



OSMEP



THE JTI FOUNDATION

# Training of Trainers

Certificate Program on

Business Continuity Planning (BCP) for SMEs

## 3.3 Business Continuity Strategies

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Bangkok, Thailand



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TOKIOMARINE

### **Module 1: BCP Framework**

Part 1.1: Importance of BCP

Part 1.2: BCP Framework

### **Module 2: Risk Identification**

Part 2.1: Prioritized Activities and Recovery Time Objective

Part 2.2: Necessary Resources for Recovery

Part 2.3: Business Risk Assessment

### **Module 3: Business Resumption Strategies**

Part 3.1: Pre-disaster preparedness and mitigation for SMEs

Part 3.2: Immediate Survival from Disruption

Part 3.3: Business Continuity Strategies

### **Module 4: PDCA (Plan-Do-Check-Act) Cycle**

Part 4.1: PDCA Exercise

Part 4.2: BCP Peer Review (Management Review)

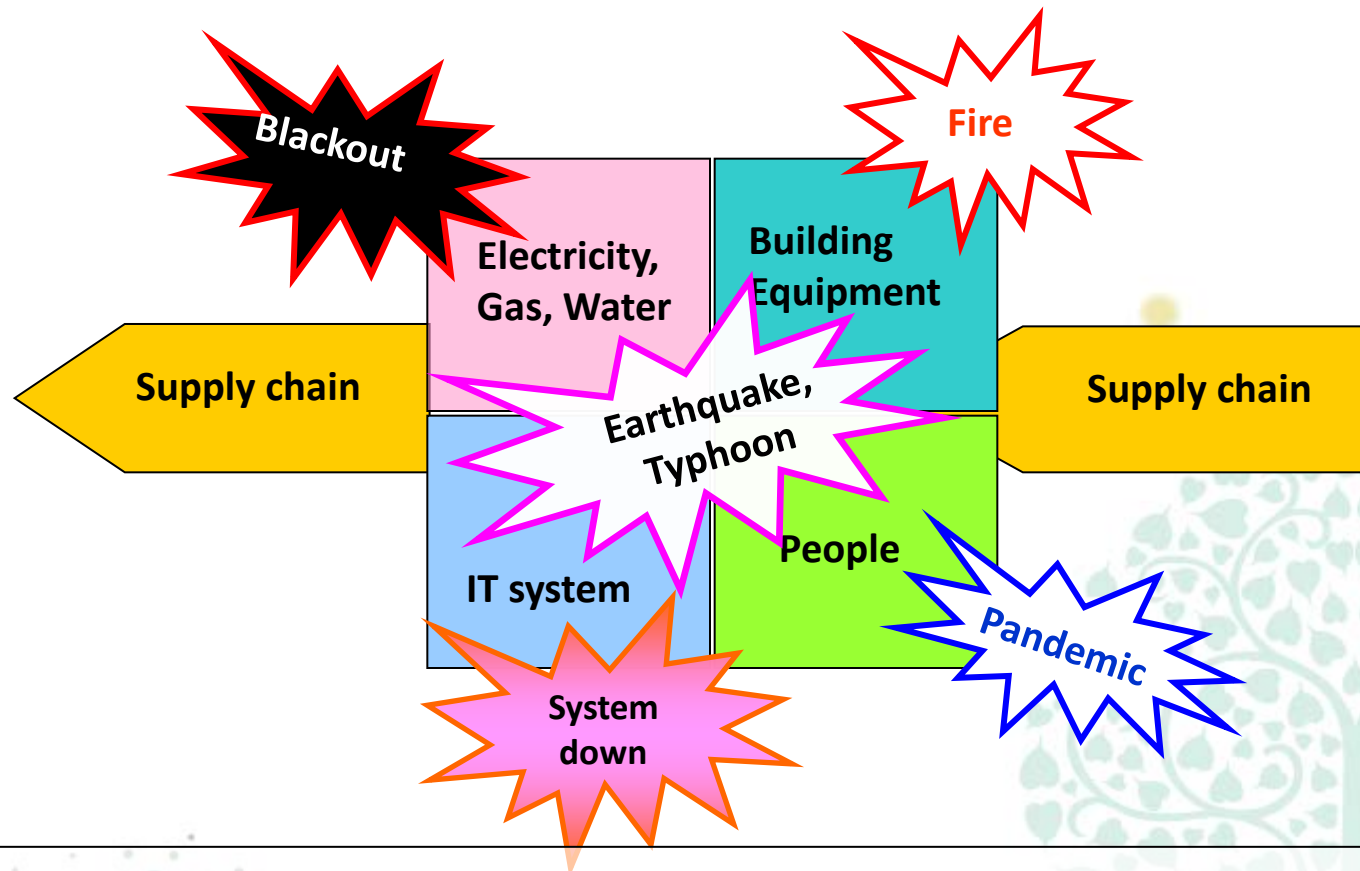
# Step 7 : BC Strategies to Early Resumption are needed?

