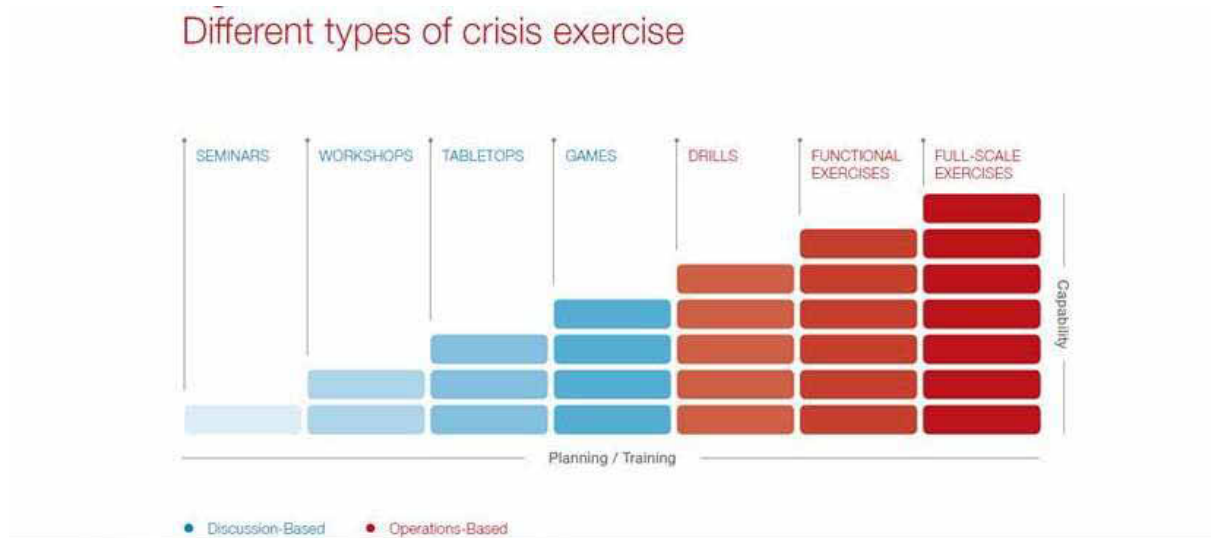
12. While significant attention has been devoted to developing techniques and designs for operational training and exercise in the public sector in both civilian (e.g. for so called blue light organizations) and military organizations (c.f. Crego, 1996; Crichton et al, 2000; Crichton, 2009), rather less attention has been devoted to problems of designing crisis management training and exercises for strategic level leaders in governmental organizations and existing practices is of varying degrees of quality and effectiveness (c.f. Borodzic and Van Haparen, 2002). Furthermore, while small and relatively closed communities of experts in various countries have developed know-how in this rather arcane area, relatively little exchange of knowledge and good practices tends to take place. The topic is somewhat sensitive and governments may be understandably reluctant to share information about what they are doing in this area. Experts may regard their knowledge as a canon best passed on through mentor-mentee communication and informal apprenticeship or their designs as proprietary trade secrets best left undocumented and un-diffused.

13. The first step in approaching and structuring this somewhat fragmented body of knowledge and experience and improving strategic crisis management exercises is to specify the exercise concept and a core skill set for strategic crisis managers.

Types and purposes of crisis management exercises

14. There are different ways to conceptualize exercises but the following explanation used by the UK Cabinet Office is a good point of departure. According to that definition, an exercise is a simulation of an emergency [or crisis] situation, which has three main purposes. It is intended to validate plans (validation), to develop staff competencies and give them practice in carrying out their roles in the plans (training) and test well-established procedures (testing). We will explore the multiple purposes of exercises in more detail below.

Figure 1. Different types of crisis exercise



15. The figure above depicts a ladder of different types of crisis management exercises at different levels of scale and complexity. Moving from right to left on the figure also entails shifting emphasis from class room or seminar type discussion about crisis management towards increasingly elaborate role-playing with emphasis on practicing/rehearsing procedures, processes, functions etc. While this figure emphasizes “Operations”, “Strategic” counterparts exist for virtually all of the exercise variants mentioned. The most ambitious types of exercise designs (such as what are termed full-scale exercises in the figure) may entail attempts to combine relatively realistic (“high fidelity”) exercising at multiple levels up to and including the strategic level.⁴

The Strategic Crisis Management Skill Set

16. Decades of research and close examination of hundreds of crises experiences have contributed to the identification of core crisis management tasks which tend to be associated successful crisis management efforts (Boin et al, 2005; c.f. Baubion, 2013). These are sense-making, decision-making and coordination, meaning-making (strategic crisis communication) , accounting, and learning. Each of these will be explained in turn below:

17. **Sense-making** in crisis refers to the challenging task of developing an adequate interpretation of what are often complex, dynamic, and ambiguous situations (c.f. Weick; 1988; Stern 2014 in press). This entails developing not only a picture of what is happening but also an understanding of the implications of the situation from one’s own vantage point and that of other salient stakeholders. As Alberts and Hayes (2003:102) put it: “Sense-making is much more than sharing information and identifying patterns. It goes beyond what is happening and what may happen to what can be done about it.” Prior to a crisis, sense-making is difficult due to attention scarcity weak or conflicting signals regarding mounting threats and a high degree of uncertainty. Once it is clear that a crisis has occurred, a paradoxical combination of information overload and uncertainty/scarcity regarding key parameters is common.

⁴ See below for an explanation of the notion of exercise *fidelity*.

18. ***Decision-making and Coordination*** refers to the fact that crises tend to be experienced by crisis managers, first responders, and citizens alike as a series of ‘what do we do now’ problems triggered by the flow of events. These decision occasions emerge simultaneously or in succession over the course of the crisis (Stern, 1999; Stern et al, 2014). Protecting communities tends to require an interdependent series of crucial decisions to be taken in a timely fashion under very difficult conditions. Increasingly, there is a recognition that public sector resources (and traditional command, control capacities) are unlikely to suffice when dealing with the larger scale, more complex, and challenging contingencies. Recent experience from around the world clearly demonstrates the power of social media and personal communications-based information to empower and potentially improve decision-making and enable more agile, flexible and decentralized forms of coordination. This is critical both for leveraging the potential for community-based response via self-organizing and for managing the interfaces between the public-sector, private sector, and non-profit sector components of a whole of community/society response.

19. ***Meaning-making (Crisis Communication)*** refers to the fact that crisis managers must provide relevant information in a timely fashion, attending not only to the operational challenges associated with a contingency, but also to the ways in which various stakeholders and constituencies perceive and understand it. Because of the emotional charge associated with disruptive events, followers look to leaders to help them to understand the meaning of what has happened and place it a broader perspective. By their words and deeds, leaders can convey images of competence, control, stability, sincerity, decisiveness, and vision—or their opposites. Social media channels—including direct social media based communications by leaders on fora such as Twitter—have become key arena in which information is exchanged and where competing risk and situational assessments compete. A sound understanding of the discursive backdrop and the frames of reference of citizens and opinion leaders is essential to formulating and implementing effective strategies for crisis communication.

