

ANALYZE CAPABILITIES, RISKS, & VULNERABILITIES

Purpose

The purpose of this module is to provide you with an understanding of the second step of the 4-step process for emergency planning. This step entails:

- Gathering information about current capabilities, possible hazards, and emergencies.
- Conducting a vulnerability analysis to determine the facility's capabilities for handling emergencies.

Additional planning needs will also be reviewed. Internal and external resources and assets are considered in relation to a business, such as plans and policies, outside groups to involve, codes and regulations, critical products/services, and capabilities.

Concepts are reinforced in this step to help ensure application to your business by:

- Reviewing sections of an emergency plan template and identifying resources that will help you in completing an emergency plan for your business.
- Demonstrating an understanding of Step 2 by responding to questions posed at critical decision points in a case study on emergency planning.

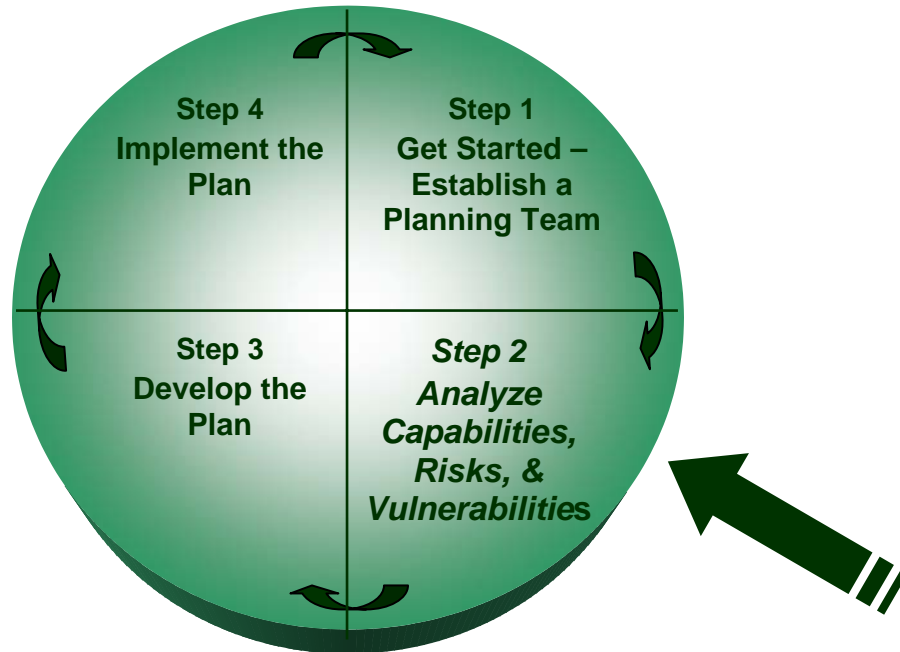
Objectives

After completing this module, you will be able to:

- Recognize key terms and definitions to use when analyzing capabilities, risks, and vulnerabilities.
- Recognize the scope of capabilities (internal and external to the business) that must be analyzed in the initial step of emergency action planning.
- Conduct a vulnerability analysis:
 - Identify potential emergencies.
 - Estimate probability.
 - Assess impact on property, life, and business.
- Identify resources that will help you in completing sections of an emergency plan.
- Demonstrate an understanding of Step 2 by responding to questions posed at critical decision points in a case study on emergency planning.
- Identify 2 actions related to Step 2 to implement at your workplace, as well as potential barriers to these actions and how to overcome these barriers.

Analyzing Capabilities, Risks, & Vulnerabilities

Once you have completed the first step of the process to develop an emergency plan, you are ready to complete Step 2 – Analyze Capabilities, Risks, and Vulnerabilities. In this step, you assess organizational strengths and vulnerabilities.



? *How can my business get a clear picture of our strengths and areas in which we are at risk? How can we use this information for planning?*

Key Terms: Analyze Capabilities, Risks, & Vulnerabilities

Briefly review the scope and definitions of key terms that will be used in this module.

Term	Definition/Description
Hazard	Any existing or potential workplace condition that, by itself or by interacting with other variables, can result in death, injury, property damage, or other loss. Hazards: <ul style="list-style-type: none"> ■ Include unsafe conditions, practices, and procedures. ■ Are defined as the potential for harm or damage to people, property, or environment. ■ Include characteristics of objects in the actions or lack of actions by people. ■ May exist with or without the presence of people and land development. Earthquakes, hurricanes, tornadoes, and other geological and meteorological events have been occurring for a very long time and the natural environment adapted to their impacts.
Risk	A measure of the probability and severity of adverse effects. <ul style="list-style-type: none"> ■ Risk depends on 3 factors: hazard, vulnerability, and exposure. ■ Risk is the estimated impact that a hazard would have on people, services, facilities, and structures. It refers to the likelihood of a hazard event resulting in an adverse condition that causes injury or damage.
Vulnerability	The exposure of people, property, industry, resources, ecosystems, or historical buildings and artifacts to risk.
RVA (Risk and Vulnerability Analysis)	A measure of exposure to risk.
Capability	The level of preparedness (ability) to respond to an emergency, including assets/resources, qualifications, capacity, means, and strengths.
Capability Analysis	A systematic review of an organization's ability to respond to an emergency.

Sources:

Content for these definitions was adapted from materials prepared by the National Safety Council and FEMA (<http://training.fema.gov/EmiWeb/IS/IS393A/Word/IS393.A-Lesson3-final.doc>, <http://www.training.fema.gov/EMIWeb/edu/docs/hram/Module%202-5%20Understanding%20Vulnerability.doc>).

Capabilities and Vulnerabilities Analysis: Determining Risk

In this module, you will explore and discuss the sub-steps presented here. The data gathered from these sub-steps will help you identify risks.

Capabilities and Risk

As you **assess capabilities** to determine risk, you will need to look at all of your business capabilities from an **internal** and **external** perspective.