--Key questions to ask yourself--

- **What** does your company prepare **For**?  
(disaster scenario)
- **Where** does your company recovery?  
(place to recovery)
  - And **How**?  
(BC Strategies)



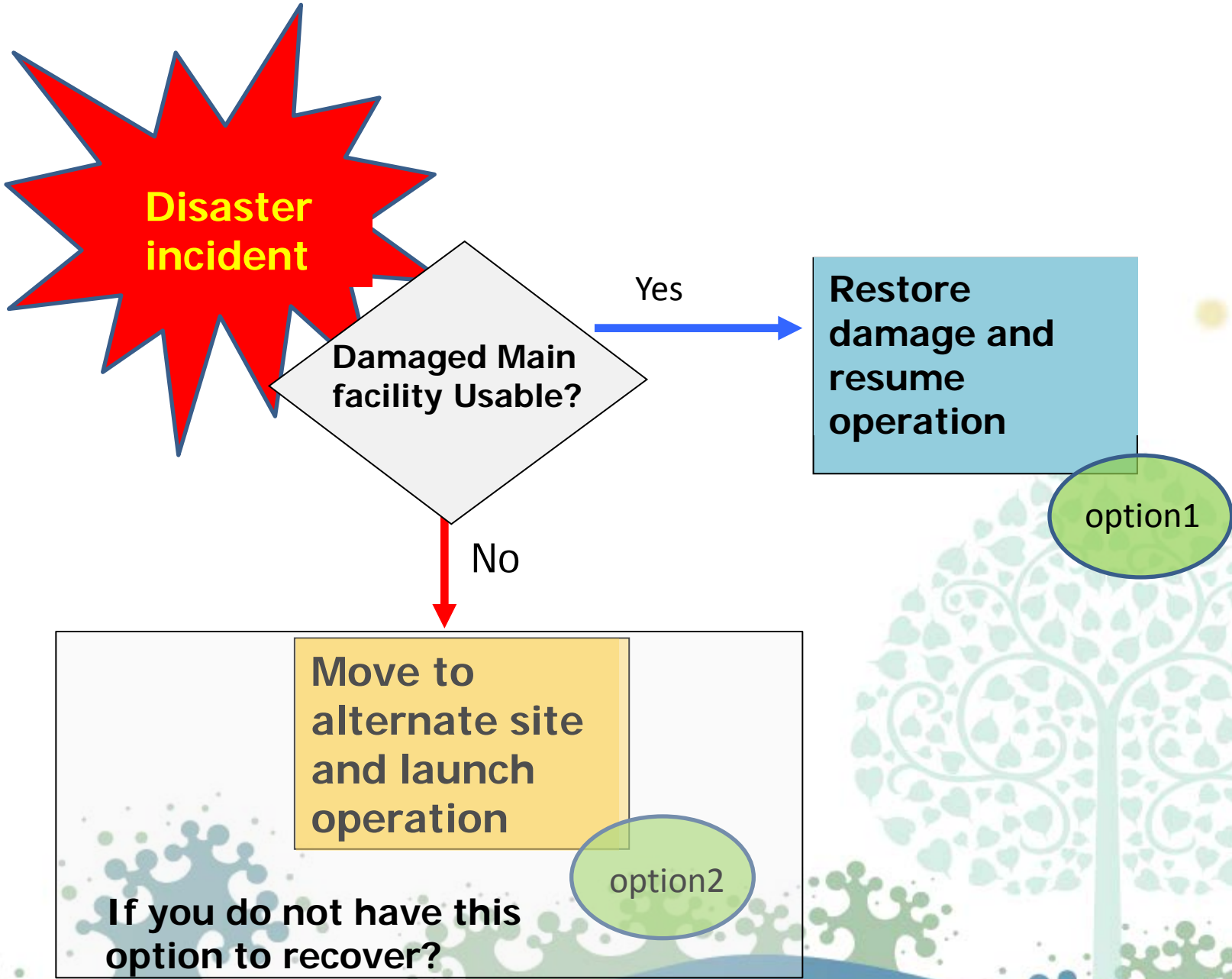
# Key supporting resources



**Which resources are necessary for Priority Business?**

**How vulnerable are they to such risks?**

**Protect them to secure availability for Priority Business resumption**



# SME's Strategies planning

- Fit to your body(company)size
- Clarify your assumptions and limiting conditions
  - Can afford alternative site recovery?
  - Wait for essential services recovery?
  - Such as electricity, water, communication, public transportation etc.
- Determine where to recover
- Consider short term and mid-long term measures
- Vitalize your staffs –Build team work
