

BUSINESS CONTINUITY MANAGEMENT PLANNING -JAPANESE APPROACH

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ABSTRACT: In 2005, Cabinet Office, Government of Japan published Business Continuity Guidelines to promote resiliency in private sectors and anticipates, in ten years, 100 % of large companies and 50% of middle size companies will establish BCM. In 2008, Japanese government published a survey report on Disaster Plan and BCM status of private companies. This paper did a secondary analysis based on the original data of the survey answers. Over 1500 companies responded throughout industries in Japan. This survey shows clear correlation between Disaster Plan and Business Continuity Plan implementation. Japanese companies have been preparing for mainly natural disasters, and earthquake risk is the current top priority agenda for most companies. It is noted by preparing for natural disasters, through Disaster Plan activities, majority of Japanese companies which implemented Disaster Plan have been coordinating with communities and local governments at normal times and have done community contributions when disasters hit. This analysis also shows Disaster Plan does not lead to higher implementation of Business Continuity Plan. There exist wide gap of BCP contents among companies which responded that they had implemented BCP. It is also noted that even advanced BCP measures taken by companies which have higher level of Disaster Plan are not always well balanced from BCP strategic standpoint. And many companies pointed out lack of skills/know-how and lack of information are problems in activities of Disaster Plan and Business Continuity Plan. It is this paper's aim to review the survey and try to find potential indicators to lead Japanese companies in different levels for better and effective BCP implementation.

KEYWORDS: business continuity plan disaster plan local community contribution

1. INTRODUCTION

In June 2008, Cabinet Office, Government of Japan published a survey report on business continuity and disaster management of Japanese companies. Over 1500 companies responded throughout industries. This paper is the secondary analysis using the original answers of this survey. In August 2005, Cabinet Office, Government of Japan published "Business Continuity Guidelines 1st ed. –reducing

the impact of disasters Improving Responses to Disasters by Japanese companies". This paper intends to review;

- Current status of disaster planning and business continuity management of private companies
- Correlation of community coordination and contributions by private companies with activities to be conducted through their Disaster Plans and Business Continuity Plans.
- Acknowledged Problems and tasks to promote

business continuity management by this survey.

- Review steps toward Business continuity management maturity model for Japanese companies.

2. DISASTER EXPERIENCE

Japan is a disaster prone country with natural disasters such as typhoons and earthquakes. Both public and private sector have been preparing mainly for natural disasters.

2.1 Affected disaster

Does such a disaster experience of a company make any changes in its disaster management? 23% of answering companies (43% of large companies, 23% of middle size) have experienced disasters, 66%-earthquake, 27%-floods, and 14%-fire. Earthquake experience comes first although its frequency is lower than other disasters. This would be because that wider area will be affected once an earthquake hits. Large companies have experienced at higher percentage than middle size companies, probably because of their wider spreads of facilities.

2.1.1 Disasters to prepare for

Surveyed companies responded for what types of disasters their Disaster Plans (DP) have prepared for. 85% for earthquake (95%-large company, 84% -middle size), 82%-fire, 32%-floods, and 25%-wind. Fire comes up to the second.

The surveyed companies which implemented BCP answer their BCP prepares for earthquake-92%, fire-65%, floods-39%, wind-30% and others-15%. The percentage of others increases. This breakdown shows pandemic, terrorism/crime/war, IT system disruption, infrastructure disruption such as electricity outage, other than natural disasters. Such expansion of the scope of disasters/events is reflected by BCP preparedness consideration.

In UK which is one of most advanced countries in BCP, Chartered Business Institute (CBI) has conducted annual BCM surveys with support from UK Cabinet Office. Its 2007 survey report shows lists of disasters UK companies prepare. From the top, it lists loss of IT-73%, loss of telecommunication-73%, Loss of (access to) the site-60%, loss of key skills-59%, loss of people-57%, utility outage-57%. Those are not disasters Japanese companies prepare for. Those are consequences caused by disasters or other events, which directly affect their business operations. This means UK companies have prepared for loss if IT whatever disaster (floods) or event (terrorist attack) may cause.