- Examples of **internal** capabilities that you will need to assess includes gathering information on existing plans and policies, as well critical products, services, and all assets and resources – human resources, physical resources, and equipment.
- Examples of areas that are **external** to your business include meeting with outside groups and identifying resources (such as local emergency management office, fire department, and utilities) that may be needed in an emergency.

Vulnerabilities and Risk

You also need to **conduct a vulnerability analysis** to determine where you are at risk.

- Your location and type of business can determine types of risks that may impact your business, ranging from natural hazards to terrorism.
- The nature and extent of the vulnerability analysis will differ based on a number of factors, including organization size, potential population affected, system infrastructure, and other factors. Security and safety evaluations also vary based on knowledge and types of threats, available technologies, and applicable local, state and federal regulations.
- You will need to look at numerous factors in this part of the process, such as building design, site location, historic patterns, and proximity to higher risk activities (key transportation routes, high profile organizations/buildings, etc.).
- Itemize potential hazards and risks using ratings to determine the probability and potential impact of each emergency. This will help you identify the extent of damage/injury.
- Understanding the risk posed by vulnerabilities is a critical aspect of determining your overall capability in responding to emergencies.

Capabilities and Vulnerabilities Analysis: Determining Risk (continued)

Using Information You Collect to Prioritize Your Efforts

In analyzing results of your information gathering, pay close attention to areas of higher risk. **Based on data collected, you can focus and prioritize your emergency planning goals.**

- The higher the risk, the more urgent the vulnerabilities – these areas should become primary targets for planning efforts.
- However, if there is no vulnerability, there will be no risk – such as an earthquake occurring in a desert where no one lives.

A capability and vulnerability analysis is economical and can produce a rapid and relatively comprehensive assessment. It also does not have to disrupt daily operations. Implementing the recommendations not only helps you in an emergency planning process, it also increases your business's overall level of safety and security.

Gather Information: Determine Capabilities to Handle Emergencies

? *Is your business capable of handling emergencies? How capable?*

There are a number of areas that must be reviewed and considered as you initially determine the capabilities of your business in regards to emergencies and emergency planning efforts. Gathering this information is a critical first sub-step as you analyze your business risks, capabilities, and vulnerabilities. The areas/tasks to include in your analysis include:

- Review internal plans and policies.
- Meet with outside groups.
- Identify codes and regulations.
- Identify critical products, services, and operations.
- Identify internal resources and capabilities.
- Identify external resources.
- Do an insurance review.

The following chart presents these areas along with examples that you can use to conduct your analysis when you return to your business.

Determine Capability: Tasks/Areas to Assess	Examples
Review internal plans and policies (documents) to determine where you stand right now.	<ul style="list-style-type: none"> <input type="checkbox"/> Evacuation Plan <input type="checkbox"/> Fire Protection Plan <input type="checkbox"/> Safety and Health Program <input type="checkbox"/> Environmental Policies <input type="checkbox"/> Security Procedures <input type="checkbox"/> Insurance Programs <input type="checkbox"/> Finance and Purchasing Procedures <input type="checkbox"/> Plant Closing Policy <input type="checkbox"/> Employee Manuals <input type="checkbox"/> Hazardous Materials Plan <input type="checkbox"/> Process Safety Assessment <input type="checkbox"/> Risk Management Plan <input type="checkbox"/> Capital Improvement Program (i.e. Does the document address emergency needs/issues in terms of future budget considerations? For example, you may need to buy new alarms, a back-up generator, etc.) <input type="checkbox"/> Mutual Aid Agreements <p><i>List other documents to assist in determining your capabilities.</i></p> <hr/> <hr/>

Gather Information: Determine Capabilities to Handle Emergencies (continued)

Determine Capability: Tasks/Areas to Assess	Examples
<p>Meet with outside groups including government agencies, community organizations, and utilities. Ask about potential emergencies, plans, and available resources for responding to them. Emphasize essential communication between a business and emergency responders/ resources in a community PRIOR to a disaster to ensure alignment of resources and plans.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Fire Department <input type="checkbox"/> Health Care/Medical Resources (ambulatory care, rural health clinic, hospital, long term care, rehabilitative, mental health, physician offices, home care, laboratories) <input type="checkbox"/> Community Emergency Management Office <input type="checkbox"/> Local Emergency Planning Committee (LEPC) <input type="checkbox"/> Mayor or Community Administrator’s Office <input type="checkbox"/> Police Department <input type="checkbox"/> American Red Cross <input type="checkbox"/> National Weather Service <input type="checkbox"/> Public Works Department/Utilities <input type="checkbox"/> Planning Commission <input type="checkbox"/> Telephone Companies <input type="checkbox"/> Electric Utilities <input type="checkbox"/> Neighboring Businesses <input type="checkbox"/> Transportation <input type="checkbox"/> Public Health <input type="checkbox"/> Public Schools, Colleges, and Universities <input type="checkbox"/> Local or Regional FBI Office <input type="checkbox"/> Citizen Corps/Medical Reserve Corps <input type="checkbox"/> Media and Communications (print, radio, TV) <p><i>List other outside groups to meet with to determine capabilities.</i></p> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/>
<p>Identify applicable Federal, State, and local codes and regulations.</p>	<ul style="list-style-type: none"> <input type="checkbox"/> Occupational Safety and Health Regulations (OSHA, other) <input type="checkbox"/> Environmental Regulations <input type="checkbox"/> Fire Codes <input type="checkbox"/> Seismic Safety Codes <input type="checkbox"/> Transportation Regulations <input type="checkbox"/> Zoning Regulations <input type="checkbox"/> Corporate Policies <p><i>List other codes/regulations to identify.</i></p> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 5px 0;"/>

Gather Information: Determine Capabilities to Handle Emergencies (continued)