- Secure cash flow
- Ask for outside assistance (from business partners)

# Continuity & Recovery Strategies

Plan and Implement **WHERE** and **HOW** you should resume Priority Business

- **Option 1:** Resume at the **damaged/affected site.**
- **Option 2:** Resume **at an alternate site**  
(either in-house or external facility)
- **Option 3:** Resume by **alternate methods**  
(or workaround methods)



You can combine any of above options for your BC Strategies.  
It is preferable you would prepare both Option 1 & 2.

# Option 1: Resume Priority Business at the damaged/affected site

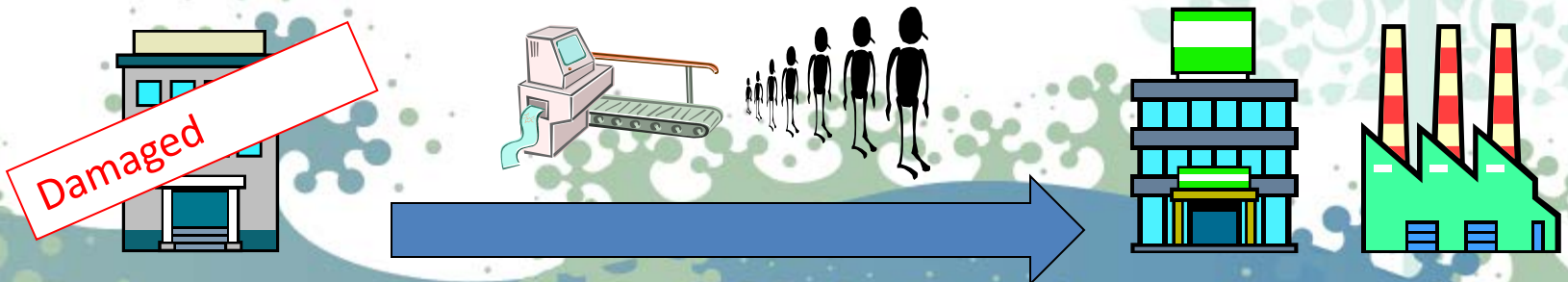
- Restore damaged resources
  - Buildings and equipment/machinery
- Estimate how soon essential services will be able to use
  - Electricity, gas, and water
  - Communication network





