

# Accounting and Budgeting for Disaster Recovery Plan

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**Submission date:** 12-Feb-2020 11:55AM (UTC+0700)

**Submission ID:** 1255957462

**File name:** Accounting\_and\_Budgeting\_for\_Disaster\_Recovery\_Plan.docx (68.53K)

**Word count:** 2546

**Character count:** 14489

## **Accounting and Budgeting for Disaster Recovery Plan**

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Disaster management, catastrophe management, contingency planning, crisis management, emergency response and recovery, business recovery, and continuity are various versions of the same concept of planning of pre-loss preventive measures, emergency response and post-disaster actions to assure survival and continuity of a business. An effective plan must consider various aspects of pre, during and post disaster exposures. The overall goal is to maximize business continuity and minimize business interruption by being prepared for the event.

Due to the nature of disasters that makes the continuation of normal functions impossible, a disaster recovery plans consists of the precautions taken so that the effects of a disaster will be minimized. Typically, disaster recovery planning involves an analysis of business processes and continuity needs, and most importantly, include a significant focus on disaster prevention.

In every organization, management has the responsibility to plan for appropriate emergency response and recovery. On the other hand, organization is forced to become accountable to its shareholders, employees, as well as other stakeholders. A well-planned response provides an opportunity to turn a negative impact into zero, if not positive impact, for the future of business. Lack of effective disaster recovery planning may indicate more vulnerable the business due to potential disasters such as natural disasters (e.g. fire, earthquakes, flood, etc), sabotage, accidents, communication, transportation safety and service failure, cyber attack and hacker activity. However, appropriate plans may vary a great from one enterprise to another,

depending on variables such as the type of business, the processes involved, and the level of security needed.

Accounting, in particular budgeting, plays some important role in disaster recovery planning. A budget is a financial plan to control future operations and results that are vulnerably affected by the environmental volatility and uncertainty. A precise and robust accounting and budgeting systems are needed to minimize the impact of disaster on record-keeping, decision making and performance evaluation.

This workshop is intended to provide a comprehensive guidance on conducting affective disaster recovery planning. Once it is developed a flexible budget is offered and implemented in order to choke for uncertainty-related disasters.

### **What is Disaster Recovery Planning?**

A disaster recovery plan is comprehensive statement of consistent actions to be taken before, during and after a disaster. It is also a proactive planning process that ensures critical services or products are *still be able* to be delivered during a disruption or disaster. The plan should be documented and tested to ensure the continuity of operations and availability of critical resources in the event of a disaster.

The primary objective of disaster recovery planning is to protect the organization in the event that all or part of its operations and/or computer services is rendered unusable. Preparedness is the key. The planning process should minimize the disruption of operations and ensure some level of organizational stability and an orderly recovery after a disaster.

Other objectives of disaster recovery planning include:

- Providing a sense of security
- Minimizing risk of delays
- Guaranteeing the reliability of standby systems
- Providing a standard for testing the plan
- Minimizing decision-making during a disaster

The Disaster Recovery Plan is the most important item in the armoury of organization. It is what the organization will turn to if there is indeed a disaster or other serious incident. Hopefully, the organizations will never have to use it, but if they do, it can be the difference between the loss of organization and its survival. It is therefore absolutely critical that it is workable – that it is of sufficient quality to guide the organization through the crisis.

There are several steps of processes pertaining disaster recovery planning.

1. Business risk and impact analysis

- ✚ Key Business Processes
- ✚ Establish Time-Bands for Business Service Interruption Measurement
- ✚ Financial and Operational Impact

IT and Communications

- ✚ Specifications of IT and Communication Systems and Business Dependencies
- ✚ Key IT, Communications and Information Processing Systems
- ✚ Key IT Personnel and Emergency Contact Information
- ✚ Key IT and Communications Suppliers and Maintenance Engineers
- ✚ Existing IT Recovery Procedures

*Existing Emergency Procedures*

- ✚ Summary of Existing Procedures for Handling Emergency Situations
  - ✚ Key Personnel Responsible for Handling Existing Emergency Procedures
  - ✚ External Emergency Services and Contact Numbers
  - ✚ Premises Issues
  - ✚ Responsibility and Authority for Building Repairs
  - ✚ Back-up Power Arrangements
2. Documenting activities necessary to prepare for possible emergencies

***Back up and Recovery Strategies***

- ✚ Alternative Business Process Handling Strategy
- ✚ Systems Back-Up and Recovery Strategy
- ✚ Premises and Essential Equipment Back-up and Recovery Strategy
- ✚ Customer Service Back-up and Recovery Strategy
- ✚ Administration and Operation Back-up and Recovery Strategy
- ✚ Information and Documentation Back-up and Recovery Strategy
- ✚ Insurance Coverage