20. ***Being accountable*** (Boin et al, 2005, Boin et al eds 2008) refers to the demands placed on crisis actors to justify their actions prior to, during, and in the aftermath of major crises and emergencies. Questions such as the following are likely to pose in a range of accountability fora:

- Why was it not possible to prevent the crisis from occurring or more effectively mitigate the damage?
- Why was the organization/society not better prepared?
- Why did delays, misunderstandings, mis-coordination, mis-communication occur?
- Why was the response not more effective, fair and legitimate?

21. Leaders and their staffs need to be prepared and equipped to answer such questions in an effective and legitimate fashion if they are to avoid becoming victims in the ‘blame games’ which are increasingly common during and after crises.

22. ***Effective learning*** requires an active, critical process which recreates, analyses, and evaluates key processes, tactics, techniques, and procedures in order to enhance performance, safety, capability etc. The learning process has just begun when a so-called “lessons learned document” has been produced. In order to bring the learning process to fruition, change management / implementation must take place in a fashion that leaves the organization with improved prospects for future success (Boin et al, 2005; Stern, 1997; Devereil and Olsson, 2009). Leaders and organizations must cultivate the capacity to learn from experience, formulate effective reform strategies and programs, and then implement them.

23. Exercises can be specifically designed to cultivate and practice skills associated with each of the above crisis leadership tasks, drawing upon both traditional and state of the art interactive instructional designs. Sense-making exercises—such as the Swiss Federal Chancellery’s Rapid Reflection Exercises and the case-based low-medium fidelity exercises developed by the Swedish National Center for Crisis

Management Research and Training (CRISMART)—can be very useful to cultivate crisis “diagnostic” and strategic problem solving skills. Other forms of exercise can be designed to elicit decisions and present leaders with crisis coordination problems to be solved. Crisis communication (‘meaning-making’) exercises can provide opportunities for leaders to practice motivational and emotional forms of leadership, show empathy, and practice rituals of contrition, mourning, or remembrance against the backdrop of social media and the increasingly globalized 24 hour news cycle. Exercises can be crafted to help leaders to prepare for the rigors of post-crisis accountability fora (be they legislative, judicial, or other) or to better equip leaders and their organizations to extract and implement lessons learned from crisis experiences.

24. In the following section, three types of challenges associated with strategic crisis management exercises will be discussed. First, the challenge of working with strategic level leaders—a particularly challenging target group—will be examined. Second, the challenge of exercising across sectoral boundaries will be discussed, emphasizing potential obstacles to be overcome in bringing in private sector actors. Third, challenges associated with international exercises will be identified.

Challenges

Involving Leadership

25. When it comes to strategic crisis management, leaders have indispensable roles to play and must be prepared for leadership tasks such as sense-making, strategic decision-making and meaning-making. Effective performance under the extreme conditions associated with crises requires leaders and their advisors to function well individually and together.

26. However, strategic level leaders (those working at the apex of their governments or other organizations) are a particularly challenging target group to engage in crisis management exercising. Why is that the case?

27. Today's leaders face tremendous demands and often keep brutal schedules. Their time and attention are scarce resources and competition for them is fierce. Time spent preparing for future crises is time not spent on current challenges and proactive policy-making. Leaders (or those who keep the gates and schedules for them) may feel that they are just too busy to take time to participate in crisis management training and exercises. They may not be aware of, or choose to disregard, the immense cost of being unprepared when crisis comes.

28. Leaders, or those that help prioritize their agenda, may be overconfident with regard to the ability of leaders and their staffs to cope with future crises. It is not uncommon in dialogues with senior policy-makers and their staffs to hear that “We manage crises every day”. While some functions in some countries may see major crises on a fairly regular basis, for most this reflects a misunderstanding of the nature of crisis in the sense emphasized here and in the OECD High Level Risk Forum.

29. Even if they are not overconfident, some leaders may loath to participate in simulations/exercises for fear of setting expectations and ‘precedents’ through choices made or priorities revealed in scenario exercises. Note that this fear is often exaggerated and in fact the alternative-- leaving others in persistent uncertainty about the likely direction of normative leadership from strategic leadership is likely to have far more corrosive consequences for preparedness.

30. Other leaders may be insecure about their ability to perform under crisis pressure and avoid the ‘hot seat’ in exercises hoping that things will work out all right if the day of crisis should arrive. Obviously, a better coping strategy would be for leaders to seek to equip themselves better for future challenges through embracing crisis management training and opportunities to practice under ‘safe’ conditions.

31. As a result, leaders may choose to opt out of exercise programs. This may have very serious consequences as a gap may emerge between the frames of reference and expectations of subordinate actors who may develop a high level of preparedness which can easily be undercut by leaders who unnecessarily and perhaps inadvertently depart from a sound game plan on game day.

32. When leaders do participate in exercises, their exalted position in the hierarchy may cause other difficulties. Other players-- some of whom may not be used to working with strategic leaders on an everyday basis may be inhibited by the fact that the 'boss' and/ or other powerful leaders are present and may be reluctant to express opinions on controversial issues. Various conformity dynamics documented in the literature (e.g. compliance and anticipatory compliance behaviours, Hart, 1991; Hart et al, 1997) may emerge in exercise environments. While, if detected and brought to the attention of participants, this may pose a learning opportunity, it may also undermine the process and outcome-- reinforcing bad habits and pernicious tendencies towards yea-saying if not addressed.

33. Not only subordinate players in exercises, but also facilitators and evaluators may need to present criticism to strategic leaders and powerful aides/advisors to them. As in all occasions involving the need to 'speak truth to power', this can be difficult and personally risky. Not all of those tasked with these functions will be inclined to be candid in their assessments. As a result, potentially improvable individual or collective deficiencies in preparedness for crisis management may well go unremarked and uncorrected-- with potentially devastating future consequences for real events.

34. To some extent, leaders are likely to get the advice and feedback they deserve. Leaders vary in terms of their willingness to hear/absorb/act upon constructive criticism. Those who are intolerant of criticism and dissent-- and surround themselves with 'yes' men and women-- are less likely to get candid feedback in training and exercise sessions as well. Those who encourage and reward candour-- protecting rather than shooting messengers bearing reports of vulnerability and areas with room for improvement-- will get more honest and actionable feedback and tend to have better prospects for future success.