# Option 2: Resume Priority Business at an alternate site

- The alternate site should be far enough away to be undamaged by the same disaster
  - All necessary resources, such as buildings, equipment, machinery, and essential services be available at this site
- Consider how to transport your workforce, materials, and parts to this location



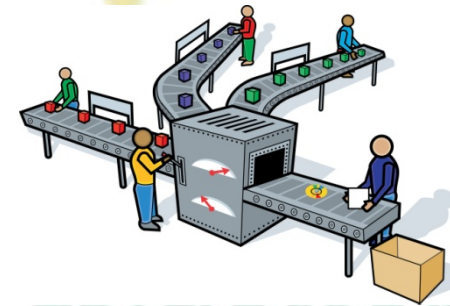
# Option 2: Resume Priority Business at an alternate site

- This option can be combined with both concepts 1 and 2 above
- For example...
  - Keep older equipment as reserve
  - Manual labor to replace disrupted IT system
- Identify if you need any assistance from external partners



# BCP key points to consider (by industry)

- Manufacturing
- ICT
- Logistics (Transport, warehouse)
- Construction
- Whole sale
- Service



# Key points : Manufacturing

Your company in long supply chain

- Review of suppliers and stock plans

Enhance capability to recover the critical assets

- expand staff's capability (inspection, repair)
- strengthen outside network for emergency response

Pre-disaster measures (prevention & mitigation)

- staffs, equipment etc.

Train employees for multi roles and expertise

Standardize equipment with reserve/ back-up equipment

Consider and prepare for alternate site recovery

Arrange alternate operation by outside partners

Prepare for emergency when social infrastructure disrupted



# Key points : ICT

Demanding short time recovery (ex. a few hours)

- ASP, IT support business

IT system disruption recovery measures

- duplicate system, data back-up

Switch to alternate system in not-affected site

Prepare for a disaster scenario when you cannot use the main building

If an alternate site recovery is not feasible to your company,

- utilize cloud services
- alternate process (ex;manual works)
- use home as alternate site

When staffs work At the customer's site,

- follow the customers Disaster Plans
- safety confirmation
- respond to the client emergency requests of additional staffs



# Key points : Logistics

Social mission to support social life and industries.

Need to respond to requests from local authorities for emergency

- disaster support agreement

Emergency response vs. Normal time business

- Prioritization and need to balancing the two
- Most appropriate resource allocation judgment

Recovery Time Objectives(RTO) vary by characteristics of goods

Safety confirmation of drivers and trucks - cargo damage survey

Secure fuel, means of communication,

Emergency communication with clients

Guidance to drivers at emergency

Support arrangements with companies in other territories



# Key points : Construction

- Response to two businesses
  - (1) Normal time projects in process
  - Emergency response to requests from local authorities
- Client maintenance services
  - Respond to the facilities of your clients
    - Damage survey and safety confirmation of buildings
    - Respond to requests to dispatch experts to the sites
- Prioritization of tasks at emergency
  - Appropriate allocation of limited resources
- Secure necessary equipment and other materials



# Key points : Wholesales

Wholesale as hub of supply chain

order management between producers and buyers

alternate purchase arrangement if supplies are stopped

delivery management

Emergency communication with partners in supply chain

Secure communication

IT System recovery – back up system or alternate method

Multi-layered logistic network





# Key points : Service

Wide variety of business

Common key resources = People

- Emergency response policy, procedures, safety confirmation

Secure alternate staffs and train specialists

Prior arrangement with clients for disasters

- Emergency response, BCP
- Back-up of operations
- securing clients' assets in custody
- alternate payment/settlement procedures at emergency
- secure support from business partners

Prepare for increasing tasks at disaster



# Case Study - Manufacturing

- Manufacturer of plastic parts
- Clients: for automobiles, light electric appliances, heavy electric equipment and computer/communication equipment.
- 30 employees











- priority business is plastic molding and manufactures plastic parts.
- The necessary resources:
  - molding machines and other equipment,
  - die and mold,
  - Materials
  - staffs (operators).