***Key BCP Personnel and Supplies***

- ✚ Functional Organizational Chart
- ✚ BCP Project coordinator and Deputy for Each Functional Area
- ✚ Key Personnel and Emergency Contact Information
- ✚ Key Suppliers and Vendors and Emergency Contact Information
- ✚ Manpower Recovery Strategy
- ✚ Establishing the Disaster Recovery Team

- ✚ Establishing the Business Recovery Team

***Key Documents and Procedures***

- ✚ Documents and Records Vital to the Business Process
- ✚ Off-site Storage
- ✚ Emergency Stationery and Office Supplies
- ✚ Media Handling Procedures
- ✚ Emergency Authorization Procedures
- ✚ Prepare Budget for Back-up and Recovery Phase

3. Identifying and authorizing detailed activities for any disaster recovery phase

***Planning for Handling the Emergency***

- ✚ Identification of Potential Disaster Status
- ✚ Involvement of Emergency Services
- ✚ Assessing Potential Business Impact of the Emergency
- ✚ Project Management Activities

***Notification and Reporting During Disaster Recovery Phase***

- ✚ Mobilizing the Disaster Recovery Team
- ✚ Notification to Management and Key Employees
- ✚ Handling Personnel Families Notification
- ✚ Handling Media during the Disaster Recovery Phase
- ✚ Maintaining Event Log during Disaster Recovery Phase
- ✚ Disaster Recovery Phase Report

4. Identifying and authorizing detailed activities for managing the business recovery process

***Managing the Business Recovery Phase***

- ✚ Mobilizing the Business Recovery Team
- ✚ Assessing Extent of Damage and Business Impact
- ✚ Preparing Specific Recovery Plan
- ✚ Monitoring Progress
- ✚ Keeping Everyone Informed
- ✚ Handling Business Operations Back to Regular Management
- ✚ Preparing Business Recovery Phase Report

***Business Recovery Activities***

- ✚ Power and Other Utilities
  - ✚ Premises, Fixtures and Furniture (Facilities Recovery Management) Communication Systems
  - ✚ IT Systems (Hardware and Software)
  - ✚ Production Equipment
  - ✚ Other Equipment
  - ✚ Warehouse and Stock
  - ✚ Trading, Sales and Customer Service
  - ✚ Human Resources
  - ✚ Information and Documentation
  - ✚ Office Supplies
  - ✚ Operations and Administration (Support Services)
5. Testing and auditing the business recovery process

### ***Planning the Tests***

- ✚ Develop Objectives and Scope of Tests
- ✚ Setting the Test Environment
- ✚ Environmental Disasters
- ✚ Organized and / or deliberate disruption
- ✚ Loss of Utilities and Services
- ✚ Equipment or System Failure
- ✚ Serious Information Security Incidents Other Emergency Situations
- ✚ Prepare Test Data
- ✚ Identify Who is to conduct the Tests
- ✚ Identify Who is to Control and Monitor the Tests
- ✚ Prepare Feedback Questionnaires
- ✚ Prepare Budget for Testing Phase
- ✚ Training Core Testing Team for each Business Unit

### ***Conducting the Tests***

- ✚ Test each part of the Business Recovery Process
  - ✚ Test Accuracy of Employee and Vendor Emergency Contact Numbers
  - ✚ Assess Test Results
6. Training staff in the business recovery process

### ***Managing the Training Process***

- ✚ Develop Objectives and Scope of Training
- ✚ Training Needs Assessment



- ✚ Training Materials Development Schedule
- ✚ Prepare Training Schedule
- ✚ Communication to Staff
- ✚ Prepare Budget for Training Phase

### ***Assessing the Training***

- ✚ Feedback Questionnaires
  - ✚ Assess Feedback
7. Implementing a process for keeping the plan up to date
- ✚ Change Controls for Updating the Plan
  - ✚ Responsibilities for Maintenance of Each Part of the Plan
  - ✚ Test All Changes to Plan Advise Person Responsible for BCP Training

### **IDENTIFYING AND MANAGING RISKS**

Risk analysis is a process that identifies the probable threats to the business. Risk analysis is the basis for risk assessment. The scope of risk is determined by the potential damage, cost of downtime or cost of lost opportunity. In general, the wider the disaster, the more costly it is. Figure 1 visualizes the attributes of risk.

