

# **Comp 5940 Project Disaster Recovery Planning**

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# Disaster Recovery Planning Project

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# Disaster Recovery Planning Project

## Executive Summary

Disaster recovery planning (DRP) is an integral part of the larger issue of business continuity planning (BCP). Both activities share many similarities. Both planning activities, are ongoing processes, are multi-disciplined in nature, require a high degree of integration across the organization, and must be constantly tested and updated to match current business realities.

This document will be divided into sections covering the following topics:

- The purpose of the project including defining the current state of DRP within the organization.
- Identify the internal and external customer's requirements with regard to regulatory and other legal responsibilities.
- Identify the resources within the organization and its parent company with DRP and/or BCP responsibilities including asset management records.
- Identify a list of Stakeholders, including senior management, and document any strategies and policies they had established to minimize downtime, financial losses, and liabilities to support continuity of critical business functions.
- Define a list of critical issues and lessons learned from previous DR projects including a risk assessment.
- Define a list of assumptions necessary to proceed with the project.
- Define the project's objectives.
- Define the project's specifications.
- Identify a Planning Cycle Model that can be used for DR planning.
- Define a project schedule in the format of a GANTT chart produced using MS Project Software.
- Define the project tracking mechanisms.

## **Disaster Recovery Planning Project**

### **Purpose of the Project**

The purpose of this project is to provide a workable Disaster Recover Plan (DRP) that will meet the customer's objectives and also integrate into the Business Continuity Planning. The DRP should address the following twelve key elements of an Enterprise-wide Recovery Program:

- Regulatory requirements.
- Strategies and policies of senior management.
- Asset Management.
- Application Analysis including recovery on all major platforms and identify the priority of each.
- Change Management to insure the DRP is kept up to date.
- Business Impact Analysis.
- Risk Assessment both internal and external.
- Emergency Response including a plan of who, what, when, where, and how the DRP will be tested and implemented.
- DRP/Data Storage Integration and Retention.
- BCP/DRP Integration.
- Building, Maintaining, and Storing Test Plans.
- DRP as a Business Process.

## **Disaster Recovery Planning Project**

### **Customer's Requirements**

1. The customer must have telephone access with the Customer Service Centers.
2. Customer Service Centers must have access to customer policy data.
3. Customer New Business Areas must have the ability to issue new policies.
4. Agent's commission payments must be made on time.
5. Claims must be able to issue checks to customers on insurance claims.
6. Regulatory reporting requirements must be met.
7. Good public relations with customers and stockholders must be maintained.
8. Corporate business goals must not be impacted.
9. Payroll checks must be issued on time.
10. Employee benefits must be available.
11. All strategic business functionalities must remain intact.
12. Employees and the Stakeholders must be provided with adequate security at all times while engaged in activities to support the business.

## **Disaster Recovery Planning Project**

### **Resource Requirements**

1. Project Manager.
2. Project Sponsor.
3. Quality Assurance testers.
4. Programmers.
5. Users for Acceptance testing.
6. Customer Service Representatives.
7. HOT-Site Disaster Recovery Site that mirrors our current infrastructure setup.
8. Terminals and servers setup on line to the HOT-Site.
9. Contracts with offsite storage for backup tape storage.

# Disaster Recovery Planning Project

## Stakeholders

### **1. Senior Management.**

Senior management are the stewards of the company assets. They are responsible to the stockholders, customers, employees and the community for the ongoing viability of the organization. They rely on others to provide critical information to them to support their decision making process. In the time of a crisis such as a natural or other disaster, the ultimate decisions such as declaring a disaster (not a trivial expense) must be made with confidence that there is a viable plan that will succeed.

### **2. Legal.**

Legal plays a dual role in DRP. First, management needs to know what government regulation exists to mandate specific BCP/DRP requirements for the business. Legal must be aware of regulations and interpret the practical implications of those regulations to the business. Second, Legal must understand the capabilities and limitations of the BCP/DRP so that client contracts are consistent with the design of the plans. We should not commit to recovery parameters that are not designed into the plans.

### **3. Facilities.**

In the event of a disaster, physical facilities may be in various states of availability. This will impact which technology recovery options (if any) are necessary. For example, systems may be unharmed, but if the building they reside in is deemed unfit to occupy by local authorities, key systems may be unavailable to the business.

### **4. Finance.**

As a user of critical financial systems, the Finance area is a customer of the DRP. Finance is also a participant in DRP by helping to determine the financial viability of various DRP options.

### **5. Agency.**

Since this group generates revenue for the organization, it is a key customer of the DRP.

### **6. TIO.**

TIO represents the first line of defense for our technology assets in the event of a disaster. This is the group that will be evaluating problems and making recommendations to management regarding recovery options. The pressure will be on this group to perform during any crisis. In the event of a regional crisis (earthquake, tornado, etc.) personal issues could outweigh business considerations. Well being of family members will be of primary concern to everyone. This speaks to the need for redundancy in task assignments to address business needs effectively.