[Source:http://www.sangyorodo.metro.tokyo.jp/shoko/keiei/BCP/bcp/common/download/bcp\\_booklet\\_2011\\_complete.pdf](http://www.sangyorodo.metro.tokyo.jp/shoko/keiei/BCP/bcp/common/download/bcp_booklet_2011_complete.pdf) (in Japanese)

# Case Study - Manufacturing

- **loss scenario**
  - the **Northern Tokyo Bay Earthquake**
  - intensity up to the level 6
  - the main factory is severely damaged and not be operational.
  - finished goods and work in process are damaged.
  - Some of the key plastic molding machines may be damaged.  
Many employees could not come to work.

Form 4-2 Resource Damage Estimate Sheet

Risk		Northern Tokyo Bay Earthquake	Assumed recovery period						Need measures	
Assumed damage		E/Q Intensity Lv5 (+) hits the region. The company sustains damages to various resources which disrupts its operation.	Day	Day (shown by graph)						
Necessary resources		Damage		3 ds	1 wks.	2 wks.	1 mo	2 mos.	3 mos.	
Internal Resources	Building	Main factory – no damage to the structure, but walls crack ,ceiling fall, piping damaged	25							◎
	Equipment Machinery	no severe damage but machines moves and need adjustments	30							◎
	Inventory	finished products and materials fall from shelves	30							◎
	People	30% staffs can not come to work	2							
	IT System	IT servers fall	10							
	Fund (other )									
Essential Social Services	Electricity	disrupted for one day	1							
	Gas									
	Water	no disruption								
	Phone Communication	disrupted for one day	1							
	Traffic / Roads	no disruption								
	(other )									
Supply	Direct suppliers	material supplies may stop for 2-4 weeks	14-30							○
	2nd, 3rd Suppliers	material supplies may stop for 2-4 weeks	14-30							○
	Customer									
	(other )	repair companies of molding machines may delay to respond	10							○

**Recovery time objective : 2 weeks**

# Case Study - Manufacturing

## BCP Strategies

### •Post Disaster – Damage investigation

- Damage investigation plan – priority area of equipment to check
- Check if repairable by staff or
- outside repairer should be called

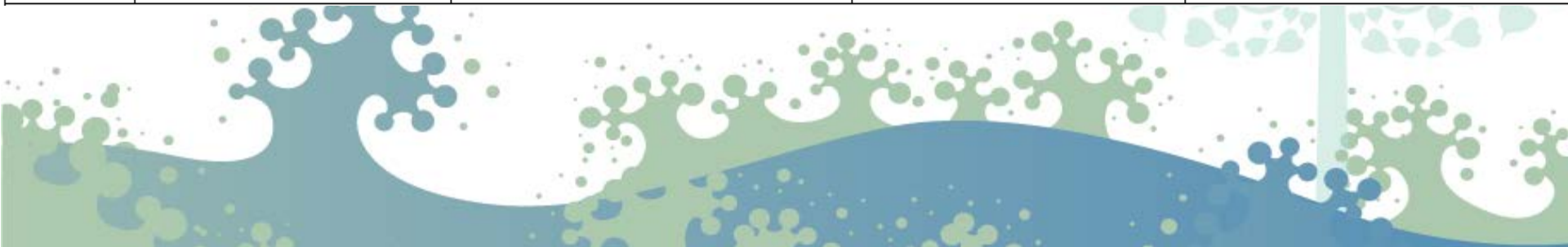
### •Recovery at damaged site (option 1)

- Recovery timeline plan – specifying staffs in charge (alternate )
- Staff's capability list –bottleneck of specialist staffs
- Training program for back-up staffs