35. Finally, it is not uncommon for training and exercise efforts to develop in bottom up fashion by starting with operationally challenging events and then involving strategic leaders as well. Furthermore, because operational level emergency/ crisis management training tends to be better established, scenarios and designs may in fact be optimized for the operational leaders as well. In such cases, strategic leaders may not be presented with problems which challenge and engage them-- turning them into spectators more than active partners in integrated strategic/operational crisis management. Such experiences may make leaders disinclined to participate in the future and may lead them to misunderstand and underestimate the roles that they may be called upon to play in future major events.

Involving the Private Sector⁵

36. It is increasingly recognized that-- though difficult enough to achieve—a whole of government approach to crisis management and disaster response is insufficient. Responding to highly complex, large scale crises (especially the so-called maximum of maximum scenarios) as well as smaller events with trans-sectoral impacts is likely to require mobilization of Whole of Society efforts for response and recovery. Active private sector participation in the management of such crises is essential.

⁵ This section draws heavily upon the discussion at the OECD/Swiss Federal Government workshop held in Geneva in June of 2014.

37. Furthermore, in the wake of the public administration reforms and privatization trends that have taken place in recent decades in the OECD countries, governments tend to have fewer levers that they can directly activate to manage crisis as they did in the past. They need now to work in partnership also with the private sector to respond to crisis and in particular with the operators of critical infrastructures, the transportation industry, providers of critical emergency supplies. For such partnership to work well in times of crisis, it essentially for both sides to get to know each-other and learn how to communicate in order to solve problems together.

38. However, involving the private sector too poses significant challenges to designers and organizers of strategic crisis management exercises. *For example, how can governments motivate (and create incentive structures) for private sector actors to invest time and resources in government-driven preparedness processes and exercises?*

39. While regulatory obligations may be a possibility in some contexts, often participation will rest on impulses toward corporate social responsibility and government's ability make a 'business case' for participation. Selecting corporate partners for exercises may also be difficult. Who should participate and what should the mix among large, medium, and small enterprises look like? Furthermore, there may be fairness concerns. For the purposes of an exercise, it may only be necessary or advisable to have one or a few representative of a given industry or even the private sector as a whole and competitors or other organizations not included may feel left out or that those participating are receiving unfair advantages.

40. Even where corporations are willing to participate, securing participation of persons at the right level and or with the right backgrounds may be difficult. Obviously, top corporate leaders also have many competing demands for their attention and overloaded schedules much like public sector leaders.

41. Corporations may also be reluctant to participate in exercises if participation could require or pressure them to reveal information about vulnerabilities or internal processes that they would prefer to keep confidential. Similarly, there may be concerns that participation could lead to unflattering portrayals of the firm involve a risk of damage to brand, reputation, valuation etc.

42. Other potential concerns include:

- Secrecy and classification rules (from a public sector perspective)
- Risks of disclosure of proprietary information (from the corporate perspective).
- Differing levels of corporate commitment and competence with regard to intra- and inter-organizational exercising.
- Barriers to communication deriving from language and professional terminology/jargon/acronyms
- Trust deficits in relation to the public sector in some countries/industries
- Sensitivities related to the relationship between regulators and the regulated (or the tax collectors and the taxed)
- Potential legal risks and liabilities associated with identification of vulnerabilities, preparedness gaps, involvement in multi-sector crisis responses etc.

43. Despite these obstacles-- which fortunately can be and are regularly overcome-- regarding multi-sectoral exercises in OECD countries, active participation of the private sector in strategic crisis management exercises is extremely important.

Involving International Partners: Bi-Multi-lateral Exercises⁶

44. As crises do not recognise national borders, international cooperation in crisis management is imperative. Just as working across sectoral boundaries requires getting to know one another and opportunities to practice and test preparedness and collaborative ability, so too does working across national boundaries in bi-or multi-lateral constellations. In fact, such exercises take place regularly under the auspices of organizations such as the NATO and the European Union, and other regional or global international organizations. Here too, international exercises targeted at the strategic level may be particularly difficult to design, arrange, and implement. Let us consider **some of the obstacles and challenges to be overcome** with regard to international exercises:

45. **Differences:** Participants in international exercises are likely to exhibit particularly pronounced differences in various respects that can impact on strategic crisis management exercises. Not surprisingly, they are likely to differ in terms of their perception of the most important threats and risk. A scenario or issues within a scenario which are highly relevant and salient for one country may be of little interest to another, greatly complicating scenario selection and development. Similarly, participants may have very different levels of prior preparation, skill, and experience.

46. Another challenge in preparing exercises (but actually a great potential payoff of exercises) is the fact that **countries have very different institutional arrangements for crisis management** in terms of governmental structure, the division of responsibility, labour, and resources among public, private and non-profit sectors. Figuring out who should be included and appropriate national focal points for participation can be demanding, particularly for novel crisis scenarios where such issues may not have previously been adequately discussed and worked out within and across countries. Similarly, exercise development may be challenged by (but provide extremely valuable opportunities to identify and overcome) issues of organizational or technical interoperability and information sharing among nations.

47. **Other important challenges and obstacles** include:

- **Political sensitivities** related to real world interests and conflicts among the players
- Political sensitivities related to scenario roles (victim of or responsible party for an attack, accident or disaster, recipient (e.g. “host country”) or “helper” (provider of assistance).
- **Secrecy and classification rules**
- **Building trust**
- Barriers to communication deriving from language and professional terminology/jargon/acronyms
- Participants may be from different levels and organizations in their respective countries
- **Different levels of prior knowledge, skills, preparedness** in general and with regard to specific contingencies
- **Different cultural and historical frames of reference**, and different cultures with regard to exercising and evaluation.

48. The next section will focus on exercise design and development. Key parameters associated with exercise design and scenario development will be identified and explained. Good practices associated with involving leadership and the potential of technology for overcoming challenges and improving scenario quality and efficiency of development will be discussed.

⁶ This section draws heavily upon the discussion at the OECD/Swiss Federal Government workshop on *Strategic Crisis Management Exercises* held in Geneva in June of 2014.

Exercise Design and Scenario Development

Exercise and Scenario Design Parameters

49. This section presents some key parameters of exercise design and presents good practices for coping with some of the above-mentioned challenges proposed.

Table 1. Exercise and Scenario Design Parameters

Purpose	Learning	Testing
Group	Homogeneous	Heterogeneous
Constellation	Leader solo or with advisory group	Leader and additional levels of the organization
Fidelity	Low	Medium or High
Player/Group Interactivity	Low	High
Technology	Low	High
Scenario Openness	Open	Closed
	Simple	Complex
Relationship to Scenario	Analysis and discussion	Role play and practice of tasks/skills.
Player Roles	Uniform	Differentiated
	Stipulated	Natural
Context and setting	Hypothetical/masked	Natural
Exercise time	Real time	Game time

50. Purpose: refers to the purpose of the exercise. Broadly speaking, purpose can be divided into two categories. *Learning* exercises are intended to raise awareness of issues, improve knowledge of the (crisis) organization, plans, procedures, protocols etc, or to develop/maintain crisis leadership skills. Testing exercises are designed to probe individual, group, and organizational preparedness and identify areas of strength and vulnerability which can be addressed by remedial actions of various kinds.