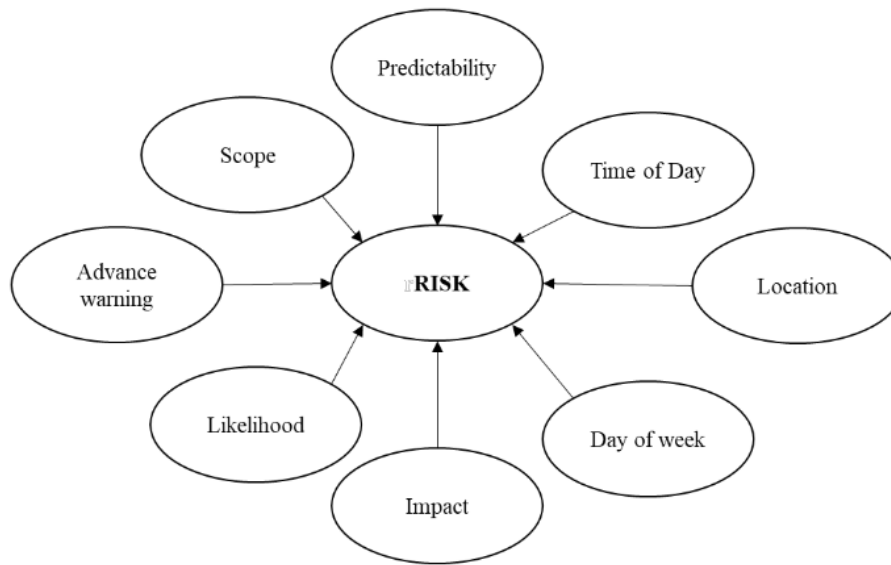


Figure 1: The Attributes of risk

The impact of risks vary widely according to what happens to whom and when. In considering risks, it is very helpful to separate the risks into broad categories or layers to properly prioritize their solutions. There are five commons layers of risk, which are:

1. External risks

This external risk, indeed, can shut down the business either directly or indirectly.

These are risks from nature, such as flooding, earthquake, etc. it can also include risks from man made object such as rail roads or airplanes. Risks of this type usually disrupt customers, supplies as well as employees.

2. Risk to local facility

This risk is usually due to the way offices were constructed; although it cannot be neglected that some risks are associated with severe wheater.. The risks include risk to basic services such as electrical and telephone access to the office or building.

3. Data systems risk

Example of this risk is loss of data that can lead to severe legal problems. Although most data can be recreated, but the expense for doing so can be quite high.

4. Individual risks

Each department has critical functions to perform to meet their production goals and weekly assignments. These processes depend on specific tools to do this. Each department needs to identify the risk that might prevent them from performing their assigned works. These risks may not threaten the company's primary functions but overtime can degrade the overall facilities' performance.

5. Individual risks

This is the most "objective" risk. Since individuals are so familiar with their daily work, they may assess the risks-associated to them easily and quickly. However, it cannot be neglected that this risk may have a serious impact to the organization performance.

#### FLEXIBLE BUDGET AS DISASTER RECOVERY TOOLBOX

Budget is defined as the formal expressions of goals, plans, and objectives of management that covers all aspects of operations for designated time period. The budget is a tool providing targets and direction. Budgets provide control over the immediate environment, help to master the financial aspects of the job department, and solve problems *before* they occur. Budgets focus on the importance of evaluating alternative actions before decisions actually are implemented.

In a completely uncertain world, particularly when disaster occurs, static budget may lose its relevance and therefore, cannot be used as a performance indicator of managers or divisions or

departments. In this case, flexible budget, which is geared toward a range of activity rather than a single activity and dynamic in nature, may be useful to cope for uncertainty due to disaster.

To illustrate this, assume that the Assembly Department of Ar-Rahman, Inc, located in Klaten was budgeted to produce 6000 units during July. Assume further that due to disaster in Jogja was able to produce only 5,800. The budget for direct labor and variable overhead costs is:

Table 1: Direct labor and variable overhead budget

Ar-Rahman, Inc. The Direct Labor and Variable Overhead Budget Assembly Department For the month of July	
Budgeted production	6000 units
Actual production	5800 units
Direct labor	\$ 39,000
Variable overhead costs:	
Indirect labor	6,000
Supplies	900
Repairs	<u>300</u>
	<u>\$ 46,200</u>

For the purpose of convenience and deeper understanding, the performance report of static budget will appear in this way:

Table 2: performance report of static budget

Ar-Rahman, Inc. The Direct Labor and Variable Overhead Budget Static Budget versus Actual Assembly Department For the month of July			
	Budget	Actual	Variance
Production in units	6000	5800	200 U
Direct Labor	39000	38500	\$500 F

Variable overhead costs:			
Indirect Labor	6000	5950	50 F
Supplies	900	870	30 F
Repairs	300	295	5 F
	\$46,200	\$45,615	\$585 F

Note: U and F stand for unfavourably and favourably, respectively

These cost variances are useless, because they are comparing number of units under normal capacity and post-disaster phase. The static budget above is based on an activity level of 6000 whereas the actual costs were incurred at an activity level of 5,800 units. From a control stand point, it is unreasonable to try to compare costs at one activity level with costs at a different level of capacity. Using such comparison would make a production manager look good as the actual production is less than the budgeted production. Using the flexible budget that is based on 5800 units gives the performance report as follows:

Table 3: performance report of flexible budget

Ar-Rahman, Inc. The Direct Labor and Variable Overhead Budget Flexible Budget versus Actual Assembly Department For the month of July				
Budgeted production 6,000 units				
Actual production 5,800 units				
	Flexible budget formula	Flexible budget 5800 units	Actual 5800 units	Variance
Direct Labor	\$6.50	37,700	38,500	800 U
Variable Overhead:				
Indirect Labor	1	5,800	5,950	150 U
Supplies	0.15	870	870	0
Repairs	0.05	290	295	5 U
	\$7.70	\$44,660	\$45,615	\$955 U

Note that the variance is unfavorable, as compared to the favorable cost variance on the performance report based on the static budget approach.

Table 4: Performance report static budget (example b)

Ar-Rahman, Inc. The Direct Labor and Variable Overhead Budget Performance Report-Static Budget Assembly Department For the month of July			
Units	2,000	1,200	800
Sales revenue	\$60,000	\$36,000	\$24,000 U
Variable costs:			
Film	16,000	11,500	4,500 F
Other material	4,000	3,000	1,000 F
Technician	3,000	2,500	500 F
Other labor	900	600	300 F
Other variable	2,400	2,000	400 F
Total variable	26,300	19,600	6,700 F
Contribution Margin	33,700	16,400	17,300 F
Fixed Costs:			
Rent	800	800	0
Depreciation	400	400	0
Supervision	2,000	2,000	0
Other fixed	3,500	3,300	200 F
Total Fixed	6,700	6,500	200 F
Operating Income	27,000	9,900	17,100 U

More comprehensive example is given in table 5 and 6.

Table 5: Flexible Budget (example b)

X-Ray unit Hospital Barokah Flexible Budget June 2007						
	Budgeted per unit	Number of X-Rays per month				
		1000	1,200	1,400	1,800	2,000
Sales revenue	\$30	\$30,000	\$36,000	\$42,000	\$54,000	\$60,000
Variable costs:						
Film	8	8,000	9,600	11,200	14,400	16,000
Other material	2	2,000	2,400	2,800	3,600	4,000
Technician	1.5	1,500	1,800	2,100	2,700	3,000
Other labor	0.45	450	540	630	810	900

Other variable	1.20	1,200	1,440	1,680	2,160	2,400
Total variable	13.15	13,150	15,780	18,410	23,670	26,300
Contribution Margin	16.85	16,850	20,220	23,590	30,330	33,700
Fixed Costs:						
Rent		800	800	800	800	800
Depreciation		400	400	400	400	400
Supervision		2,000	2,000	2,000	2,000	2,000
Other fixed		3,500	3,500	3,500	3,500	3,500
Total Fixed		6,700	6,700	6,700	6,700	6,700
Operating Income		10,150	13,520	16,890	23,630	27,000

Table 6: performance report of flexible budget (example b)

X-Ray unit Hospital Barokah Performance Report-Flexible Budget June 2007			
	Costs incurred	Flexible Budget	Variance
Units	1,200	1200	0
Sales revenue	\$36,000	\$36,000	0
Variable costs:			
Film	11,500	9,600	1900 U
Other material	3,000	2,400	600 U
Technician	2,500	1,800	700 U
Other labor	600	540	60 U
Other variable	2,000	1,440	560 U
Total variable	19,600	15,780	3,820 U
Contribution Margin	16,400	20,220	3,820 U
Fixed Costs:			
Rent	800	800	0
Depreciation	400	400	0
Supervision	2000	2000	0
Other Fixed	3,300	3500	200 F
Total Fixed	6,500	6700	200 F
Operating Income	9,900	13,520	3,620 U

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