### •Recovery at alternative site (option 2)

- Setting up production at alternate site
- Transport die and mold, tools, materials
- Collection of information for transport

Priority	Strategy Outline	Activities to Resume	Key Resources (bottleneck resources)	Necessary External Partners
Strategy 1: Resume at the damaged/affected site				
1	Resume Prioritized Activity at the damaged Main Factory if repair within RTO deadline is considered possible	<ol style="list-style-type: none"> <li>1. Damage survey and repair time estimate</li> <li>2. Building repair</li> <li>3. Damaged machines repair (order to the outside companies if necessary)</li> <li>4. Secure materials</li> <li>5. Secure utilities</li> <li>6. Secure enough operations and other staffs</li> </ol>	<ol style="list-style-type: none"> <li>1. Main factory building</li> <li>2. Molding machines</li> <li>3. Mold and die</li> <li>4. Materials</li> <li>5. Operators</li> <li>6. Electricity</li> </ol>	<ol style="list-style-type: none"> <li>1. Molding machine repairer</li> <li>2. Material suppliers</li> <li>3. Electricity company</li> </ol>



Priority	Strategy Outline	Activities to Resume	Key Resources (bottleneck resources)	Necessary External Partners
Strategy 2: Resume at an alternate site				
2	Resume Prioritized Activity at the alternate site if the damaged Main Factory is not back to operation within RTO deadline	<ol style="list-style-type: none"> <li>1. Secure all necessary resources (including utilities) at the alternate site</li> <li>2. Prepare the building and utilities ready</li> <li>3. Prepare alternate machines or transport machines to the alternate site.</li> </ol>	<ol style="list-style-type: none"> <li>1. Alternate site building</li> <li>2. Molding machines</li> <li>3. Mold and die</li> <li>4. Materials</li> <li>5. Operators</li> <li>6. Electricity</li> <li>7. Trucks or other transporting means</li> </ol>	<ol style="list-style-type: none"> <li>1. Transporting company</li> <li>2. Molding machine company</li> <li>4. Material suppliers</li> <li>5. Electricity company</li> </ol>
		<ol style="list-style-type: none"> <li>4. Transport mold and die, other tools, and materials</li> <li>5. Secure transporting means,</li> <li>6. Accommodation for staffs</li> </ol>		



Form 7-2 BC Strategy Planning Sheet

[Strategy No.1:Resumption at the damaged site]

Prioritized Activity		Strategy Outline				
Automobile and electric app. parts		Strategy No1 = resume at the damaged Main Factory				
Categories	Resources	What's to be done / needed	Details of Measures	To be done by when		Dept. in charge
				Short term	Mid- Long Term	
Internal Resources	Building	Improve earthquake resistant levels	Reinforcement of building	X	X	Facility Dept.
	Equipment / Machinery	Minimize possible damage and down time	1. Fix the machines to prevent from fall over 2. Make pre-disaster agreement to secure outside repair services	X	X (outside agreement)	Production Dept.
	Stock	Minimize damage from fall-over	1. Change storage shelves to prevent fall-over 2. Emergency stocks	X		Production Dept.
	People	Identify key skilled worker and back-up staffs	1. Make a list of staff capability list 2. Assign back-up staff 3. Make cross training plans	X (1,2)	X(3)	Production and HR Dept
	IT System	Minimize possible damage and arrange back-up data	1. Install restraint to prevent fall-over	X		IT Dept.



Internal Resources	IT System	Minimize possible damage and arrange back-up data and system	1. Install restraint to prevent fall-over	X		IT Dept.
	(others )					
	Electricity/Gas/Water	Check how soon services will be back		X		Facility Dept.
Essential Social Services	Phone/Communication	Check how soon services will be back		X		Facility Dept.
	Traffic / Roads	Check possible damage or congestions at emergency	Identify the alternate routes	X		Logistics Dept.
	(others )					
Outside Partners	Suppliers	Secure material supplies	Make agreement with supplies		X	Purchase Dept.
	Customer					
	others	Secure machine repair services	Secure quick dispatch form repairers	X		Production Dept.