51. Group: refers to the composition of the group being exercised. Homogeneous groups are composed of participants with similar roles/functions, levels of seniority or organizational affiliations. Heterogeneous groups tend to be composed of participants with different roles/functions, levels of seniority and organizational affiliations. Hybrid compositions are quite common—for example, a cabinet level exercise focusing on principals (cabinet Secretaries or Ministers) would be relatively homogenous with regard to level of seniority but heterogeneous with regard to participation from multiple Departments or

Ministries. Both homogeneity and heterogeneity have typical advantages and disadvantages with regard to the exercise experience. Design choices in this regard should be linked to the purpose of the exercise.

52. Constellation: refers to other aspects of the selection of participants. For example, exercises focused on developing the crisis management capacity of strategic level leaders could involve scenario-based dialogue between the leader and one or more instructors or “coaches” or the leader with a small group of key officials. Alternatively, the top-level leader or leadership group can be exercised as part of a broader effort involving a much larger body of participants.

53. Fidelity: Fidelity refers to the degree of detail and realism associated with a scenario exercise. Low fidelity exercises often involve relatively brief, abstract, and general descriptions of a scenario. Low fidelity exercises are often used to generate discussion and experience sharing among experienced, qualified practitioners who have a solid frame of reference and can ‘go beyond the information given’ in useful ways. The Rapid Reflection Analyses conducted by the Swiss Federal Chancellery and some of the techniques used in U.S. Cabinet level exercises fall into this category.

54. High fidelity exercises involve the production of detailed, highly realistic, often case or risk analysis based scenarios grounded in deep contextual knowledge about the organization(s) in question and the threats, risks, and hazards they face. High fidelity exercise scenarios often involve the creation of a relatively realistic (and fragmented) information flow involving government, stakeholder, and media-generated communications and documents. Medium fidelity exercises fall somewhere in between.

55. Player/Group Interactivity: refers to the extent to which players and groups interact with each other, but also through player/team initiatives with regard to requests for information in game play. In low interactivity designs, player interaction is primarily in the form of discussion of a scenario. In high interactivity designs there is more role- and/or team-based interaction among players within or between groups. In such designs, game play and dynamic interaction progresses not only through revelation of pre-prepared injects portraying an unfolding situation, persuasion attempts, bargaining, and other forms of public or behind the scenes communication. More interactive designs often work well with somewhat less elaborate (e.g. medium fidelity) scenarios as much of the mutual stimulation in the exercise is provided by the players themselves.

56. Technology: Strategic crisis management exercises vary greatly in terms of the degree to which they depend upon and exploit the potential of technology. Well designed (low tech) exercises with compelling scenarios may in fact be delivered using paper hand-outs, power-point, or email. Just as a good book retains its power even in a multi-media age, so can these relatively simple and inexpensive means still be used to provide a valuable exercise experience for participants. On the other end, where resourcing permits, technology provides means for enhancing the effectiveness, efficiency, accessibility, pedagogical potential, documentary record and emotional impact of exercises. For example, exercise management software platforms may be used to choreograph and manage the delivery of injects in high fidelity designs for large numbers of players. Technology may be used to enable players to participate in activities at a distance or to participate individually at times of their choosing. Technology can help to overcome conformity pressures (such as fears of antagonizing peers or superiors) by enabling anonymous suggestions regarding problem diagnosis, strategy, and tactics and enable more candid communications about individual or collective performance, lessons learned etc. Finally, use of multi-media techniques to complement text based information such as still images, audio and video, can enhance the experience. For example, simulated traditional media broad casts (e.g. from TV and radio) and web-based social media can enhance the realism and facilitate emotional and professional engagement in an exercise—though these measures can also tend increase cost. Finally, modelling, simulation, and visualization technologies may be used in scenario development and presentation, for decision support, and to provide real time or post-exercise feedback regarding the implications of actions taken or not taken at various points in the exercise.

57. Scenario Openness: Broadly speaking scenarios can be open or closed. *Closed* scenarios are pre-determined with regard to the scenario trajectory and outcome. This means that the course of events in the exercise in fact cannot be changed by player deliberations or actions (though this is often not apparent to the players if the scenario is skilfully constructed and presented). Alternatively, in *open* designs, multiple trajectories and outcomes are possible. These may consist either of a limited number of predetermined outcomes (e.g. branches in a decision tree) or, in very open designs, scenario trajectories arise largely and in a relatively unconstrained fashion from the creative problem solving, bargaining and other interactions among players and teams. More open designs tend to require considerable pre-exercise research and/or well developed ‘control cells’ and stand-by networks enabling game controllers to access expertise in real time to cope with unanticipated initiatives and information requests from the players in a credible fashion.

58. Relationship to the Scenario and Player Roles: Some exercises are designed to stimulate analysis and discussion of a contingency or more specific scenario. In such exercises players tend to relate to the scenario with considerable intellectual distances and much the discussion is likely to involve consideration of the implications and problems associated with the scenario, division of responsibility and labour, organizational processes etc. In other words, participants will talk about crisis management more than ‘doing it’. Alternatively, in other exercise designs players will engage with the scenario through a given set of *roles* (either actual (‘natural’) organizational roles or hypothetical ones stipulated in the exercise) and tasks. This gives players and opportunity to practice crisis management skills, processes, procedures, problem solving etc. This may be done in real time or under time pressure in order to approximate the pressures associates with real world crisis management. Note that stipulated roles in an exercise can either be relatively general and uniform (all players play the same broadly defined role such as “advisor to the Prime Minister” or “member of a senior inter-agency working group”) or highly differentiated. In the latter case, participants may be assigned roles associated with different countries, organizations, or functions within an organization. Manipulation of role descriptions, contextual information, information provided during the exercise etc can then be used to create incentives for cooperative and competitive/conflictual behaviour in the exercise.

