DATA BASE MANAGEMENT

CONTINGENCY PREPAREDNESS METHODOLOGY

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INSIDE

INTRODUCTION

Many unexpected events, such as hurricanes, snowstorms, floods, earthquakes, and fires, can destroy one's ability to conduct business. In fact, could your company survive such events? Many times, companies are not willing to do contingency planning because of the associated time and costs. However, if a proper approach is chosen, it does not have to be expensive or time-consuming. To have a contingency plan is like having an insurance policy. Most of the time, it is not needed; but when something happens, its value is appreciated.

When companies adopt the idea of contingency planning, they usually go from one extreme to another. This can swing from doing nothing to covering all aspects and all areas of a business. This approach is costly and not necessary. The approach described in this article will show you how to prepare a plan that will take 20 percent of effort and it will cover 80 percent of your possible risks.

CONTINGENCY PLANNING

Contingency preparedness can be done in many different ways; however, there are three basic types of plans that should be considered. These are:

1. *Business Continuity Plan:* This plan designs manual or semi-au-

PAYOFF IDEA

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tomated processes to be used to continue business operations. Depending on the situation, each disruption can require different processes or different variations of the plan.

2. *Disaster Recovery Plan:* This plan includes backup and restore of computer hardware and software. It contains detailed information about hardware, databases, applications, and files and their recovery processes. Many times, a Disaster Recovery Plan will require keeping software and hardware in an off-site location as a storage (or hot site).
3. *Accident Recovery Plan:* This plan is designed for companies that are at risk of an accident. This type of plan is important for manufacturers of chemicals, transportation companies, or atomic plants to prevent accidents and deal with the consequences. Accidents have an impact on the environment, people's lives, and their possessions. It is crucial to have a plan that provides effective prevention, and cleanup and restoration after an accident. In areas affected by hurricanes, earthquakes, or other natural disasters, the government needs to be well-prepared to deal with such events. A triage process should be an integral part of this plan to deal with the worst-case scenario. Hospitals usually have a triage process developed as part of their contingency plans.

When developing contingency plans, various causes of disruption need to be taken into consideration. The disruptions can be grouped into the following main categories:

- natural disasters: floods, earthquake, hurricanes, snow storms, excessive heat or cold
- accidents: transportation accidents, explosions, fire, and spills
- corporate disruptions: strike and major layoffs
- data processing disruption: data errors, bugs, data wipe off, and Internet firewalls

It is important to explore all possible causes of disruption to decide which ones have a high probability of occurrence. A decision matrix can be developed to include possible causes, their risks, probability, consequences, and mitigation strategies. Using a matrix can help to decide which disruptions should be in the scope of the contingency plans and what priority they have for needing to be addressed. At the same time, certain disruptions can be excluded from the plan for their low probability.

DEFINING THE METHODOLOGY

Depending on the type of business and its location, one or multiple types of plans should be selected and presented to senior management. Once the initiative is approved and the resources are assigned to the project, the contingency plan development starts. At this stage, it is important to have a proven methodology in place. Various consulting companies offer methodologies that were developed utilizing their experience in building contingency plans. The methodology presented in this section is built from personal experience. It is a simple approach that provides good coverage. The methodology will need to be customized to a specific company to achieve the best fit. A critical part of the overall process is to conduct a thorough documentation throughout all phases of contingency planning. The process of developing quality contingency plans has the following phases:

1. Inventory
2. assessment
3. plan development
4. contingency plan testing
5. training
6. salvage
7. post mortem

Each phase contains specific tasks, documents, and deliverables, as defined below.

Inventory Phase

In this phase, an inventory of the company it developed. In terms of a business continuity plan, the inventory includes a list of all business units, applications, and tools. Part of this phase involves mapping business processes. It is a worthwhile exercise to gain a visual interpretation of the business that includes relationships with other business units, and interfaces with third-party companies. Interfaces represent company/business unit relationship with other companies, customers, or the government.

An inventory for the Disaster Recovery Plan contains a list of hardware, software, and interfaces to recover. The Accident Recovery Plan's inventory will have a list of types of accidents and possible ways to recover from an accident.

A thorough inventory will be a foundation for subsequent phases. It will be used to assess risk and criticality, and assign priorities in the next phase. Later, it will be part of the documentation for the detail contingency plans.