**【Strategy No.2:Resumption at the alternate site】**

Prioritized Activity		Strategy Outline				
Automobile and electric app. parts		Strategy No.2 = resume at the alternate site				
Categories	Resources	What's to be done / needed	Details of Measures	To be done by when		Department in charge
				Short term	Mid-Long Term	
Internal Resources	Building	<ol style="list-style-type: none"> <li>1. Secure alternate building</li> <li>2. Install necessary utilities and other services</li> </ol>	<ol style="list-style-type: none"> <li>1. Prepare the alternate site for production</li> <li>2. Prepare all necessary utilities</li> </ol>	X		Facility Dept.
	Equipment / Machinery	<ol style="list-style-type: none"> <li>1. Install key machines or</li> <li>2. Make transportation plan of them</li> <li>3. Secure mold and die, other tools</li> </ol>	<ol style="list-style-type: none"> <li>1. Make a production re-start plan at the alternate site</li> <li>2. Make all necessary resources to be transported from the damage site</li> </ol>	X		Production Dept.
	Stock	Secure necessary stock of materials	1. Make an agreement with material suppliers to deliver at the alternate site.	X		Purchase Dept.
	People	<ol style="list-style-type: none"> <li>1. Secure necessary number of staffs by expertise</li> <li>2. Make staffs transport</li> </ol>	<ol style="list-style-type: none"> <li>1. Make a list of staff with capabilities</li> <li>2. Assign back-up staffs for necessary skills</li> </ol>			

		plan.	3. Make cross-training plans to educate staffs to be able to take over other duties			
	IT System	Secure necessary IT hardware at the alternate site	Make start-up plan at the alternate site	X		IT Dept.
	(others )					
Essential Social Services	Electricity/Gas/Water	Secure services Or plan of activation when needed	Prepare a plan to activate services for restarting production	X		Facility Dept.
	Phone/Communication	Secure services Or plan of activation when needed		X		Facility Dept.
	Traffic / Roads	Make alternate route transportation		X		Facility Dept.
	(others )					
Outside Partners	Suppliers	1. Secure materials at the alternate site 2. Make transport plan of stocks and supplies	Make prior agreement with suppliers		X	Purchase Dept.
	Customer					
	(others )	Secure machine services at the alternate site	Make prior agreement with repairs	X		Production Dept.

# Case Study - ICT

- ASP (Application Service Provider) = priority business
- 23 employees, including part time workers.
- Key resources: computer servers at data center, in-house computer servers, and staffs.

- the Northern Tokyo Bay Earthquake as the first priority risk
- loss scenario :
  - the Northern Tokyo Bay Earthquake may occur at non-business hours,
  - more than half of employees cannot come to the office.
  - half of ASP computer servers at datacenter and all in-house computer servers could are broken

# Case Study - ICT

## Summary of main BCP strategies

- Fixation of cabinets
- Sparing a way for evacuation in the office
- Review of layout of sever room
- Transferring in-house servers to datacenter
- Making rules of operation at the place that has electric power and communication tools
- Making rules of operation at datacenter
- Making rules of operation of switching in-house computer systems to back-up datacenter

# Case Study - Logistics

## newspaper transport company

- over 100 employees and about 90 trucks.
- top priority is transporting their newspapers under all circumstances.
- social responsibility to deliver newspapers everyday

## the Northern Tokyo Bay Earthquake

- loss scenarios:
- 40% of staff cannot come to work
- Headquarters is not usable
- communication failure (cannot communicate with truck drivers)
- a lack of sufficient gasoline for the trucks.
- only 50% of 90 trucks are able to arrive at newspapers' printing facilities.