59. Context and Setting: Crisis Management exercises may be take place either in hypothetical, masked, or natural settings. Hypothetical or masked settings may be helpful in sidestepping sensitive political or jurisdictional issues and creating a level playing field. For example, in an international exercise, it may be expedient to set a simulated crisis in a fictitious country/region rather than privileging (or disparaging) a particular set of countries in the exercise. Aside from levelling the playing field, setting an exercise in hypothetical context and setting also serves to provide exercise designers and scenario writers with degrees of freedom with regard to controlling the behaviour of non-player actors, natural or anthropogenic events, and political/organizational contexts. Working in such hypothetical settings can help to focus player attention on problem solving and skill development and help prevent players from getting bogged down in distracting discussion regarding details of the legal framework, rules or procedures that may not be relevant to the primary purposes of the exercise. Closely related to hypothetical settings (and in fact the direct or indirect inspiration for most well done hypothetical settings) is the notion of masking. Masked scenarios (or teaching cases) generally depict contexts and situations derived from current or past historical settings, but with the names or other identifiers changed to provide some distance to the real settings. Depending on the purposes and circumstances, making may be light (in the sense that the source of inspiration is relatively easy to identify) or heavy in which it is relatively difficult to identify the original cases, actors, events which inspired the scenario. For some exercises, it may be expedient to maintain the mask during the exercise but to unmask the scenario during a debriefing session by contrasting the behaviour of the participants in the exercise with the choices and outcomes associated with the case or cases which inspired the scenario. For example, during the June 2014 OECD Swiss Federal Government Workshop on Strategic Crisis Management Exercises in Geneva, a demonstration scenario involving escalation of a regional conflict and cascading effects for critical energy and transportation

(primarily aviation) security was presented. The research-based scenario was inspired by a number of real world cases as well as contemporary risk and vulnerability analyses from different countries.

60. Exercise Time: Exercises may be played in real time or game time. An advantage of playing in real time is that it is possible to practice crisis analysis and skills while working under realistic time pressure. On the other hand, in an exercise lasting hours or days, it may be difficult to get an overview of the entire trajectory of a crisis. Some exercise and scenario designs involve time compression or the ability to fast-forward through the development of a crisis to examine a situation through its various phases of escalation and de-escalation. Thus game time may be set to elapse either faster or slower than equivalent events in real time. Hybrid designs also exist whereby some phases of the crisis are played in compressed game time, and then certain role-playing activities and tasks are rehearsed in real time.

Exercise and Scenario Design Parameters

61. A common problem in many OECD (and other countries) is that participants in training and exercise events often ‘fight’ the scenario and question the realism and relevance of the hypothetical events and problems presented for them to work on. While this phenomenon is in part due to various enduring psychological, organizational or political defence mechanism or to imperfect understanding of the methodologies used in and purposes of the training event/exercise in question, it may also derive from use of sub-optimal scenario development techniques. As noted above, certain types of ‘attacks’ on scenarios can be prevented or countered by using modelling and simulation to help formulate the contingencies presented to participants, demonstrating that the scenario rests on a systematic, state of the art scientific foundation. While modelling and simulation-based scenarios have clear advantages over ‘shooting from the hip’ and can greatly contribute to improving training, exercise and decision-support tools, it may still be open to challenge in terms of the plausibility of the assumptions underlying the models and their applicability to various real world contexts. Using historical and contemporary cases reconstructed using state of the art qualitative case research methodologies such as process tracing and structured, focused comparison has the potential to further improve scenario quality and relevance:

- *“Quality”:* Using hazard/threat development trajectories and impacts based upon real cases has the advantage of relatively high external validity. In other words, the point of departure (or in some circumstances complementary source of inspiration) for developing the scenario is an event which has occurred at a real place at a particular point of time and for which credible documentation exists. As a result, when ‘players’ become defensive and question the plausibility of the depiction in the scenario, there is a good answer: this problem is not only realistic, but based on real, historical/contemporary events. This type of answer is extremely effective in countering attacks on the scenario, tends to increase the engagement of participants and enables return of focus to the main purposes of the training/exercise in question.
- *Relevance:* As noted above a common problem in training and exercising strategic leaders is developing scenarios that strategic leaders will find fresh, interesting, challenging, and relevant to their roles and needs. One reason for this is that many exercise scenarios are developed by people with operational or technical backgrounds and orientations. Such individuals may have limited insights into the worldviews, frames of reference and concerns of strategic leaders. Similarly, scenarios may be developed with dual use (at strategic and operational levels) in mind. However, even extremely challenging operational scenarios sometimes can be of little direct interest value to strategic decision-makers (as for example, when the obvious course of action is straightforward delegation to the operational level). By contrast, the research strategy deployed at the Swedish National Center for Crisis Management Research and Training (CRISMART) has explicitly focused on strategic crisis management (and the interplay between strategic and operational levels) in international, national, regional, and local contexts. The research effort, which includes extensive interviewing, observation and ‘debriefing’ of leaders and advisors in crisis situations/simulations is

geared toward identifying and reconstructing decision problems faced by leaders in actual crises. As such, the case bank (and parallel work in the crisis studies literature) provides a gold mine of real world problems and challenges which have faced strategic crisis managers in the past. Furthermore, the focus of the effort has been to capture experience not only from high profile events (e.g. 911, Katrina, 7/7 etc) from the US and UK, but also from many lesser known cases taking place in smaller countries from across Europe, Asia, Australia & New Zealand, and the Americas. As a result, many of these cases—though characterized by considerable problem complexity, diversity, and drama—may be relatively unfamiliar to participants in training and exercise events and thus easily ‘masked’. At appropriate junctures, it then becomes possible to compare the strategies, solutions adopted by players (and the anticipated consequences/outcomes) to those revealed in the underlying real world cases. Use of this scenario development strategy has an excellent track record of producing scenarios easily accepted and much appreciated by strategic level leaders.

62. A further advantage of case-based scenario generation is that it too facilitates the rapid development of high quality scenarios at relatively low cost. This is particularly true when ongoing research efforts can be harvested for a variety of research and (applied) educational purposes including the development of training and exercise tools. It is important to keep in mind that while older (and relatively forgotten) cases can be very useful in scenario development, it is essential to continue documenting experience in contemporary socio-technical and political contexts. While much many challenges of crisis management derive from enduring aspects of the human condition, others are driven by evolving threats and vulnerabilities as well as changing governmental /governance/community and socio-technical contexts. It is critical for researchers as well as designers /developers of crisis management to keep up and incorporate such developments into their work.

Involving and Working with Leaders

63. On the basis of this review of experience and practices from the literature and extensive consultation with experts from OECD countries in the context of the June Geneva Workshop and a parallel bilateral Swedish-US expert dialogue, it is possible to make a number of observations regarding *designing and implementing crisis management exercises for strategic leaders*.

64. Emphasize The Difficulty of the Crisis Management Task: First of all, it is essential to keep the difficulty of the task of strategic crisis management under contemporary political, organizational, and societal conditions in mind. Though strategic leaders as a rule bring great ability, talent, skills, and experience (of one kind or another) to the table, crisis management may be likened to an extreme sport and one played in a highly competitive league. Performing well under crisis conditions and stress is facilitated by cultivation of crisis leadership skills—such as those identified in the introduction to this volume-- and regular practice in real and/or simulated events (Boin et al, 2005). Just as elite athletes can benefit from coaching, feedback, and reflection upon their performance in practice and competition, so too can even the best of crisis decision-makers and communicators further hone their skills through regular practice and critical reflection (Russo and Shoemaker, 1990; Stern, 2013; c.f. Baubion, 2013).