2.2.2 Disaster experience and Disaster Plan/ Business Continuity Plan

Does disaster experience promote the experienced companies to implement Disaster Plan (DP) or Business Continuity Plan (BCP)?

Among companies without disaster experience, DP companies and no DP companies split in half. But among disaster experience companies, 62% have DP and 38% do not. There is ten points increase of DP implementation in DP group.

The same review is done for BCP implementation. There is only six point's difference between disaster experienced and not experienced groups.

Originally it is expected that disaster experience increase BCP implementation, but this review revealed that there was clearer correlation between DP and BCP introduction. Among DP group, 66% know BCP and 25% implemented. Only 36% of No-DP group know BCP and only 3% implemented. This indicates that DP companies proceed to introduce BCP.

3. DISASTER PLAN

This survey did not define Disaster Plan. From answers, I selected common measures and activities through comparison between DP companies and No-DP companies.

(In brackets below, former % shows DP companies, the latter No-DP company's)

- 1) Emergency Organizational Procedure (94%:50%),
- 2) Education & Exercise (92%:47%)
- 3) Emergency evacuation (89%:50%)
- 4) DP Controlling Unit (85%:3%)
- 5) Medical Rescue staff designation (73%:39%)
- 6) BCP awareness (66%:36%)
- 7) Damage mitigation measures (66%:29%)
- 8) Emergency relief supplies (64%:28%)
- 9) Local community coordination (59%:29%)
- 10) Supply chain management (59%:52%)

Based on the above commonly implemented measures among DP companies, DP can be defined as follows;

DP is to set a unit in charge of DP program, to implement disaster emergency organizational preparedness procedures, to decide emergency rescue procedures, to nominate emergency medical rescue staffs, to store emergency relief supplies, to implement mitigation measures, to educate staffs and to exercise, to coordinate with local community from normal times and to contribute at disasters.

4. LOCAL COMMUNITY CO-ORDINATION AND CONTRIBUTION

Natural disasters affect wide areas, which often affect community and social infrastructure. The recovery of local communities and social infrastructure are also critical. Private companies have been supporting community recovery by possible and available means. This survey shows that

54% of companies have done monetary donation, 22% have provided with their products or services, another 22% have sent their employees to the disaster sites, 19% have assisted in cleaning and debris removal, 17% have supported employees' volunteer activities in disaster sites. In addition, large

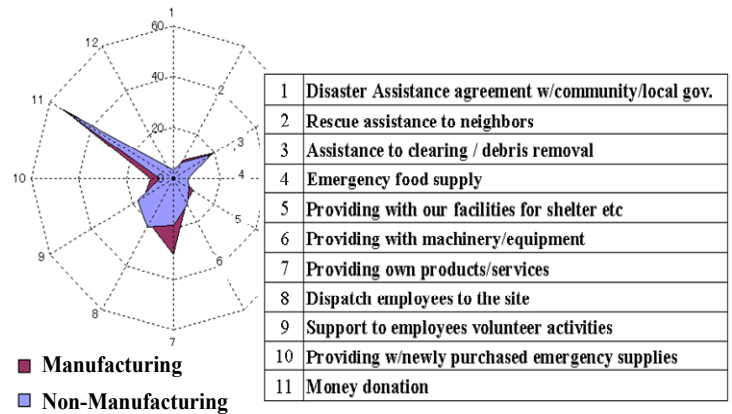


Figure 4.1 Community Contribution

companies have provided their facilities for shelter, emergency rescue supplies from their storage and their machinery and equipment.