Source: [http://www.sangyorodo.metro.tokyo.jp/shoko/keiei/BCP/bcp/common/download/bcp\\_booklet\\_2011\\_compl\\_ete.pdf](http://www.sangyorodo.metro.tokyo.jp/shoko/keiei/BCP/bcp/common/download/bcp_booklet_2011_compl_ete.pdf) (in Japanese)

# Case Study - Logistics

## **BC Strategies:**

- Emergency response for drivers
  - All drivers should to the printing factories
- Discussion to Secure reserve gasoline for trucks with the newspaper company
  - Fuel tanks at the newspaper company premise

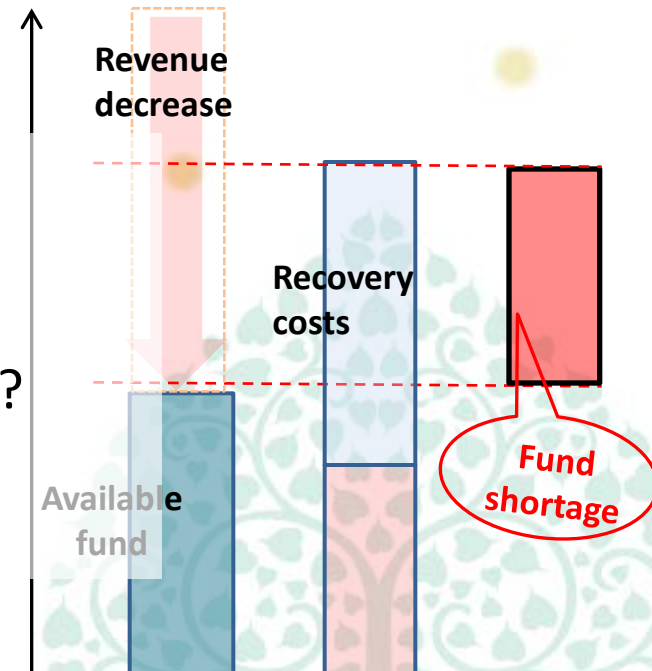
## **Summary of main BCP strategies**

- Preparation of a list of the truck drivers' email addresses.
- Procuring battery chargers for cell phones in all trucks
- Develop emergency procedures for driver
- Build fuel tanks on the premises of newspapers' printing facilities

# Step 8 : Be Financially Prepared

Know your financial condition during business disruption

- How much revenue will decrease ?
- How much available fund you have?
- How recovery costs to recover your business?
- How much ordinary cost to pay?
- How much fund shortage to make up?



Grasp your cash flow during disruption period.  
Prepare financially in advance



# How much available fund you have?

**Form 8-1 Available Fund (sample)**

Type	Amount
Cash and Deposits	200,000
Insurance	100,000
others	50,000
<b>Available Funds (A)</b>	<b>350,000</b>

# How much costs to recover ?

## Form 8-2 Recovery Costs

Recovery Cost	Amount
Building	50,000
Equipment and machinery	50,000
Fixtures and fittings	20,000
Inventory	30,000
<b>Total Recovery Costs (B)</b>	<b>150,000</b>

# How much ordinary cost to pay?

## Form 8-3 Ordinary Expenditures

Ordinary Expenditure	Amount
Payroll	140,000
Purchased supplies	30,000
Rent	10,000
Payment due	100,000
<b>Total Ordinary Expenditures (C)</b>	<b>280,000</b>

### Form 8-4 Financial Status Sheet

Available Funds (A)	350,000
Recovery Costs (B)	150,000
Ordinary Expenditures (C)	280,000
Balance (=A-B-C)	(-) 80,000

### Form 8-5 Financial Measures

Financial Measures	Amount	Detail
Emergency bank loan	50,000	Prior application
Local government aid	20,000	Check what aid program is eligible to the company in advance.
Other sources (borrowing from President)	10,000	
Total	80,000	

# Group Work 2

## Develop a BCP

