Developing Business Continuity Program Simulations Table-top Exercises

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ABSTRACT

Table-top simulations are scripted events that focus on communications and decision making rather than physical response. The development of effective table-top disaster simulations requires an artistic skill that combines realism with a logical flow of events. Likewise, conducting a simulation requires careful attention to control the flow and pace of events to meet the objectives of the exercise without unduly overloading the participants or (worse) boring them with unrealistic scenarios or lack of sufficient problems. The table-top simulation process involves four separate stages. These stages are:

- Preparation, Scenario Development, and Script Writing
- Simulation Logistics and Training
- Conducting the Exercise
- Post-Simulation Reviews and Reporting

An effective simulation leads to greater interest and involvements by the participants and creates opportunities for program improvement.

INTRODUCTION

Developing Business Continuity Program simulations is a skill that requires expertise just as any other aspect of comprehensive program development. Organization and an attention to details are essential. In addition, the ability to visualize a logical scenario that develops from the onset of a hypothetical disaster to a conclusion is often taken for granted but is by no means automatic. This White Paper will outline the essential steps needed to develop a table-top disaster exercise.[1]

PREPARATION

Prior to developing any exercise, it is important to first determine the purpose of the event and the desired outcomes (goals) that are expected by the participants as well as the exercise developers. This will enable the exercise developer(s) to meet the expectations of the participants and senior management. A clear-cut description of the purpose of the

[1] Note: for the purposes of this paper, the terms exercise, simulation, and test are used interchangeably.

simulation is also essential in the event that the organization is subject to third party or regulatory reviews.

Once the purpose of the event and desired outcomes is understood, the Business Continuity Practitioner(s) responsible for the simulation must consider the following questions:

- Is there a budget for conducting an exercise? The "budget" includes time as well as spending limits.
- Do the simulation goals fit into the approved budget?
- How many employees will be required to attend? How will the exercise maximize the benefits (training, problem identification, etc.) while minimizing the time committed by the participants.
- What will be the impact to normal operations? What steps are necessary to minimize the impact and safeguard normal operations during the simulation?
- How many facilities and employees will the exercise attempt to simulate?
- What operations will the exercise simulate? Are there Business Continuity Plans in place for each operation to be simulated?
- What facilities will be used to conduct the exercise? Are the facilities appropriate? Are the facilities properly equipped?
- What degree of difficulty is appropriate for the exercise? Have similar exercises been conducted in the past or is this the first one? Note: A key requirement is to keep the degree of difficulty within the bounds of individual and organizational experience. Otherwise, participants are likely to experience a high degree of frustration and become discouraged from being further involved in the process.
- Will the exercise involve third parties, i.e., key providers (such as essential service/product vendors), business partners, or auditors?

SCENARIO DEVELOPMENT AND SCRIPT DEVELOPMENT

Scenario and script development may be the responsibility of a single Business Continuity Practitioner or the responsibility of an Exercise Development Team. In either case, it is essential to visualize an appropriate starting scenario and outline the major events that will occur (during the simulation) that will lead to logical outcomes.

Format and Script Development Methods

Prior to writing the exercise script, several decisions must be made. These decisions include:

- Will Business Continuity (specific) software be used to write the script? If not, will a basic word processing or spreadsheet package be used?
- Will the participants receive written, voice (face-to-face, radio, or telephone), or computer messages (such as E-mail) during the exercise?
- How will the participants respond back to the messages?
- What type of message/response tracking mechanism is needed?
- Will the messages be sent in "real time" (i.e., where one-hour of actual time equals one-hour of simulation time) or will there be an accelerated simulation "game time" (e.g., where one-hour equals one-day of simulation time).

In our experience, a simple spreadsheet can be used to generate the test scripts. Basic information (columns) to include in the scripts include: a reference number, the date and time the message was sent (separate columns), a Message From and a Message To field, the type of message (e.g., an emergency response issue, facilities issue, operations problem, etc.) and the message itself. The advantage of using a spreadsheet versus a word processor is that the messages can be easily re-sorted (by number or date/time).

Regardless of the script writing method employed, one issue that is always critically important is communications. By far, the most frequent issue following an exercise (or actual event) is the lack of timely communication and/or inaccurate information. Consequently, it is essential for the script writer(s) to pace the number of messages to the participants in such a manner as to provide adequate time for a decision/response.

Furthermore, the script writer(s) must also anticipate the volume of messages that will be sent out by the participants in response to the scenario script.

Note: In some cases, the number of messages sent or the manipulation of "game time" is intentionally used to simulate the mental pressure experienced during a real event. However, care must be taken to monitor the participants and control the message flow to prevent excessive stress.

Scenario Selection

A disaster scenario must be believable. In general, the best scenarios involve specific issues related to the physical site where the organization is located, e.g., flood, earthquake, tornado, hurricane, hazardous materials spill, etc. or the events that the organization feels is most likely, e.g., computer virus/hacking incident, loss of data processing systems, terrorist threat/activity, etc. For simple exercises or with organizations undergoing their first simulation, it is best to limit the number of scenarios as well as the number of sites, i.e., for a basic exercise a single site or one building event is typically used for the scenario. As the organization achieves greater experience, the sophistication of script can increase to include multiple simultaneous scenarios.