Determine Capability: Tasks/Areas to Assess	Examples		
Identify critical products, services, and operations to assess the impact of potential emergencies and determine the need for backup systems.	<ul style="list-style-type: none"> <input type="checkbox"/> Company products/services and facilities/equipment needed to produce them. <input type="checkbox"/> Supplier products/services, especially sole source vendors. <input type="checkbox"/> Lifeline services (electrical power, water, gas, communications, sewer, telecommunications, etc.) <input type="checkbox"/> Operations, equipment, and personnel vital to continued functioning of the facility. <p><i>List other products, services, and operations to identify.</i></p> <hr/> <hr/>		
Identify internal resources and capabilities that could be needed in an emergency:	<ul style="list-style-type: none"> <input type="checkbox"/> Personnel: Fire brigade, hazardous materials response team, emergency medical services, security, emergency management and/or response team, evacuation team, public information officer <input type="checkbox"/> Equipment: Fire protection and suppression equipment, first aid supplies, emergency supplies, communications equipment, warning systems, emergency power equipment, decontamination equipment <input type="checkbox"/> Facilities: Emergency operating center, media briefing area, shelter areas, first-aid stations, sanitation facilities <input type="checkbox"/> Organizational capabilities: Training, evacuation plan, employee support system <input type="checkbox"/> Backup systems: Arrangements with other facilities to provide for: <ul style="list-style-type: none"> <li style="width: 50%;">– Payroll <li style="width: 50%;">– Shipping and receiving <li style="width: 50%;">– Communications <li style="width: 50%;">– Information systems support <li style="width: 50%;">– Production <li style="width: 50%;">– Emergency power <li style="width: 50%;">– Customer services <li style="width: 50%;">– Recovery support <p><i>List other codes/regulations to identify.</i></p> <hr/> <hr/>		
Identify external resources that could be needed in an emergency. In some cases, formal agreements may be necessary to define the facility’s relationships.	<table style="width: 100%; border: none;"> <tr> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> <input type="checkbox"/> Local Emergency Management Office <input type="checkbox"/> Fire Department <input type="checkbox"/> Hazardous Materials Response Organization <input type="checkbox"/> Emergency Medical Services <input type="checkbox"/> Hospitals </td> <td style="width: 50%; vertical-align: top;"> <ul style="list-style-type: none"> <input type="checkbox"/> Local and State Police <input type="checkbox"/> Community Service Organizations <input type="checkbox"/> Utilities <input type="checkbox"/> Contractors <input type="checkbox"/> Suppliers of Emergency Equipment <input type="checkbox"/> Insurance Carriers </td> </tr> </table> <p><i>List other external resources to identify as you determine capabilities.</i></p> <hr/> <hr/>	<ul style="list-style-type: none"> <input type="checkbox"/> Local Emergency Management Office <input type="checkbox"/> Fire Department <input type="checkbox"/> Hazardous Materials Response Organization <input type="checkbox"/> Emergency Medical Services <input type="checkbox"/> Hospitals 	<ul style="list-style-type: none"> <input type="checkbox"/> Local and State Police <input type="checkbox"/> Community Service Organizations <input type="checkbox"/> Utilities <input type="checkbox"/> Contractors <input type="checkbox"/> Suppliers of Emergency Equipment <input type="checkbox"/> Insurance Carriers
<ul style="list-style-type: none"> <input type="checkbox"/> Local Emergency Management Office <input type="checkbox"/> Fire Department <input type="checkbox"/> Hazardous Materials Response Organization <input type="checkbox"/> Emergency Medical Services <input type="checkbox"/> Hospitals 	<ul style="list-style-type: none"> <input type="checkbox"/> Local and State Police <input type="checkbox"/> Community Service Organizations <input type="checkbox"/> Utilities <input type="checkbox"/> Contractors <input type="checkbox"/> Suppliers of Emergency Equipment <input type="checkbox"/> Insurance Carriers 		

Gather Information: Determine Capabilities to Handle Emergencies (continued)

Determine Capability: Tasks/Areas to Assess	Examples
<p>Meet with insurance carriers, with special emphasis on emergency-related issues, to review all policies.</p>	<p>Most companies discover that they are not properly insured only after they have suffered a loss. Lack of appropriate insurance can be financially devastating. Discuss the following topics with your insurance advisor to determine your individual needs.</p> <ul style="list-style-type: none"> <input type="checkbox"/> How will my property be valued? <input type="checkbox"/> Does my policy cover the cost of required upgrades to code? <input type="checkbox"/> How much insurance am I required to carry to avoid becoming a co-insurer? <input type="checkbox"/> What perils or causes of loss does my policy cover? <input type="checkbox"/> What are my deductibles? <input type="checkbox"/> What does my policy require me to do in the event of a loss? <input type="checkbox"/> What types of records and documentation will my insurance company want to see? Are records in a safe place where they can be obtained after an emergency? <input type="checkbox"/> To what extent am I covered for loss due to interruption of power? Is coverage provided for both on- and off-premises power interruption? <input type="checkbox"/> Am I covered for lost income in the event of business interruption because of a loss? Do I have enough coverage? For how long is coverage provided? How long is my coverage for lost income if my business is closed by order of a civil authority? <input type="checkbox"/> To what extent am I covered for reduced income due to customers' not all immediately coming back once the business reopens? <input type="checkbox"/> How will my emergency management program affect my rates? <p>Use the Insurance Coverage Discussion Form from Ready Business at http://www.ready.gov/business/downloads/insuranceform.pdf on the following page to focus your discussion with your insurance carrier.</p> <p><i>List other topics to review.</i></p> <hr style="border: 0; border-top: 1px solid black; margin: 10px 0;"/> <hr style="border: 0; border-top: 1px solid black; margin: 10px 0;"/>

Open for Business Worksheet
Insurance Coverage Discussion Form

Use this form to discuss your insurance coverage with your agent. Having adequate coverage now will help you recover more rapidly from a catastrophe.