4.1 Disaster experience and local community contribution

Among the surveyed companies, 43% (55% of large companies, 38% of middle size) have been coordinating with local governments and communities regarding disaster management related matters from normal times. But disaster experience does not show clear correlation with local community coordination activities, but DP implementation has clear correlation. Regardless of disaster experience, more than double of DP companies have coordinated with local community than No DP companies. (Among disaster experienced companies, 38% vs. 13%, and without disaster experience, 13% vs. 28%)

Local community contribution activities of private companies show a different picture. 85% of companies with disaster experience desire to make

contribution and 59% did contribution. 59% of non-experienced companies' desire and 37% did. There is 21 points difference in % which did disaster contribution with or without disaster experience.

4.2 Characteristics by industry

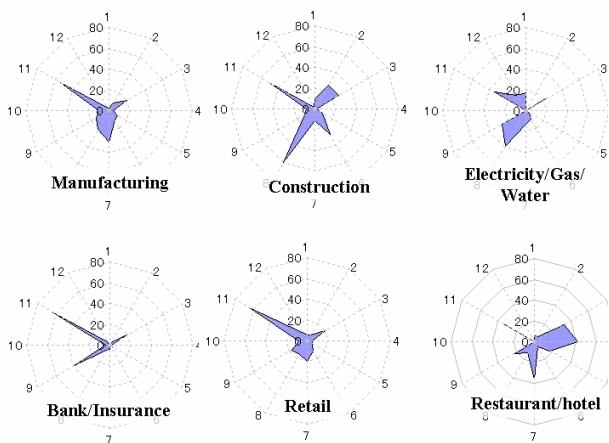


Figure 4.2 Community Contribution by Industry.

There are interesting characteristics by industry what contributions have been done, as Figure 4.2 shows the different shapes of graphs. Monetary donation is the top activity through out industries. In Construction industry, employees are sent to the sites and equipment and machinery are provided. In Utilities industry, their employees are also sent. In manufacturing industry, their goods are commonly provided. In Restaurant & Hotel industry, emergency foods supply is provided.

5. BUSINESS CONTINUITY PLAN (BCP)

This Cabinet Office survey defines Business Continuity Plan (BCP) as follow;

“Business strategy that would not interrupt specified operations at the time of a disaster and if business activities are interrupted, enables a company to resume critical functions within the target recovery time, and protect company from damage caused by an interruption of business.”

And Business Impact Analysis (BIA) is defined; “Process that confirms the impact on operations and financing by the business interruption. It identifies critical business operations and processes and relevant business resources and performs analysis of the impact on business continuity.”

This Business Impact Analysis includes the following five elements; 1) identifying critical business operations, 2) business processes analysis, 3) identifying bottleneck, 4) recovery prioritization, 5) setting a recovery time objective (RTO)

Cabinet Office, Government of Japan aims that 100% of large companies and over 50% of middle size companies introduce BCP in ten years The central and local governments are carrying out various related policy measures.

5.1 BCP Implementation

This survey reports that 35% of large companies, 16% of middle size companies and 12% of all surveyed companies have implemented BCP. There are about 20 points difference between large companies and smaller ones. BCP have been introduced to the minority of companies and has not yet prevailed like DP. It should be noted 62% of middle size companies do not know BCP.

The above UK' CBI survey 2007 reports much higher percentage of BCP implementation among UK companies, such as 80% - financial, 76% -Utility, 48% -IT, 45% -Service, 45% -Manufacturing.

5.2 Business Impact Analysis

The core BCP measures are the above-mentioned five elements. Among the companies which answered that they have implemented BCP, only 32% of them did BIA and 33% has set RTO Interestingly, 49% of BCP implemented companies did not know what is BIA and 58% did not conduct BIA. The half of BCP implemented companies seem to understand BCP differently from the above

definition given by Cabinet Office. Those companies very probably interpret BCP in broad term without strictly following Cabinet Office guidelines published in 2005. This is a possibility that various measures to assist early resumption of business after a disaster might be understood as BCP program. The writer had an experience with a certain company which had started internal BCP discussion and that finally they had decided to do anti-seismic reinforcement measures as BCP action for the year. The writer reviewed activities and measures of those companies from the survey answers and noticed that they are very close to the companies which have DP but not BCP.