Script Writing

Script writing involves the development of informational messages to be conveyed to the participants. When developing scripts, it should be remembered that one message sent to a participant may cause the recipient to generate several messages in response or create messages to other participants. Consequently, 100 scripted messages can easily generate 400 actual messages during the exercise.

There are several basic types of messages

- Status Information or Set-up Messages – these provide the participant with information about the status of operations, weather, customers, etc. and other facts. These messages may not be important immediately but will become important as the simulation progresses.

- Disaster Messages – these provide the participant with information about a specific disaster event.
- Provoking Messages – these are messages from the script writer(s) that provoke the participant to respond or take action. Examples include customer order inquiries, complaints, or requests from the news media for information.

Unless the script calls for intentionally vague information, messages should be as detailed as possible. For example, the inclusion of actual employee names adds to the realism of the events. Such information can usually be gathered from the organization's Business Continuity Plans or an internal telephone directory. Again, messages should also be realistic and in line with the scope of normal operations or logical outcomes of the disaster described. Messages should also address issues that are in alignment with the scope of the exercise, the exercise objectives, and the organization's desired goals.

Wild Cards

When conducting an exercise, it is important to remember to take into account the unexpected. For example, the participants may solve a problem in much less time than anticipated or some scenarios may be delegated to third parties with little action required by the participants or the participants choose to go in a direction that negates some future messages called for in the script. Therefore, it is recommended that the script writer(s) have in place special "wild card" messages that can be used to replace messages that become inapplicable or to bridge the time between events should an unexpected lull occur. Examples of "wild card" messages include:

"A fire has broken out at *****"
"A truck containing hazardous materials has crashed near your location"
"A key employee must go home to take care of his/her family"

SIMULATION LOGISTICS AND TRAINING

Logistics

Logistics includes the selection of an appropriate simulation site (at the organization's facility or at a third party location), coordination of audio/visual equipment requirements, communications equipment and computer equipment set-up (telephones, satellite telephones, cellular telephones, E-mail, etc.), the development of Participant Guides, and room set-up (to meet simulation objectives), food services, and other necessities.

Pre-Simulation Training

Pre-simulation training sessions walk each group through the simulation process. This ensures that the participants are prepared and are familiar with the manner in which the exercise will be conducted.

CONDUCTING THE EXERCISE

Message Flow

In general, the simplest approach is where the final flow of scripted communications resembles a bell curve. The initial flow of messages to the participants is relatively slow and may contain simple information about normal status or events that occur on a day-to-day basis (which will be impacted later by the disaster). Once the participants settle into their roles, the disaster strikes and the number of messages expands exponentially until some traffic peak is reached. Gradually, the number of messages decreases until normal operations are restored. A variation to this "one hump" camel type of message flow is a "two hump" event wherein a second unexpected outbreak of messages follows an apparent de-escalation of the crisis. Other approaches start with a catastrophic event and a flurry of initial messages that gradually decrease over time.

Simulation Controller

A Simulation Controller is designated to provide a single point of control of the exercise. The Simulation Controller adjusts the pace of messages to the participants and (if necessary) has the power to invoke message "wild cards'. The Simulation Controller is

the person that is ultimately responsible for the simulation and is often accountable for developing the Post-Simulation Review Report.

Simulation Monitors

A team of monitors is needed for simulations that involve more than 15 – 20 people. These monitors provide answers to questions by the participants, assist the Simulation Controller in delivering messages, and otherwise observe the participants and their actions.

Third Party Observers

In some cases, third parties are invited to observe the simulation and provide feedback on their observations. Typically these observers consist of key vendors or business partners. Additionally, the organization's Executive Management may be observers if they are not required to participate in the exercise. Finally, invited observers may include third party auditors that are responsible for monitoring the organization's compliance to any regulatory requirements related to Business Continuity.

POST SIMULATION REVIEWS AND REPORTING

Immediately following the simulation, it is important to capture the immediate impression that the exercise has had on the participants. MLC utilizes a "What Went Well" and "What Can Be Improved" type of process wherein groups of participants are asked to document and summarize their impressions to the rest of the group. In addition, individual questionnaires are used to capture each person's viewpoint and suggestions for improvement. A subsequent Post-Simulation Review Report is used to document areas for improvement as well as areas that met or exceeded expectations. The review also provides a benchmark for measuring the effectiveness of future exercises. Finally, the report is often used for regulatory compliance audits as proof that Business Continuity Plans are in place and have been tested.

SUMMARY

The development of effective disaster simulations is an expert skill on par with actual plan writing. Key requirements include organization, an attention to detail, and an ability to visualize a logical scenario that develops from the onset of a hypothetical disaster to a conclusion. An exercise that has been carefully crafted and conducted is invaluable as a training tool and to identify areas that require attention as well as those aspects of the program that meet or exceed requirements. If all these conditions are met, each participant will feel that his or her time has been well spent and that they are individually and collectively more prepared to handle the chaotic and unexpected events that are generated by actual disasters.

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