



Simulation Exercises Overview

Activities designed to
assess, enhance and evaluate
preparedness.

“The ability to deal with a crisis situation is largely dependent on the structures that have been developed before chaos arrives. The event can in some ways be considered as an abrupt and brutal audit at a moment’s notice, everything that was left unprepared becomes a complex problem, and every weakness comes to the forefront.”

Patrick Lagadec, a French Crisis Management Academic

What is a Simulation Exercise?

- An exercise is a practice activity that places participants in a simulated situation requiring them to function in the capacity expected of them in a real event.
- Its purpose is to promote preparedness by testing policies and plans, SOPs, and personnel training.

Why Conduct a Simulation Exercise?

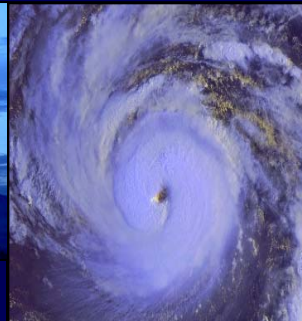
- Simulation exercises are conducted to evaluate an organization's ability to execute one or more portions of its response.
- Many successful responses to emergencies are attributed to previous simulation exercises.

Commonalities of Disaster After Action Reports:

- Planning, training and exercising are the only feasible recommendations.
- Relationships must be established, plans written and tested, and procedures agreed upon.
- Effective coordination cannot be achieved during the chaos of an actual event.

Research shows that people generally respond to an emergency in the way they are trained.

Governments and organizations **MUST** exercise their plans and procedures so they are better prepared to react.



Main Benefits of Exercise Simulations

- **Individual training:** Allow people to practice their roles, gain experience in their roles without an actual disaster.
- **System Improvement:** Improves the organizations system for managing emergencies.
- **Benefits:** Occur from actual practice and evaluations, and then FOLLOWING THROUGH WITH RECOMMENDATIONS.

Reasons to Conduct Exercise Simulations

- Test and evaluate plans
- Reveal planning weaknesses
- Reveal gaps in resources
- Improve organizational coordination
- Clarify roles and responsibilities
- Improve individual performance
- Gain recognition and support of officials
- Satisfy regulatory requirements
- Train personnel

The focus of a simulation exercise should always be on locating and eliminating problems prior to an actual emergency.

Corrective actions are part of exercise design, evaluation and follow-up.

In exercise simulation planning, the emphasis is on common, multi-hazard functions rather than types of emergencies.

Examples to test in an warning exercise simulation:

- Speed of message delivery
- NDWC interface with media
- Consistency of Message
- Communications hardware
- Interagency communications



Any simulation exercise program involves the participation of various entities.




Through participation of multiple entities, organizations can test both their internal procedures and coordination mechanisms with each other.

Simulation exercises require careful planning around clearly specified goals.

Only through identifying exercise goals, then designing, developing, conducting and analyzing the results can the responsible individuals be sure of what works-and what does not.





Simulation exercises should be organized to increase in complexity. Each simulation builds on previous exercises using more sophisticated techniques, and requiring more personnel and planning.

Rushing into a full-scale simulation exercise can result in failure because shortfalls have not been identified through less complicated and expensive exercises.

Advantages to Building Incrementally to a Full-Scale Exercise Simulation:

- Officials are more willing to commit resources
- Personnel are motivated to move on to the next exercise
- Confidence increases
- Operational skills improve



Five Main Types of Simulation Exercises

- Orientation Seminar
- Drill
- Tabletop Exercise
- Functional Exercise
- Full-Scale Exercise



Orientation Seminar

- An overview or introduction.
- Purpose is to familiarize participants with roles, plans, procedures or equipment.
- Can be used to resolve questions of coordination and assignment of responsibilities.

Drills

- A coordinated, supervised exercise activity, normally used to test a single specific operation or function.
- There is no attempt to coordinate organizations.
- Practice and perfect one small part of the response plan.
- The effectiveness is its focus on a single, relatively limited portion of an overall system.

Tabletop Exercise

- Facilitated analysis of an emergency situation in an informal stress-free environment.
- Designed to elicit constructive discussion as participants examine and resolve problems based on existing operational plans and identify where plans need to be refined.
- Success is determined by group participation and problem identification.
- Minimal attempt at simulation: equipment is not used, resources are not deployed, and no time pressures are introduced.

Functional Exercises

- A fully simulated interactive exercise that tests the capability of an organization to respond to an event.
- Tests multiple functions of the organization's operational plan.
- A coordinated response to a situation in a time pressured, realistic simulation.
- Focuses on the coordination, integration, and interaction of an organization's policies, procedures, roles and responsibilities before, during, or after the simulated event.

Full-Scale Exercise

- Simulates a real event as closely as possible.
- Designed to evaluate the operational capability of emergency response.
- Conducted in a stressful environment that simulates actual response conditions.
- Requires the mobilization and actual movement of emergency personnel, equipment, and resources.
- Tests and evaluates most functions of the emergency plans.

The process of creating and conducting a simulation exercise occurs in three phases: before, during, and after the exercise.

Major Tasks

- Establish the groundwork
- Exercise development
- Conduct the exercise
- Critique and evaluation
- Exercise follow-up



Other Considerations

- What level of “fidelity” is needed?
- How much technology is needed?
- How do people learn?
- How do people make decisions?
- Cost



Implementing Change

- Recommendations for the future are reason for conducting the simulation exercise.
- The goal of a simulation exercise is not achieved until the recommendations are implemented.
- The purpose of the evaluation is to improve the emergency management plan and the organization's performance in carrying out the plan.

In Summary

- ➔ Simulation exercises are conducted in order to evaluate an organization's capability to execute one or more portions of its response or contingency plans.
- ➔ Simulation exercises can be used to provide individual training and improve the emergency management system.
- ➔ People generally respond to an emergency in the way they are trained.
- ➔ Simulation exercise recommendations must be implemented for the program goals to be achieved.