Insurance Agent: _____

Address: _____

Phone: _____ Fax: _____ Email: _____

INSURANCE POLICY INFORMATION

Type of Insurance	Policy No.	Deductibles	Policy Limits	Coverage (General Description)

Do you need Flood Insurance? Yes ___ No ___

Do you need Earthquake Insurance? Yes ___ No ___

Do you need Business Income and Extra Expense Insurance? Yes ___ No ___

Other disaster-related insurance questions:

SAMPLE EMERGENCY PLAN

❑ Capabilities: Internal Plans and Policies

The following plans and policies were reviewed (please check). Note additional plan/policies reviewed in the space provided.

- | | |
|---|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> Evacuation Plan <input type="checkbox"/> Fire Protection Plan <input type="checkbox"/> Safety and Health Program <input type="checkbox"/> Environmental Policies <input type="checkbox"/> Security Procedures <input type="checkbox"/> Insurance Programs <input type="checkbox"/> Finance and Purchasing Procedures <input type="checkbox"/> Plant Closing Policy <input type="checkbox"/> Employee Manuals | <ul style="list-style-type: none"> <input type="checkbox"/> Hazardous Materials Plan <input type="checkbox"/> Process Safety Assessment <input type="checkbox"/> Risk Management Plan <input type="checkbox"/> Capital Improvement Program (i.e. Does the document address emergency needs/issues in terms of future budget considerations? For example, you may need to buy new alarms, a back-up generator, etc.) <input type="checkbox"/> Mutual Aid Agreements |
|---|---|

Other documents.

Plan/Policy Reviewed

Plan/Policy Reviewed

Plan/Policy Reviewed

Plan/Policy Reviewed

Plan/Policy Reviewed

Plan/Policy Reviewed

The following plans/policies related to this emergency plan are enclosed/attached in this section:

Plan/Policy Included in this Section

Plan/Policy Included in this Section

Plan/Policy Included in this Section

Plan/Policy Included in this Section

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Plan/Policy Included in this Section

Plan/Policy Included in this Section

Plan/Policy Included in this Section

SAMPLE EMERGENCY PLAN (continued)

☐ Capabilities: Outside Groups

The following outside groups/sources of information were contacted to determine potential emergencies and about plans/available resources for emergency response (please check). Note additional groups/sources of information and contact information in the space provided.

- | | |
|---|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> Fire Department <input type="checkbox"/> Health Care/Medical Resources (mental health, long term care, ambulatory care, rural health clinic, hospital, rehabilitative, physician offices, home care, labs) <input type="checkbox"/> Community Emergency Management Office <input type="checkbox"/> Local Emergency Planning Committee (LEPC) <input type="checkbox"/> Mayor or Community Administrator's Office <input type="checkbox"/> Police Department <input type="checkbox"/> American Red Cross | <ul style="list-style-type: none"> <input type="checkbox"/> National Weather Service <input type="checkbox"/> Public Works Department/Utilities <input type="checkbox"/> Planning Commission <input type="checkbox"/> Telephone Companies <input type="checkbox"/> Electric Utilities <input type="checkbox"/> Neighboring Businesses <input type="checkbox"/> Transportation <input type="checkbox"/> Public Health <input type="checkbox"/> Public Schools, Colleges, and Universities <input type="checkbox"/> Local or Regional FBI Office <input type="checkbox"/> Citizen Corps/Medical Reserve Corps <input type="checkbox"/> Media/Communications (print, radio, TV) |
|---|--|

Other outside groups/sources of information contacted:

Outside Group	Outside Group
Outside Group	Outside Group

Contact information: Note groups/individuals who will also participate on the planning team.

Name	Group/Source of Information
Contact Information (Phone Number, Other)	
Name	Group/Source of Information
Contact Information (Phone Number, Other)	
Name	Group/Source of Information
Contact Information (Phone Number, Other)	

SAMPLE EMERGENCY PLAN (continued)

Capabilities: Outside Groups (continued)

Name	Group/Source of Information
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Contact Information (Phone Number, Other)

Name	Group/Source of Information
------	-----------------------------

Contact Information (Phone Number, Other)

Name	Group/Source of Information
------	-----------------------------

Contact Information (Phone Number, Other)

Name	Group/Source of Information
------	-----------------------------

Contact Information (Phone Number, Other)

Name	Group/Source of Information
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Contact Information (Phone Number, Other)

Name	Group/Source of Information
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Contact Information (Phone Number, Other)

Name	Group/Source of Information
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Contact Information (Phone Number, Other)

Name	Group/Source of Information
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Contact Information (Phone Number, Other)

SAMPLE EMERGENCY PLAN (continued)

Capabilities: Codes and Regulations

The following Federal, State, and local regulations apply to our emergency planning effort were reviewed (please check).

- | | |
|--|--|
| <ul style="list-style-type: none"> <input type="checkbox"/> Occupational Safety and Health Regulations (OSHA, other) <input type="checkbox"/> Environmental Regulations <input type="checkbox"/> Fire Codes | <ul style="list-style-type: none"> <input type="checkbox"/> Seismic Safety Codes <input type="checkbox"/> Transportation Regulations <input type="checkbox"/> Zoning Regulations <input type="checkbox"/> Corporate Policies |
|--|--|

Other codes and regulations:

Code/Regulation	Code/Regulation
Code/Regulation	Code/Regulation

The following plans/policies related to this emergency plan are enclosed/attached in this section:

Plan/Policy Included in this Section	Plan/Policy Included in this Section
Plan/Policy Included in this Section	Plan/Policy Included in this Section
Plan/Policy Included in this Section	Plan/Policy Included in this Section
Plan/Policy Included in this Section	Plan/Policy Included in this Section
Plan/Policy Included in this Section	Plan/Policy Included in this Section

SAMPLE EMERGENCY PLAN (continued)

☐ Capabilities: Critical Products, Services, and Operations

The following critical products, services, and operations must be considered to assess the impact of potential emergencies and determine the need for backup systems (please check).