Assessment Phase

The assessment is done using the inventory list from the first phase. A crucial part of this phase is to develop the criteria for assessing risk and criticality and to assign priorities for each unit (business or system). Priority will be determined by the risk and criticality of each unit. Once the risk and criticality criteria are developed, the actual assessment processes can start. The riskiest units are the ones that break down the easiest. The most critical units are the most profitable or the most important ones to continue running the business. It is usually the unit or system that brings the most profit, or it is the most crucial to company's customers, suppliers, or it has the most impact on the public or the operating environment. An example of this is a system that fails the most often, but it processes non-critical data and provides non-critical information. It will have a high risk but is not critical to the operation of the business. However, it will have a lower priority than a system that is highly profitable and does not break down easily.

Once the priorities are assigned, the next step of this phase is to select the type of contingency coverage. Usually, the 80/20 formula works well. This ensures that a reasonable amount of money and time are spent. Another option is to focus on priority one plans only.

Plan Development Phase

The first step in this phase is to develop a format for the contingency plans. Afterward, the plans will be developed for selected areas of business, systems, or accident recovery, and selected incidents decided in assessment phase. It will require dedicated staff to develop the plans, and offer full support from selected business areas. A critical part of each plan is to find a simple, but workable solution. When any emergency event happens, it is preferable to have an easy-to-implement solution rather than something elegant and perfect. People will not have time to read extensive manuals and figure out complicated solutions. The plan should include contact names, including phone and page numbers.

Some commonly neglected areas include various interfaces with customers, suppliers, government, banks, other systems, or environmental effects. The interfaces can be grouped into three main categories, as follows:

1. products
2. services
3. information

Moving or operating from other operating sites will be required to offer contingency to the organization. This should be part of the solution process developed in the plan. This is especially important for data processing. Each data processing disaster recovery has to have a site to store backed up files and systems. These backups must be updated on a regular basis. Some companies require a hot site with hardware and software to continue operations, in the event that a specific primary computer site fails. It is also useful to plan for handling backups and storing backups both on- and off-site. Frequent backups are especially important due to the existence of viruses and piracy that can destroy a lot of valuable data.

Time will be a critical aspect in each plan. How quickly does the plan have to executed? How long can an alternative process be in place before the situation becomes an emergency or unmanageable?

Another important part of the contingency plan is a resumption plan. This includes information that explains which system or business units go back to normal operations and in what sequence. The priorities determined in the assessment phase help to establish a resumption sequence. This sequence can be changed based on various parameters such as interfaces, usage of systems, and location.

Contingency Plan Testing Phase

The plan is not completed without testing. This is to ensure that the plans are viable. Another objective of this phase is to win the commitment of users. At the same time, users will get more familiar with the plans. For this reason, users will have to participate in the testing phase. Testing has various levels. The first level includes conducting a simple walk-through. The next level includes addressing testing equipment and software tools used in the event of a disruption. It is expected that some plans may change in this phase. The change can be from fine-tuning to major changes to part of the plan. Testing can also prove that a different solution would resolve the situation in better than that originally proposed. This phase usually requires more time than expected to execute. Once testing is complete, the plans will be ready for sign-off. After signing off the plans, they can be distributed throughout the organization.

Training Phase

To ensure that the plans will be used as designed, all relevant resources assigned to the plan must become familiar and trained in all the procedures. This activity involves the production of training manuals and may require a formal training process to increase the likelihood of a successful implementation of the contingency plan.

Salvage Phase

This is the phase where quality of the plans, personal leadership, responsibility, and creativity will be very visible. It is a good practice to keep a log of events, including people taking actions and performing various tasks. This will be further used in the post-mortem phase to assess the plans, and change them, including assigning different resources to the plan.

Post-mortem (What Has Been Learned) Phase

After an incident is resolved, make sure that the causing event is reviewed. All participants of the event should meet and discuss what they have learned from the experience. Some changes to the contingency plans might be required to provide a better response in the future. This can involve changing a particular solution, staff assigned to the plan, interfaces, among others.

The post-mortem phase, executed properly, will ensure that the company has the best solution in place — and one that evolves over time to remain fresh. Contingency plans are living documents. They change with changes in organizations. Most companies have regular updates scheduled for every three to six months. This could be done as a review meeting or an audit. The business units using these plans are in a good position to maintain their own documents.

CONCLUSION

This article provided an overview to a contingency methodology. Organizations can modify the basic framework to customize it to their specific needs. Creating an effective plan does not have to be time-consuming or expensive. It requires an approach that is well developed and thorough. An effective contingency plan should be an integral part of an organization. The value of the plan will be appreciated when an unexpected event happens. In that case, the company will be prepared to act in a logical manner rather than panic and lose control.

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