65. The Need for a Contingency Approach: As noted above, success in this area will require a rich set of ‘tools’ and design templates. When it comes to crisis management training and exercise for strategic leaders, one size most definitely does not fit all! Exercises aimed at challenging target group should be consciously and explicitly designed and adapted to the specific *purpose, target, and time* (including leaders’ availability) *and resources available* for the effort.

66. Exercises may be designed primarily to explore a theme and familiarize leaders with parameters, actors & stakeholders, distributions of responsibilities and capabilities associated with a particular issue or threat. They may also be designed to test a particular crisis plan with an eye to identifying gaps, faulty

assumptions, and areas for further development. Alternatively, they may be used to help develop skills and/or fluency with particular processes, protocols, or systems. These different purposes are will tend to be best served by different exercise designs and formats.

67. Exercise designs (and associated briefings and educational activities) should be adapted to the leader or group's experience and skill levels. Approaches which might be perfectly appropriate for a relatively new leader with little past or on the job crisis management experience might not work as well for a veteran leader with a wealth of experience and a well-developed crisis management skill set. For example, the US Department of Homeland Security's Mobile Exercise Team (MET) executive education format⁷ is a good example of discussion-based design which has reportedly been well received by many newly elected Mayors and Governors, their staffs, and other collaborating officials over the life of the program.

68. Another consideration impacting on training and exercise design is availability of leaders in terms of time and geography. Shorter windows of leader/senior official availability often suggest using simpler, 'lower fidelity' designs such as the Swiss Federal Chancellery *Rapid Reflection* format. . Bigger windows of time tend to enable use of more elaborate 'medium or high fidelity' designs more realistically simulating intra-and inter-organizational processes and involving greater numbers of supporting functions. Similarly, if it is difficult to gather leaders in one place or in one time, introduction of technology for at-a-distance participation and/or asynchronous game design (more on this below) may be indicated.

69. *Cultures*—societal, organizational, training and exercise-specific-- impact on training and exercise design choices as well. For example, organizations vary in terms of the extent to which senior officials are (willing and) expected to be subjected to evaluation and criticism. For some organizations, exercises aimed at 'testing' preparedness or capability may be anathema. Some organizations (e.g. the military in many countries) train regularly and see it as an integral part of readiness for leaders and foot-soldiers alike. For some militaries and particularly in periods of relative peace—real 'action' may be rare and exercise settings a key source of leadership experience. By contrast, blue light organizations may see smaller scale 'action' on a daily basis and train/exercise far less often—though it is important to keep in mind that major, 'novel' crises fully challenging the coping capacity of strategic leaders even in such organization tend to come far less frequently. So called high reliability organizational cultures (LaPorte and Consolini, 1991) tend to value rigorous training and exercise very highly, evaluate performance at all levels (including that of strategic level leaders), and take prompt, proactive remedial action on the basis of training and exercise results.

70. Training and exercise designs for strategic leaders should also take into account *leader personality, learning and management styles*. The literature on Presidents and Prime Ministers (e.g. Daleus, 2012; Preston, 2001; George and Stern, 1998) demonstrates that leaders—like other mortals- may have very different cognitive, learning and policymaking styles. Choices regarding how best to provide and how much information to include in crisis management exercises may depend in part upon these factors. Some leaders may respond best to written information while others may prefer oral briefings or videos. Strategic leaders may vary in terms of their comfort level regarding technology—some may enjoy technology and want to see and use it themselves; others may be better served by hiding the technology 'back stage'.

71. Feedback and follow up: Well-designed and implemented exercises and associated educational activities can generate valuable information regarding preparedness gaps and vulnerabilities. Such information should be documented, analysed, and used as the basis for remedial measures and/or organizational reforms. However, there may be significant legal and political obstacles and disincentives

⁷ <http://www.chds.us/?met>

for strategic leaders to avail themselves of such possibilities. Yet leaders run even more serious risks of future failures in real crises if identifiable issues are not addressed. Further exploration of measures for assuring confidentiality and legal protection of such information, while still allowing such information to circulate to those with a legitimate ‘need to know’ is needed. Ideally, lessons identified in crisis training and exercise sessions should be addressed and turned into lesson truly learned and implemented in a fashion leading to enhanced individual and collective preparedness. Efforts are underway in many countries to improve learning from both real and simulated events⁸, but as noted above, crisis management exercises for strategic leaders are particularly challenging in this regard.

72. Providing feedback to strategic leaders is a sensitive, difficult, and potentially risky task. Cultivating organizational cultures in which strategic leaders are expected to participate and get used to receiving feedback is helpful. Ultimately, of course, leaders who do not want honest feedback (and who punish those giving it) are not likely to get it. A good practice is often to start with self-critique. In other words, facilitators can ask participants questions like:

- What went well today and what went less well?
- What was most challenging?
- What was most surprising to you?
- What would you do differently next time?
- Which tasks associated with the exercise do you feel most comfortable with and which were most challenging?

73. Such questions can open the way for critical discussion of performance, general preparedness and preparedness gaps, or areas where additional practice and skill-building might be appropriate.

74. When feasible and appropriate, feedback from the participants themselves can be complemented with feedback by peers and/or expert evaluators. Finding peers of strategic level leaders (particularly top national leaders) is likely to be difficult (though not necessarily impossible) and may be precluded by a variety of political or organizational rivalries and sensitivities. In some cases, recently retired officials or others with insight into the office in question may be appropriate sources of peer feedback.

75. For strategic leaders willing to receive such feedback, it is important to choose timing, venue, and mix of positive and negative feedback carefully. In some cases, it may be best to provide certain kinds of feedback in a ‘hot wash up’ immediately following an exercise. If it is unlikely that it will be possible to get leaders’ attention at a later date, immediate feedback might be the only opportunity. However, if the exercise has been dramatic and emotionally or physically draining (which is sometimes the case) it may be that more sensitive or critical feedback is better given later, after participants have had time to process their experience a bit and ‘recover’ on their own. Regarding venue, when possible, it may be advisable to present critical feedback privately or with just a few trusted advisors present to strategic leaders if access for this purpose is forthcoming. Another option may be to present feedback in writing, though sensitivities and the need for secrecy may at times preclude that possibility. Finally, as in other kinds of pedagogical situations, it is important to try to balance positive and negative feedback carefully. A litany of negative criticism is likely to provoke defensive reactions, while a balanced treatment which gives due credit for things that went well tends to help participants to absorb feedback about areas in which there may be room for improvement. This may entail prioritizing and focusing on the most important areas; other less significant critical observations may have to wait for another opportunity.