- ☐ Company products and services and the facilities and equipment needed to produce them.

Products/services and facilities/equipment	Products/services and facilities/equipment
Products/services and facilities/equipment	Products/services and facilities/equipment
Products/services and facilities/equipment	Products/services and facilities/equipment
Products/services and facilities/equipment	Products/services and facilities/equipment

- ☐ Products and services provided by suppliers, especially sole source vendors.

Products/services by suppliers	Products/services by suppliers
Products/services by suppliers	Products/services by suppliers
Products/services by suppliers	Products/services by suppliers
Products/services by suppliers	Products/services by suppliers

- ☐ Lifeline services such as electrical power, water, sewer, gas, telecommunications and transportation.

Lifeline services	Lifeline services
Lifeline services	Lifeline services
Lifeline services	Lifeline services
Lifeline services	Lifeline services

SAMPLE EMERGENCY PLAN (continued)

Capabilities: Critical Products, Services, and Operations (continued)

- Operations, equipment, and personnel vital to the continued functioning of the facility.

Operations, equipment, and personnel

Operations, equipment, and personnel

Operations, equipment, and personnel

Operations, equipment, and personnel

Operations, equipment, and personnel

Operations, equipment, and personnel

Operations, equipment, and personnel

Operations, equipment, and personnel

- From where will response operations be managed in the case of an emergency?

Location/Related Information

Information pertaining to the following critical products, services, and operations are enclosed/attached in this section:

SAMPLE EMERGENCY PLAN (continued)

Capabilities: Internal Resources and Capabilities

The following internal resources and capabilities may be needed in an emergency (please check).

- Personnel:** Fire brigade, hazardous materials response team, emergency medical services, security, emergency management and/or response team, evacuation team, public information officer
- Equipment:** Fire protection and suppression equipment, first aid supplies, emergency supplies, communications equipment, warning systems, emergency power equipment, decontamination equipment
- Facilities:** Emergency operating center, media briefing area, shelter areas, first-aid stations, sanitation facilities
- Organizational capabilities:** Training, evacuation plan, employee support system, ADA/special needs issues
- Backup systems:** Arrangements with other facilities to provide for:

– Payroll	– Shipping and receiving
– Communications	– Information systems support
– Production	– Emergency power
– Customer services	– Recovery support

Other internal resources and capabilities:

Information pertaining to the following internal resources and capabilities are enclosed/attached in this section:

SAMPLE EMERGENCY PLAN (continued)

Capabilities: External Resources

The following external resources may be needed in an emergency (please check). Note additional resources and contact information in the space provided.

- | | |
|---|---|
| <ul style="list-style-type: none"> <input type="checkbox"/> Local Emergency Management Office <input type="checkbox"/> Fire Department <input type="checkbox"/> Hazardous Materials Response Organization <input type="checkbox"/> Emergency Medical Services <input type="checkbox"/> Hospitals | <ul style="list-style-type: none"> <input type="checkbox"/> Local and State Police <input type="checkbox"/> Community Service Organizations <input type="checkbox"/> Utilities <input type="checkbox"/> Contractors <input type="checkbox"/> Suppliers of Emergency Equipment <input type="checkbox"/> Insurance Carriers |
|---|---|

Other external resources contacted:

External Resource	External Resource
External Resource	External Resource

Contact information: Note groups/individuals who will also participate on the planning team.

Name	External Resource
Contact Information (Phone Number, Other)	
Name	External Resource
Contact Information (Phone Number, Other)	
Name	External Resource
Contact Information (Phone Number, Other)	
Name	External Resource
Contact Information (Phone Number, Other)	
Name	External Resource
Contact Information (Phone Number, Other)	

SAMPLE EMERGENCY PLAN (continued)

□ Capabilities: External Resources (continued)

Name	External Resource
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Contact Information (Phone Number, Other)

Name	External Resource
------	-------------------

Contact Information (Phone Number, Other)

Name	External Resource
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Contact Information (Phone Number, Other)

Name	External Resource
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Contact Information (Phone Number, Other)

Name	External Resource
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Contact Information (Phone Number, Other)

Name	External Resource
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Contact Information (Phone Number, Other)

Name	External Resource
------	-------------------

Contact Information (Phone Number, Other)

Name	External Resource
------	-------------------

Contact Information (Phone Number, Other)

SAMPLE EMERGENCY PLAN (continued)

□ Capabilities: Insurance Review

Results of the meeting with the insurance carrier are enclosed/attached.

Open for Business Worksheet

Insurance Coverage Discussion Form

Use this form to discuss your insurance coverage with your agent. Having adequate coverage now will help you recover more rapidly from a catastrophe.

Insurance Agent: _____

Address: _____

Phone: _____ Fax: _____ Email: _____

INSURANCE POLICY INFORMATION

Type of Insurance	Policy No.	Deductibles	Policy Limits	Coverage (General Description)

Do you need Flood Insurance? Yes ___ No ___

Do you need Earthquake Insurance? Yes ___ No ___

Do you need Business Income and Extra Expense Insurance? Yes ___ No ___

Other disaster-related insurance questions:

Conduct a Vulnerability Analysis

? *What is the potential level of impact of an emergency that may impact your business?*

The next step in emergency planning is to assess the vulnerability of your facility – the probability and potential impact of each emergency. The Vulnerability Analysis Chart in the FEMA Emergency Management Guide is an example of a tool that can be used to guide this process, which entails assigning probabilities, estimating impact and assessing resources, and using a numerical system.