## **Disaster Recovery Planning Project**

### **7. Genelco Software.**

Genelco Software is both a user of DRP services in St. Louis and Atlanta, and also a resource in the event of a disaster impacting Greenville. In the event of a disaster impacting St. Louis, Genelco Software may call on the larger resources of LIS in Greenville to recover. Should Greenville be impacted by an event, the Software Division can bring knowledgeable people to bear on mission critical application issues that may result.

### **8. Other Internal.**

BCP/DRP is truly multi-disciplined in nature. Every part of the organization may be impacted by a disaster. Even some seemingly routine operations may be necessary to support critical business functions in other areas of the organization. Each aspect of the business should be included in planning.

### **9. Clients.**

Since we are a services organization, clients have a stake in our viability. We must understand the client's needs for recovery and be willing to provide for those needs. We need to include pricing for these services in the contract because we expect the client to compensate us for providing appropriate DRP. Only the client can determine appropriate price points for DRP. It should be clear via contract what services are provided and at what cost. The client bears the responsibility for determining the level of protection they want compared to the price they will pay. DRP should be priced like any other service we provide.

### **10. Vendors.**

Certain vendors are stakeholders in BCP/DRP. They may provide critical resources to keep the business running (Sungard, IBM, utility companies, etc.). Or they may simply provide everyday supplies. It is important that in the event of a disaster that vendor lists and contact information is available to key individuals in the organization.

### **11. Government.**

Local, state and federal government enter into the process both to set the rules we must follow and to provide information and possibly assistance in the event of a disaster.

### **12. Stockholders/RBC.**

The bottom line purpose of BCP/DRP is to protect the value of the company for its stockholders/owners. This means spending our BCP/DRP dollars wisely to provide an adequate and prudent level of recovery. RBC is also a resource for assistance in planning and implementation of BCP/DRP.

## **Disaster Recovery Planning Project**

### **Critical Issues**

1. HOT site is not available for the actual disaster.
2. Daily backup tapes are not available to apply transactions to bring the databases up to the correct currency.
3. Backup tapes have no data on them.
4. Restore process has never been fully tested.
5. Restore tapes are mislabeled.
6. Restore tapes cannot be found.
7. Offsite tape supplier cannot retrieve tapes.
8. Operator on duty does not know how to contact the recovery service.
9. Personnel cannot carry the tape canister onto the airplane.
10. Tape canisters are mislabeled.

## **Disaster Recovery Planning Project**

### **Assumptions**

1. The Com Disco or alternate site will be available for the disaster recovery testing and also for actual use in the case of a real disaster. This may include RBC's Guelph Disaster/Recovery Center.
2. Vault copies of the daily tape backups will be available as of the day prior to the disaster.
3. Tapes will not be corrupted and will contain viable data.
4. Restore process has been fully tested.
5. Restore tapes are not mislabeled.
6. Restore tapes can be found.
7. Offsite tape supplier can retrieve tapes.
8. Operator on duty does know how to contact the recovery service.
9. Personnel can carry the tape canister onto the airplane.
10. Tape canisters are not mislabeled.

# Disaster Recovery Planning Project

## Project Objectives

1. DRP Framework.
  - a. Understand differences between DRP and BCP.
  - b. Define what a good DRP should do.
  - c. Define “back to normal” conditions.
2. DRP Current State at LIS.
  - a. Determine what DRP exists within LIS today.
  - b. Determine what BCP exists within LIS today.
  - c. Determine legal requirements.
    - i. Regulatory.
    - ii. Client contracts.
    - iii. General liability.
3. Identify DRP/BCP Resources.
  - a. LIS resources.
  - b. RBC resources.
  - c. Vendors.
  - d. Facilities.
4. Management Views
  - a. Corporate Goals.
  - b. Public Relations.
  - c. Security Procedures.
  - d. Business as Usual.
  - e. Employee Relations.
5. Business Process Outsourcing.
  - a. Technology Services.
  - b. Genelco Software.
6. Initiatives.
  - a. Staffing.
  - b. Documentation of Disaster Recovery Procedures.
  - c. Test Plan.
  - d. Contingency Plan.
  - e. Implementation.
  - f. Integration of DRP and BRP.
  - g. Perform DRP test.
  - h. Evaluate Costs and Effectiveness.