⁸ This was a major topic of discussion at the Oslo workshop organized by OECD and Norwegian DSB in September 2014. <http://www.oecd.org/gov/risk/agenda.pdf>

Technology

76. **Technology:** As noted above strategic leaders are a particularly challenging target group for training and exercise. Significant obstacles must be overcome if training and exercise at this level is to take place at all and if it is to be a meaningful and constructive experience for leaders, their advisers and their organizations writ large. It is clear that making use of current and emerging technology has great promise in help to overcome many of these obstacles. **Technology can help in several ways:**

- *Gathering leaders and scheduling exercises:* Getting firm commitments from a single leader to participate in exercises is often difficult. Getting an entire leadership team in one place may be particularly challenging. A virtue of several of the technology enhanced training and exercise techniques explored in the preceding chapters is that they enable participation by individuals who may be geographically dispersed. For example, US FEMA's Emergency Management Institute has successfully deployed communications technology to enable at a distance participation in table top exercises. The STANCE concept developed at the Center for Homeland Defence and Security, US Naval Post Graduate School takes this a step further. Not only can participants 'play' from diverse geographic locations, but they can participate in policy simulation exercises at times of their own convenience. This possibility is a function of STANCE's *asynchronic* design and one which could be incorporated into to other forms of training and exercise as well. Note that this also potentially enables participation in exercise which can take then take place over extended periods (not just hours or days, but actually weeks or months should that be advantageous), which would generally not be feasible for strategic leaders and others with very heavy time constraints.
- *Overcoming hierarchy and constraints on candid communication and integrating feedback:* It has been noted above that a key challenge is overcoming reluctance to speak freely about sensitive issues, take positions in exercises that challenge the conventional wisdom or the perceived policy preferences of superiors. Similarly, subordinates may—for understandable reasons—be reluctant to provide honest feedback to their leaders regarding the quality of their performance in training or exercises. Speaking truth to power may also be challenging for those tasked with 'debriefing' an exercise or evaluating the results more formally afterwards. Technology can provide a means of facilitating open, candid conversation. For example, the MMOWGLI platform developed by the US Office of Naval Research and Naval Post Graduate School enables broad based participation in policy 'games' in which the use of anonymous participation enables players to freely express opinions without fear of sanctions. This approach would be well suited for use in larger exercises and a good means of accomplishing '360 degree' evaluation of leadership as exercised at multiple levels and directions in the organization, including at the strategic level (c.f. Maxwell, 2006; c.f. Marcus, Dorn and Henderson, 2006). MMOWGLI also has the benefit of including functionality for aggregating, weighing, and integrating the perspectives expressed by a substantial number of players and/or observers of exercises.⁹
- *Improving scenario quality, impact and development efficiency:* Modelling, simulation, and geo-spatial visualization technologies such as those demonstrated in the US SUMMIT [Standard Unified Modelling and Simulation Toolkit) Project¹⁰. and the European Union FP7 INDIGO¹¹ provide enhanced opportunities to develop and present scenarios in a more rigorous, visually compelling and plausible fashion. Drawing upon state of the art hazard models (hurricanes, floods, earthquakes), SUMMIT provides an excellent point of departure for scenario development and is a good complement to the case based approaches discussed above. This is a good way to bring

9 The MMOWGLI platform (Massive Multi-Player Online Wargame Leveraging the Internet) and has been deployed to examine wicked problems such as combating piracy in Somalia and developing a sustainable energy policy for the future. (<http://www.onr.navy.mil/en/Science-Technology/Directorates/office-innovation/mmowgli-internet-war-game.aspx>)

10 <https://dhs-summit.us/>

11 <http://www.crs4.it/vic/cgi-bin/project-page.cgi?acronym='INDIGO'>

'science' into the exercise development process and one which can greatly enhance the credibility of scenarios for operational and strategic leaders alike. Furthermore, use of geo-spatial visualization technology such as that used in both the above mentioned SUMMIT platform and the INDIGO platforms can help to accurately convey complex situational information in a visually compelling fashion. It should be noted, however, that the information needs of strategic leaders tend to be quite different from those of operational decision-makers and care should be taken to deploy these technologies in ways that will facilitate strategic crisis management and not tempt strategic leaders to stray in counterproductive ways into operational territory. Finally, integrated modelling and simulation technology such as the SUMMIT portal and model 'bank' can help to bring down costs and reduce (but not eliminate!) the need for specific hazard subject matter expertise in scenario development and exercise control.

- *Providing feedback regarding alternative threat/ hazard development and response/recovery trajectories (the what if questions):* Real-time modelling, simulation, and visualization technology such those described in the previous chapter help to provide enhanced scenario flexibility, interactivity and impact in preparation and delivery. For example, it becomes possible to model hazards at various levels of severity (e.g. hurricanes of different wind speed categories) and geographic trajectories (and thus alternative storm surge patterns). Furthermore, it also becomes possible to vividly demonstrate the consequences of proactive versus reactive strategies with regard to interventions. For example, in a public health emergency event, it possible to show the consequences of different timing and scope (e.g. narrow definition of risk groups, broad definition of risk groups, whole population) of vaccination strategies or other medical countermeasures (e.g. social distancing). This can be a powerful pedagogical tool in crisis management training and exercises for strategic leaders.

Developing Exercises and Exercise Programs for Strategic Leaders: Design Questions

77. For some of the reasons mentioned above, strategic leaders (and their staffs) are generally a very difficult target group to engage in crisis management training and exercises. As a result, the question of how best to engage with them-- in the short, medium, and long term-- is highly salient. In fact there is a considerable variety of approaches in play in the OECD countries today.

78. Let us consider these alternative exercise (program) design choices in the form of questions:

1. ***Who is the target group for Strategic Crisis Management exercises?*** The most acute and short term need is, of course, to make sure that those currently bearing the mantle of responsibility for crisis management are as well equipped for the challenge as is practically feasible. No effort should be spared to convince leaders to take the time to prepare and practice for crisis management and to make sure that they are provided with state of the art training and exercise experiences well adapted to their needs. However, this should be complemented with a broader, longer term strategy which emphasizes reaching not only leaders, but those who support and advise them. Furthermore, efforts should be made to reach not only today's strategic leaders but those who are making good progress in their government (or other relevant sector) careers and may be in strategic leadership positions in the future.
2. ***Should the training be delivered 'in house' or off-site?*** In other words, does the trainer go to the locales where the strategic leaders generally work and do the training/exercises in situ, or should the leaders be brought to a new location removed from the everyday environment. Both have potential advantages. Conducting activities in situ tends to enhance realism and provide broader access to the supporting context and infrastructure most likely to be used in crisis. In addition, it may be helpful that leaders and many other key players are already in place and special travel arrangements will not be necessary for them. However, it may be more difficult to maintain focus on training or

exercise if the leader is in an environment where he or she can easily be interrupted by subordinates with questions related to on-going matters. Holding the activity offsite in an educational institution or conference facility (especially one with limited cell phone access if feasible) may help organizers get and maintain relatively undivided attention. In some cases it may be advantageous to hold an activity in a place hosting particular training/exercise infrastructure or otherwise convenient for instructors/exercise facilitators (and thus reducing travel costs on their end). Sometimes it may be possible to hold events in places with symbolic significance and/or other positive qualities (e.g. natural or architectural beauty, post event recreational potential) which may make it easier to attract and retain participants.