Review the descriptions for areas to analyze below (identified by category heading) and on the following pages. See a “snapshot” of the headings for the Vulnerability Analysis Chart below. An example of the chart is provided at the end of this section. Remember, the lower the score, the better.

TYPE OF EMERGENCY	Probability	Human Impact	Property Impact	Business Impact	Internal Resources	External Resources	Total
	High 5 ← 1 Low	High Impact	5 ← 1	Low Impact	Weak Resources 5 ← 1	Strong Resources	

List Potential Emergencies

In the first column of the chart, list all emergencies that could affect your facility, including those identified by your local emergency management office. Consider both:

- Emergencies that could occur **within your facility**.
- Emergencies that could occur **in your community**.

As you list all emergencies, make sure to consider all factors that relate to emergencies. The chart on the following page presents an at-a-glance overview of considerations.

Conduct a Vulnerability Analysis (continued)

Factors Related to Emergencies	Examples/Considerations
Historical – What types of emergencies have occurred in the community, at this facility and at other facilities in the area?	<input type="checkbox"/> Fires <input type="checkbox"/> Severe weather <input type="checkbox"/> Hazardous material spills <input type="checkbox"/> Transportation accidents <input type="checkbox"/> Earthquakes <input type="checkbox"/> Hurricanes <input type="checkbox"/> Tornadoes <input type="checkbox"/> Terrorism <input type="checkbox"/> Utility outages
Geographic – What can happen as a result of the facility's location?	<input type="checkbox"/> Proximity to flood plains, seismic faults and dams <input type="checkbox"/> Proximity to companies that produce, store, use or transport hazardous materials <input type="checkbox"/> Proximity to major transportation routes and airports <input type="checkbox"/> Proximity to nuclear power plants
Technological – What could result from a process or system failure?	<input type="checkbox"/> Fire, explosion, hazardous materials incident <input type="checkbox"/> Safety system failure <input type="checkbox"/> Telecommunications failure <input type="checkbox"/> Computer system failure <input type="checkbox"/> Power failure <input type="checkbox"/> Heating/cooling system failure <input type="checkbox"/> Emergency notification system failure
Human Error – What emergencies can be caused by employee error? Are employees trained to work safely? Do they know what to do in an emergency?	<input type="checkbox"/> Poor training <input type="checkbox"/> Poor maintenance <input type="checkbox"/> Carelessness <input type="checkbox"/> Misconduct <input type="checkbox"/> Substance abuse <input type="checkbox"/> Fatigue NOTE: Human error is the single largest cause of workplace emergencies.
Physical – What types of emergencies could result from the design or construction of the facility? Does the physical facility enhance safety?	<input type="checkbox"/> The physical construction of the facility <input type="checkbox"/> Hazardous processes or by-products <input type="checkbox"/> Facilities for storing combustibles <input type="checkbox"/> Layout of equipment <input type="checkbox"/> Lighting <input type="checkbox"/> Evacuation routes and exits <input type="checkbox"/> Proximity of shelter areas
Regulatory – What emergencies or hazards are you regulated to deal with?	<input type="checkbox"/> Chemical release

Analyze each potential emergency from beginning to end. Consider what could happen as a result of:

- | | | |
|--|---|--|
| <input type="checkbox"/> Prohibited access to facility | <input type="checkbox"/> Water damage | <input type="checkbox"/> Explosion |
| <input type="checkbox"/> Loss of electric power | <input type="checkbox"/> Smoke damage | <input type="checkbox"/> Building collapse |
| <input type="checkbox"/> Communication lines down | <input type="checkbox"/> Structural damage | <input type="checkbox"/> Trapped persons |
| <input type="checkbox"/> Ruptured gas mains | <input type="checkbox"/> Air or water contamination | <input type="checkbox"/> Chemical release |

Conduct a Vulnerability Analysis (continued)

TYPE OF EMERGENCY	Probability	Human Impact	Property Impact	Business Impact	Internal Resources	External Resources	Total
	High 5 ← 1 Low	High Impact	5 ← 1	Low Impact	Weak Resources	5 ← 1 Strong Resources	

Estimate Probability

In the Probability column, rate the likelihood of each emergency’s occurrence.

- Note that this is a subjective consideration, but useful.
- Use a simple scale of 1 to 5 with 1 as the lowest probability and 5 as the highest.

Assess the Potential Human Impact

Analyze the potential human impact of each emergency in relation to being exposed to death or injury.

- For example, consider:
 - Will employees face a brief exposure to the emergency from which they will recover or will they experience a permanent disability or death?
 - Will 1 person become ill or is there a potential for 100 or more deaths?
- Assign a rating in the Human Impact column of the Vulnerability Analysis Chart.
- Use a 1 to 5 scale with 1 as the lowest impact and 5 as the highest.

Assess the Potential Property Impact

The extent of property damage impacts a business. Consider the potential property for losses and damages.

- For example, consider:
 - Does the emergency affect the entire building or only a part of the building?
 - Has significant production equipment or ancillary equipment been impacted?
 - Will the building or equipment need to be repaired or replaced completely?
- Assign a rating in the Property Impact column.
- Use a scale with 1 being the lowest impact and 5 being the highest.

Conduct a Vulnerability Analysis (continued)

TYPE OF EMERGENCY	Probability	Human Impact	Property Impact	Business Impact	Internal Resources	External Resources	Total
	High 5 ← 1 Low	High Impact	5 ← 1	Low Impact	Weak Resources	5 ← 1	Strong Resources

Assess the Potential Business Impact

Consider the potential loss of market share.

- For example, assess the impact of:
 - Business interruption.
 - Employees unable to report to work.
 - Customers unable to reach facility.
 - Company in violation of contractual agreements.
 - Imposition of fines and penalties or legal costs.
 - Interruption of critical supplies.
 - Interruption of product distribution.
- Assign a rating in the Business Impact column.
- Use a scale in which 1 represents the lowest impact and 5 is the highest.

