HYBRID EXERCISE GAME DESIGN

Exercises—tabletops, drills, functional exercises, and full-scale exercises—can help agencies and jurisdictions to validate capabilities, identify improvements, train staff, and improve overall preparedness for natural disasters, emergency incidents, and terrorist events. Tabletops are the most common exercise because they are cost effective, but they can become rote, limiting the value to participants. Drawing on CNA's expertise in gaming, we have developed an innovative hybrid exercise design that engages participants and produces high-quality and actionable insights.

Our hybrid exercise design incorporates the best attributes of a tabletop exercise while overcoming common shortfalls of this more traditional approach. Although tabletop exercises let participants examine and validate their roles and responsibilities when faced with a scenario, discussions tend to be static and abstract, limiting participant engagement and the ability to consider the particular response system as a whole.

CNA's hybrid design, on the other hand, provides a more hands-on, dynamic, and fun learning event that shows participants how their decisions, actions, or resource needs affect the entire emergency response environment. Participant actions cause the scenario to change, creating a more realistic environment. Our hybrid design helps agencies explore different strategies, discuss what works, and identify what does not. Our approach also follows Homeland Security Exercise and Evaluation Program (HSEEP) guidance.

Example CNA game board

BENEFITS OF THE HYBRID EXERCISE APPROACH

CNA's hybrid game-tabletop exercise approach offers unique benefits over more traditional tabletop exercises. Based on our experience designing and conducting hybrid exercises for other emergency response organizations, this innovative hybrid approach yields a rich experience:

• Interactive and collaborative. Participants engage one another in a defined setting and combine their skills sets, knowledge, and physical resources to solve problems and address issues to achieve a common goal.

• Engaging and stimulating. Participants enhance their skills and learn lessons they can apply in a real-world incident through a direct and shared experience. The game environment keeps "the loudest voice" from dominating the conversation (as can occur in a more traditional tabletop exercise). All participants have an equal stake in the exercise; our approach ensures that their viewpoints and contributions are accounted for.

About games and CNA

Since our origin in 1942, CNA has been intimately involved in US Navy wargaming efforts and has designed games for other government sponsors (such as the US Department of Agriculture, the US Department of Health and Human Services, and the Centers for Disease Control and Prevention) and nonprofit organizations. CNA cosponsored the Food Chain Reaction global food security game with Cargill, Mars, the World Wildlife Fund, and the Center for American Progress. Our gaming experts also actively speak, write, and publish about the theory of games. CNA's Peter Perla is the author of the seminal book *The Art of Wargaming: A Guide for Professionals and Hobbyists*.

- Confidence and accountability. Participants are able to directly visualize how they contribute to a larger effort to address a specific issue or challenge. They will have to explain their actions, which limits their ability to speak in the abstract or provide weak or incomplete responses. Players will be able to visualize and discuss how the movement of personnel or resources may affect their roles and responsibilities to identify inconsistencies or critical decisions. This will also provide opportunities for immediate and end-of-exercise feedback.

IDENTIFYING SYSTEMS-LEVEL LESSONS LEARNED

Our hybrid exercise approach also supports system-level assessments for exercise series that are conducted multiple times (e.g., across multiple locations). By using a baseline scenario and common exercise delivery approach across multiple exercises in the series, we can capture information specific to each individual exercise while also examining exercise information from a system-level perspective.

> "*The features of these exercise programs—most notably, the use of a common exercise format in many different locations—enabled the NAHLN program office to analyze the animal health laboratory response system in a way that no single exercise would allow. The analysis resulted in recommendations for the coordination of animal health laboratory response capabilities across the United States that address resource management, process alignment, communication and notification, diagnostic development and validation priorities, and knowledge management strategies for the NAHLN, its laboratories, and their interface with field operations.*"
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> National Animal Health Laboratory Network (NAHLN) Program Office

After an exercise series, we produce a comprehensive meta-analysis that goes beyond simply compiling the individual exercise after-action reports. We examine how different participants approached the same problem to identify both commonalities and differences. Identifying and understanding these variations and patterns across the exercises lets us identify common issues and best practices across the system. We provide an understanding of the series in a way that no single exercise can.

CONCLUSION

Our hybrid format, based on CNA's nationally recognized expertise in designing and executing games, will turn participants into active players (rather than passive observers). They engage in a unique experience that leads to a deeper and more personal understanding and appreciation of the scenario than can be attained through any other method short of participating in a real world incident. We capture participants' attention by combining common gaming elements—including a scenario, mechanics and rules, game pieces representing personnel and resources, and maps—with a facilitated discussion that focuses on the key decisions, procedures, and resource requirements. This hybrid format lets exercise participants learn more comprehensively and elicits specific, actionable information to identify needed improvements.

ABOUT CNA CORPORATION

CNA is a not-for-profit research and analysis organization with 75 years of experience providing government agencies with data-driven insights and real-world, actionable solutions grounded in our direct experience with the operational environments where these solutions are applied. CNA developed the foundational techniques for operational analysis to address complex challenges facing government programs. We have applied these techniques successfully in areas ranging from defense to aviation, education, justice, and homeland security.

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