5.3 BCP implemented & implementing companies

A group of companies which have implemented or are implementing BCP have done (or are doing) most of the core measures of BCP.

- 1) 75% - evaluation of degree of impact done, 2) 84% - identified critical business: 3) 84% - assessed probable damage to critical business: 4) 84% - identified bottlenecks, 5) 77% - RTO set

5.4 RTO companies

The one of key measures of BCP is to set Recovery Time Objective (RTO). In order to resume operations within the target time or RTO, various measures are necessary to be introduced within the company and together with outside business partners.

The following comparison of activities and measures between RTO companies and others with only DP shows overall leveling-up of RTO company group's disaster management program.

- 1) High implementation measures- same level. The following measures are DP related ones. Both groups have achieved very high and same level of implementation.

- Emergency Organizational Procedures (RTO 94%: DP w/o RTO 94%),

- Education & Exercise (90%:92%)
- Emergency evacuation (88% :89%)
- Medical Rescue staff designation (77%:73%)
- Emergency relief supplies (89%:64%)

2) RTO companies advances the following measures;

- Damage mitigation measures (85%←66%)
- Supply chain management (78%←59%)
- Financial arrangement (61%←50%)
- Local community coordination (68%←59%)
- Local community contribution (72%←51%)
- Periodical Inspection (72%←70%)
- Management review (55%←46%)

In the followings, RTO companies' activities and measures are compared with DP implemented Group and no DP group.

5.4.1 Disaster Emergency Organizational Preparedness

Among no DP group, half of companies have designated a member of the board in charge of DP and determine the chain of command. The other items are done only among 1/4 to 1/3 of companies.

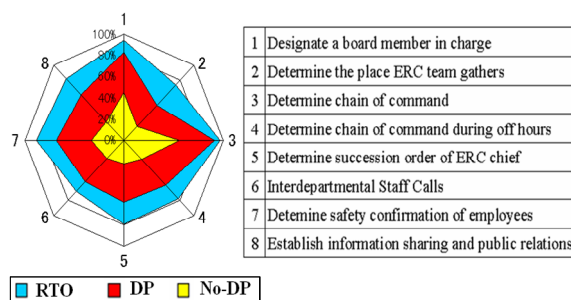


Figure 5.1 Emergency Operational procedures

Among DP group, 80-90% companies designated a member of the board in charge of DP and determined chain of command but 50-60% of companies implemented other emergency measures. Only half of companies determined the place where Emergency Response Team gathers. Under this status of preparedness, confusion seems inevitable immediately after a disaster hits.

Among RTO group, over 75% have evenly implemented those emergency measures, which is a very important difference with the other two groups.

5.4.2 IT system disaster plan

Among no DP group, 66% have store backup data and 43% have implemented backup system. Other items are implemented only by less than 1/4.

Among DP group, 80% have stored backup data and half implemented backup systems and did anti-seismic reinforcement measures. 42% store vital records at safe place. Other items are done by only less than 30% of the companies.

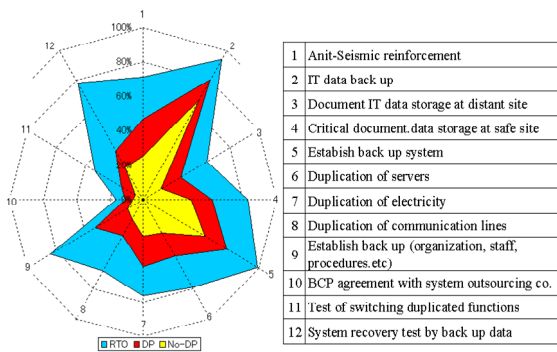


Figure 5.2 BCP - IT System measures

Among RTO companies, such measures are advanced at higher rate. 70-94% of the companies have done information backup storage and implementation of backup system and anti-seismic reinforcement measure. But 63% store vital records at safe place, and other items are done at 50% or lower.