Assess Internal and External Resources

Next, assess your resources and ability to respond. To help you do this, use the information generated from the capability analysis. (The capability analysis provided you with a profile of your ability to respond to each emergency.)

- For example, consider the answers the capability analysis answered these questions:
 - Do we have the needed resources and capabilities to respond?
 - Will external resources be able to respond to us for this emergency as quickly as we may need them, or will they have other priority areas to serve?
- Assign a rating to your Internal Resources and External Resources.
- The lower the score the better.

each potential emergency from beginning to end and each resource that would be needed to respond. For each emergency ask these questions:

Conduct a Vulnerability Analysis (continued)

TYPE OF EMERGENCY	Probability	Human Impact	Property Impact	Business Impact	Internal Resources	External Resources	Total
	High 5 ← 1 Low	High Impact 5 ← 1 Low Impact			Weak Resources 5 ← 1 Strong Resources		

Add the Columns

Total the scores for each emergency.

- The higher the score, the higher the vulnerability and need for attention.
- The lower the score, the lower the priority.
- While this is a subjective rating, comparisons will help determine planning and resource priorities.

? *How do risk assessment/analysis tools used in your business compare with this Vulnerability Analysis Chart and its categories?*

Vulnerability Analysis Chart

TYPE OF EMERGENCY	Probability	Human Impact	Property Impact	Business Impact	Internal Resources	External Resources	Total
	High Low 5 ↔ 1	High Impact	5 ↔ 1	Low Impact	Weak Resources	5 ↔ 1 Strong Resources	

The lower the score the better

Activity: Vulnerability Analysis

Directions: Use data from the One Is Not Enough Cookie Company profile to work examples of emergencies on the Vulnerability Analysis Chart on the following page.



1. In a large group, review 2 examples of emergencies and ratings on the following page. Your facilitator will guide you through the process. To ensure everyone is using the same data and assumptions for this activity, use the One Is Not Enough Cookie Company profile as your basis for determining ratings in examples 1-4.
2. In pairs, complete the probable ratings for the 3rd emergency that is listed in the chart.
3. Then, work in pairs to identify an additional “potential” emergency that may occur at the Cookie Company. Document the probable ratings related to the emergency.
4. Be prepared to share the emergencies and ratings you identified in a large group.

Company Profile: One Is Not Enough Cookie Company

Industry: Food/Manufacturing

One Is Not Enough Cookie Company At-A-Glance:

- A privately owned business that makes sugar wafer cookies; has been operating over 50 years.
- There are 200 employees – 125 floor level employees, 50 employees in the office, and 25 on and off-site sales/marketing staff.
- Manufacturing site is one floor (single story). Offices are housed on two floors in the front of the building. There is a small retail shop in the front of the building where the public can purchase product directly from the factory.
- The plant is located in a suburb (25,000 people) of Anytown, USA (population 1,000,000) with access to local police, fire, Local Emergency Planning Committee (LEPC), etc.
- The organization is relatively “flat” with many employees having multiple work responsibilities.

About Operations and the Facility:

- 2 shifts are run from 6:00 - 2:30 AM and 2:30 -10:00 PM. 3rd shift is used for cleanup or overtime if there is downtime during a shift to make the production schedule. No shifts are run on weekends or holidays unless necessary.
- The facility is comprised mostly of non-combustible construction (tile walls, floors, stainless steel equipment for cleanability). There are combustible package contents.
- The facility is brick with front offices made out of tilt up concrete. The roof is flat. Manufacturing facilities and offices are connected by a one-story “breezeway.”

Activity: Vulnerability Analysis (continued)

About Operations and the Facility: (continued)

- In this business, operations such as the following are run:
 - Receiving of raw materials (like flavorings that are flammable liquids)
 - Mixing and processing
 - Forklifts and battery charging area (potential acid battery spill)
 - Packaging
 - Ovens for baking (use of natural gas)
 - Warehouse/shipping
 - Maintenance support/activities (cutting/welding spark producing)
 - Cleaning chemicals
- Nitrogen, ammonia, acids, and cleaning chemicals are used in work processes.
- The building has a materials receiving area where materials, tanks, and goods are stored, including:
 - Packaging materials, such as cardboard boxes and foil wrapping paper.
 - Flavor additives and processing raw materials.
 - Two bulk storage tanks that hold flour and sugar.
 - Finished goods that are held in this area prior to shipment.

About the Community:

- The building sits on the outside loop of an industrial park, with businesses on 3 sides of the building (N, W, and E). The south side (rear of building) backs up to a wooded area with high priced homes located just past the woods. (The proximity of the homes are about ¼ mile of wooded area.) There is a small stream running in front of the woods separating the industrial park from the wooded area.
- The neighbor to the west, Acme Adhesive, manufactures glue and adhesive products 24/7. There is a rail siding that separates the two properties. Acme receives raw materials – primarily railcars of chemicals for storage (above and underground tanks) and use in their products. Their manufacturing process is housed in a 3-story metal enclosed building, and uses pressure vessels (reactors) and mixing tanks.
- The neighbor to the east, Westside Trailer sales, builds, assembles, and repairs semi-truck trailers. Approximately 80 employees work 2 shifts work in a 1-story brick building. Component parts (primarily steel and fiberglass side panels) arrive by truck. Riveters and welding equipment are used to assemble and repair. The sales/repair function results in people from all over the city/county coming into the industrial park to visit this site.
- The neighbor across the street is a warehouse, primarily shipping products all over North America. They are housed in a one story metal clad building with 50 dock doors (25 on each side of the building). Approximately 125 employees work 24/7 and are spread evenly across all 3 shifts.