3. ***How should participants be selected and grouped?*** Should one work in an intra-organizational fashion and group leaders with advisers, aides, and other subordinates? This has advantages in terms of working with formations likely to engage together in future crisis management. For example, the US DHS/Naval Post Graduate School METS (Mobile Executive Training Seminar) program for Governors and Mayors has tended to take this form with the training and scenario exercises delivered in various state capitals or other major cities in the United States.¹² On the other hand (and not referring to METS specifically) such groups can be very hierarchical and may be inhibited by conformity or conflicts imported with the participants. Another common approach is to work in homogenous groups of peers across agencies or organizations: e.g. Principals from various departments or press secretaries from all of the ministries. Such groups will tend to gather individuals of similar professional backgrounds, formal seniority, and facing similar challenges. These groups are often very good for identifying current problems and identifying/exchanging good practices. They may take place within or help to develop networks and familiarity (personal and organizational) across agencies. In fact, the network building is often a valuable secondary dividend of such training and exercise activities. A third variant may be to work with heterogeneous and diverse groups with individuals drawn from various organizations, functions, etc. Optimizing training and exercises for highly diverse groups is often challenging but there are benefits of bringing eclectic groups (e.g. representing public, private, non-profit, federal, state, local government) together as these represent a cross-section of the whole society and may lead to valuable enhanced awareness of other levels, sectors, etc.
4. ***Should educational (training and exercise) efforts be short term and ad hoc (e.g. so called one off events) or longer term, programmed, and cumulative?*** Clearly getting access to strategic leaders is difficult and even brief and isolated engagements can be very valuable. However, there are significant benefits to more sustained efforts in which efforts can be made to both widen and deepen competence when it comes to preparedness for various leadership tasks as well as for coping with various types of contingencies. At the opposite end of the spectrum from single session effort would be a degree-granting program (such as those offered by the Swedish National Defence College and the Naval Post-Graduate School—which enables sustained cumulative interaction. While such programs are generally far too time consuming to be feasible for sitting top level national government leadership, they are able to attract rising mid-level officials and those participating in strategic leadership groups at other levels of government. In between these extremes are options such as multi-day or multi-week courses and other forms of regularly scheduled shorter sessions on a monthly, quarterly, or yearly basis.

¹² <http://www.chds.us/?met> (Accessed November 26, 2014).

5. *What types of teaching and learning strategies are likely to be most effective?* This question should be approached in both generic and more specific ways. From a more general perspective, there is a strong case to be made that multiple strategies and tools for training and exercising strategic leaders should be deployed. Traditional briefings, lectures, and ‘war stories’ by other strategic leaders followed by question and answer sessions can certainly be helpful. However, these should be complemented by various forms of active instructional designs ranging from teaching cases, role playing, low to medium fidelity scenario exercises, to various forms of high fidelity simulations and ‘command post’/strategic leadership exercises. In the field of crisis management—as in most others—there is no substitute for learning by doing.

79. Instructional design needs to fit the purpose and skill set to be developed or practiced. More costly and elaborate instructional/exercise designs and formats may be preferable for certain purposes, while simpler and more economical approaches may even be optimal for others. In addition, strategic leaders such as U.S. Presidents or Swedish Prime Ministers may vary greatly in their cognitive/learning styles as noted above (George and Stern, 1997; Preston, 2001; Daleus, 2012). Therefore it is important to adapt training and exercise formats to those modes which are most effective in reaching and engaging particular leaders are likely to be a good investment.

80. In this respect, another question is whether to turn to traditional (e.g. paper-based) or technology-enhanced training and exercise methodologies with regard to training and exercising strategic leaders? Once again, the answer is that it depends. Some strategic leaders—and this is in part a generational issue—may be averse to technology and prefer to avoid it or keep it behind the scenes. Others may be technophiles rather than technophobes and feel very comfortable with exercises adapted to computer or portable device (tablet or smartphone) platforms. Just as reading a book can for many still provide an intense and dramatic experience, text based training and exercise tools such as teaching cases can be powerful teaching and learning instruments. On the other hand technology can provide significant means of improving the realism, flexibility, and cost-effectiveness of training and exercises. Furthermore, technology can provide means of transcending time and distance constraints enabling people in diverse locations and with different schedules to engage in meaningful interactions.

Conclusion: Toward Good Practices in Strategic Crisis Management Exercise Design and Development

81. This document has discussed the advantages and challenges in setting up Strategic Crisis Management Exercises for country leaders in order to strengthen preparedness and improve the capacity to address successfully major adverse events and crises. The Good Practices below are offered for the reader's consideration in helping to better engage and design such exercises in the future:

- ***Strategic Crisis Management Exercises are essential for developing and “stress-testing” capacity to cope with novel crises and large-scale emergencies.***
- ***Exercises can be used for multiple purposes,*** such as familiarization, skill-building, preparedness testing.
- ***Purpose drives exercise design:*** Exercise formats, designs and techniques should be consciously and explicitly adapted to the goals and purposes of a given exercise. One size (and one instructional design) does not and cannot fit all.
- ***Exercises should be adapted to the individuals, groups, and organizations to be exercised*** and take into account their prior frames of reference, previous experience, and levels of proficiency.
- ***Case-based scenario development techniques can improve the quality of scenarios*** and enhance the relevance of the exercise for strategic level leaders.
- ***Engage the private (and not for profit) sectors.*** The scale and complexity of major crises requires Whole of Society cooperation under difficult conditions. Engaging the private sector, though difficult, is essential.
- ***Engage international partners.*** Many of the most significant threats and hazards do not respect national boundaries. Exercising is essential to develop, test, and improve the ability of nations to cooperate effectively under adverse condition. International exercises-- though also challenging to arrange, design, develop, and implement—can play a key role in improving preparedness.
- ***Make the most of technology*** to lower costs, overcome scheduling difficulties & geographic dispersion of leaders, and enhance the realism and impact of scenarios.

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