## Disaster Recovery Planning Project

### Project Specifications

1. Alignment - To be effective, DRP tactics must be aligned to the BCP. Infrastructure components should be recovered in relation to the relative importance of the business functions they support. Decisions on recovery steps must accommodate technical necessities, but must be driven by business need.
2. Prioritized - Business need based on regulatory, contractual or financial considerations will determine DRP tactics. Senior management must have set priorities in advance of a disaster based on factors they deem most critical to the continued viability of the business. The tactics of the DRP must support these pre-defined goals. The following goals are some to consider.
  - Customer Service Centers must have telephone access with 24 hours of the disaster using a DRP 1-800-number that is totally transparent to the customer.
  - Customer Service Centers must have access to the customer policy file within 24 hours of the disaster.
  - Customer Service Centers must be able to enter and issue new policies within 48 hours of the disaster.
  - Agents must be able to receive commission checks within 72 hours of the disaster. This may possibly be a manual check cutting procedure.
  - Claims must be able to issue claim checks within 24 hours of the disaster. This may possibly be a manual check cutting procedure.
3. Documented – The DRP must be documented for a variety of reasons. Personnel changes alone mandate this. How many application systems exist in businesses today that cannot be modified or adequately maintained due to poor documentation and staff changes? The DRP must survive normal business changes to be effective when needed.
4. Verifiable – The DRP must be tested before there is an incident. Management must be assured that the plan works. The time to determine this is not when there is a crisis, but when there is time to repair any problems or oversights in a methodical fashion.
5. Cost-Effective - Both the BCP and DRP must factor the financial implications of disaster recovery into the equation. In effect, senior management must weigh all the anticipated risk factors, regulatory requirements, contractual commitments and costs to determine the level of recovery that is prudent for the business. Ultimately, the customers of the business must be willing to pay for the level of recovery to be provided. The primary question to be answered is whether or not the business can sell its product at pricing levels required to support the BCP/DRP. If not, then the plans cannot be implemented for the

## Disaster Recovery Planning Project

long term since the business cannot survive unless it makes appropriate profits.

6. Flexible – Disasters cannot be predicted, only anticipated. When a disaster strikes it can take many forms with many different levels of severity. Outages can be far-reaching or narrowly focused. Upper management will ultimately need to make informed business decisions on responses based on information provided by technology staff, government and clients. Many times, this information will be incomplete, based on faulty assumptions and sometimes, just plain wrong. The DRP must anticipate multiple severity levels as well as the likelihood that some degree of chaos will be involved. While choices make the decision process more complex, they also provide much needed options to management.
7. Dynamic – Things change. Business priorities, government regulations, client requirements, technology and markets are variable factors that may impact DRP over time. If the DRP is not a living, breathing document that reflects our business today, then it may not be useful when a disaster hits. DRP can be compared to security. Just as system security involves planning, implementation and ongoing diligence, so does DRP. Security is meant to protect business assets, as they exist. DRP is meant to replace damaged or destroyed assets for both short and long-term scenarios.

## Disaster Recovery Planning Project

### Overview of the Contingency Planning Cycle Model

<b>UNDERSTAND THE BUSINESS</b> Business goals and direction Process Control Manuals Business work flow diagrams Alternate methods of doing business Mapping Procedures to Standards to Policies Interrelationships/dependencies between functions	<b>UNDERSTAND THE LEGAL REQUIREMENTS</b>	<b>UNDERSTAND CONTINGENCY</b> Internal corporate vision/goals Fundamental principles Industry Lessons Learned Industry trends and directions Industry “best practices” strategies
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<b>BUSINESS IMPACT ASSESSMENT</b> Scale of impact definitions Tangible and intangible impacts Resources used/essential resources required Establish Business Priorities	<b>RISK ASSESSMENT</b> Internal business exposures External business exposures Level of risk acceptance Changes that reduce risk
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<b>DEFINE THE CONTINGENCY MISSION</b>		
Mission statement Funding level requirements	Scope of responsibilities Corporate visibility/priority	Assumptions and success factors Cultural integration goals

<b>DEFINE CONTINGENCY SERVICE LEVEL EXPECTATIONS</b> Contingency capacity requirements Establish <i>recovery</i> priorities	<b>ASSET PROTECTION</b> Asset and resource availability Business process integrity Hazard Protection
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<b>PLANS FOR INTERNAL COMPONENTS</b> Damage control and assessment Crisis mgmt/public relations Decision management Business continuity	<b>CONTINGENCY ACTIONS TEAMS</b> Strategy development Process documentation Action team integration training Corp. cultural integration/education	<b>PLANS FOR EXTERNAL COMPONENTS</b> Contingency services vendors External corporate resources Emergency services External logistics
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<b>ACTION PLAN EXERCISE &amp; PROCESS TESTING</b> Exercise Contingency Action Teams procedures and strategies Test automated systems and process effectiveness
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## **Disaster Recovery Planning Project**

### **GANTT Chart**

See attached document.

## **Disaster Recovery Planning Project**

### **Project Tracking Mechanism**

1. Weekly status meetings.
2. Weekly status reports used to update the MS Project Work Plan.
3. Agenda for each meeting.
4. Issues list to track problems.
5. Publish minutes of status meetings.
6. Management status review updates.
7. GANTT chart updated by Project Leader.