Activity: Vulnerability Analysis (continued)

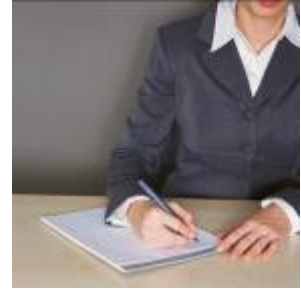
TYPE OF EMERGENCY	Probability	Human Impact	Property Impact	Business Impact	Internal Resources	External Resources	Total
	High 5 ←→ Low 1	High Impact	5 ←→ 1	Low Impact	Weak Resources 5 ←→ Strong Resources 1		
1. EXAMPLE: Fire in finished product warehouse.	2	3	4	4	3	1	17
2. EXAMPLE: Neighboring company has chemical leak while off-loading a tank truck into outside storage tank. Chemical affecting outside atmosphere; employees can't enter/leave Cookie Co. building.	2	4	1	4	1	3	15
3. Flooding. Small creek in rear overflows on property; water covering East parking lot at rear of site and blocking access to flour silo (outside, rear of building.). Mucky water pouring into side exit in processing area.							
4. <i>Insert potential emergency and ratings.</i>							

The lower the score, the better

Activity: Initiating a Vulnerability Analysis for Your Business

Directions: Identify potential emergencies that may impact your own business. Assign ratings to the emergency in the appropriate columns.

1. Using the Vulnerability Analysis Chart on the following page, begin the process of listing and rating potential emergencies that may occur at your business.
2. Be prepared to share the emergencies and probable ratings you identified in a large group.



Notes about emergencies and ratings:

Activity: Initiating a Vulnerability Analysis for Your Business (continued)

TYPE OF EMERGENCY	Probability	Human Impact	Property Impact	Business Impact	Internal Resources	External Resources	Total
	High 5 ←→ Low 1	High Impact	5 ←→ 1	Low Impact	Weak Resources 5 ←→ Strong Resources 1		
<i>Insert potential emergency at your business</i>							
<i>Insert potential emergency at your business</i>							
<i>Insert potential emergency at your business</i>							
<i>Insert potential emergency at your business</i>							
<i>Insert potential emergency at your business</i>							
<i>Insert potential emergency at your business</i>							
<i>Insert potential emergency at your business</i>							

The lower the score, the better

SAMPLE EMERGENCY PLAN

□ **Types of Emergencies/Vulnerability Analysis**

Attach/enclose the results of the vulnerability analysis in this section. Include emergencies that may impact your business and an assessment of the vulnerability of your facility – the probability and potential impact of each emergency.

Case Study: Emergency Planning

Directions: Complete this part of the case study that pertains to Step 2 – Analyze Capabilities, Risks, and Vulnerabilities.

1. Break into small work groups with guidance from your facilitator.
2. In your small groups, discuss and answer the case study questions. Take notes in the space provided.
3. Be prepared to share your responses with the large group.



Additional Information – Company Profile: One Is Not Enough Cookie Company

- The company has no back-up gas, sewer, water, or power capabilities.
- The facility utilizes a paging system and 2-way radios in addition to land lines for communication. There are 3 pay phones in the employee break room. Some managers have company issued cell phones.
- Most employees provide their own transportation to work – some drive on their own, and some participate in car pools. About 20% of employees use the local bus line located 3 blocks from the entrance of the industrial park.
- The Plant Manager, who also has sales and marketing staff as direct reports, and the Finance Manager have been added to the team.

Consultation: One Is Not Enough Cookie Company’s Emergency Planning Effort

The Cookie Company’s emergency planning team is working on Step 2: Analyze Capabilities, Risks, and Vulnerabilities. As a group, act as a consultant to review and critique their work. Assist them in identifying steps to ensure an effective planning process.

1. In starting to gather information for their capabilities and vulnerabilities analysis, the planning team noted that the Cookie Company does not have a back-up generator to support critical functions on the site if there is a loss of power. If there is a temporary interruption of power, there are various battery back-up systems (computer UPS, fire alarm/protection systems, emergency lighting, security system, etc.) to provide 4-6 hours of relief. *The planning team is feeling like the existing back-up systems are sufficient and are hesitant to allocate resources to a generator.*
 - A. In which section of the emergency plan did this issue surface?
 - B. As a consultant to the planning team, use the chart on the next page to document and discuss pros and cons of this circumstance based on various company functions: sales/marketing, manufacturing/maintenance, office support staff.

Case Study: Emergency Planning (continued)

Consultation: One Is Not Enough Cookie Company's Emergency Planning Effort (continued)

Pros	Cons
Sales/Marketing	
Manufacturing/Maintenance	
Office/Support Staff	

- C. Should the planning team recommend an improvement to this situation? If so, provide recommendations on what should be done. Note your comments in the space below.

Comments:

Case Study: Emergency Planning (continued)

2. The planning team meets with you briefly for a status report after just starting to work on their capabilities and vulnerabilities analysis. They are feeling a bit overwhelmed with the amount of work involved in this step of the process. For example, one of the questions they pose is whether or not they need to include “external” (national or global) emergencies in their analysis to save time.

What recommendations can you make to the team to ease their anxiety and manage the tasks in this step?

Priority Actions for Your Business

Directions: How can you apply what you have learned in this module to emergency planning efforts back at your business?

1. Identify 2 actions you will take when you return to your business. You can select from the actions listed below or come up with your own.
2. Identify potential barriers you might encounter in taking these actions.
3. List ideas for overcoming the barriers you have identified.



Possible Actions

- 1. Share the information you learned in this module about analyzing capabilities, risks, and vulnerabilities with a supervisor, the head of your company, and/or co-workers who need to be informed.
- 2. Volunteer your services to the emergency planning team based on your knowledge, skills, and expertise in specific areas of the capabilities, risks, or vulnerabilities analysis.
- 3. Once your team has identified potential emergencies that may impact your business, learn as much as you can about each emergency to increase your level of preparedness.

Action Plan

Action	Potential Barrier(s)	Overcoming Barrier(s)
1.		
2.		