This status may indicate the situation that even 50% of RTO companies would have IT system disruption if electricity is down. The duplication of electricity and communication lines is delayed.

5.4.3 BCP Manuals

By focusing on the manufacturing industry, the status of BCP manual preparation are reviewed among three different groups of BCP status, 1) no-BCP group, 2) BCP without RTO, and 3) RTO

companies.

Among no-BCP group, only 10% of companies have an emergency response manual but have almost none of other BCP manuals.

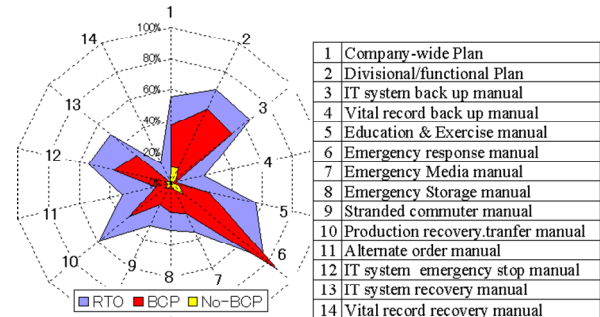


Figure 5.3 BCP Manuals

BCP without RTO group improves that 88% prepare an emergency response manual and 50% made divisional and functional plans and IT system backup manuals. But other manuals are made by less than 1/3.

Among RTO group, more than 2/3 companies made emergency response manual, divisional and functional plans, and IT system backup manual. Over 50% have manuals on education and exercise, production resumption, and IT system emergency stop manual. As Figure 5.3 shows, even RTO companies' preparations of related manuals are not well balanced. More than 3/4 of RTO companies have emergency response manual but only 14% to 22% prepared vital record related manuals.

5.4.4 Disaster education & exercise

BCP requires exercise and training to make it perform effectively at any time. Among no DP group, 86% conduct evacuation drill. But 32% - emergency contact drill and 28% - emergency rescue drill.

Among DP group, evacuation drill is done at the same percentage of companies and emergency contact, employee safety confirmation and emergency rescue drill are done by 30-40%. Equipment/IT system Recovery drill of and system is

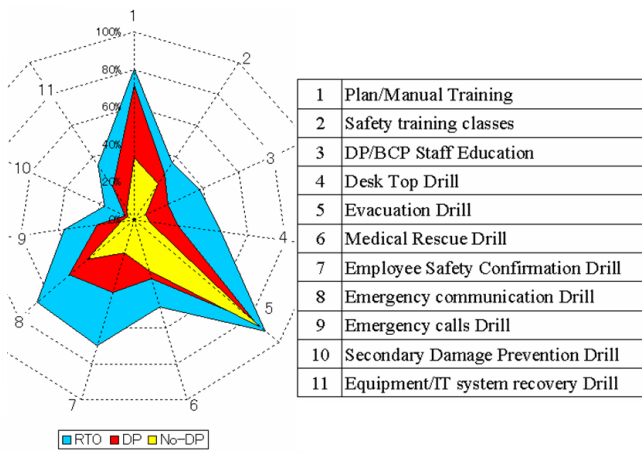


Figure 5.4 Education & Exercises

done only by 21%.

Among RTO group, emergency contact and employee safety confirmation drill increase to 60-70%. But other types of exercises are done at lower level.

5.4.5 Supply chain management measures

In the manufacturing industry, supply chain management measures are done from what companies can do within own organizations. 40% establish alternative production procedures, 23% increase stocks and materials. It is very interesting to note that middle size and smaller companies have done those two measures more than large companies.

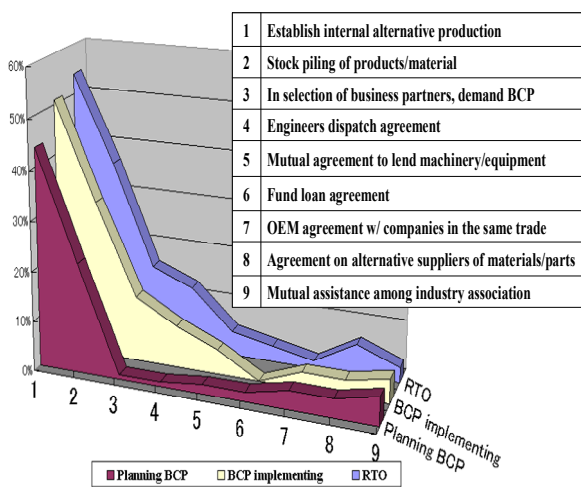


Figure 5.5 BCP supply management

There are other three measures, OEM agreement with other companies in the same trade, alternative

material and parts supply agreement and mutual assistance agreement in industry association, which smaller companies have also higher percentage than middle size and large companies. This percentage is also higher than RTO group. This might indicate different behavior of smaller companies and may give us a hint of options for less resourceful companies in disaster management.

The percentage of those measures decline in accordance with BCP implementation levels, from BCP implemented level, and BCP implementing level down to planning level. Alternative production procedure is the top measure implemented, followed by Stock increase of products and materials, BCP demand to business partners, Engineer dispatch assistance agreement. In RTO companies, more companies implement those measures and scope of supply chain measures have expanded.

5.4.6 Continuous improvement-PDCA Cycle

Continuous improvement through PDCA cycle is the key element of effective implementation of plans. The related questions of this survey did not distinguish DP and BCP in those related questions.

5.4.6.1 Periodical Inspection

Among all surveyed companies, 46% conduct periodical inspection. 70-80% of DP/BCP companies have done. 99% of RTO companies have implemented or planning it.

5.4.6.2 Evaluation & corrective action

The percentage of evaluation such as self check, self audit (by internal audit unit) or third party audit increase along the level of BCP implementation advances. But the implementation percentage of evaluation stays at roughly 50%. 40% with BCP implemented companies conduct evaluation annually or semi-annually and 55% with RTO companies.

5.4.6.3 Management review

At the starting point, Management commitment is a critical factor and periodical Management review of the program is also critical factor of PDCA cycle. 63% of BCP implemented companies and 56% of RTO companies have management review. (It would be nearly 90% with RTO companies if planning companies are included)

5.4.7 Disclosure of DP/BCP

Among all responded companies, 7% (17% of large companies) have disclosed DP/BCP. 91% of those disclosing companies have DP. But only half recognize BCP and only 30% set Recovery Time Objective. Among key indicators of PDCA cycle, 85% of this group has periodical inspection and 72% have management review. Those indicators show high level of risk management mind of the organization including management level but also show lower level of awareness of BCP mind.

6. BCP IMPLEMENTATION LEVELS COMPARISON

6.1 BCP Implementation levels

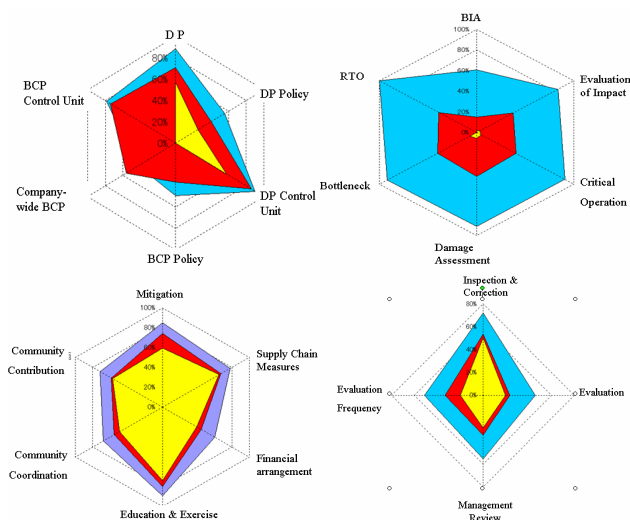


Figure 6.1 BCP elements – 4 areas

Three groups can be categorized by implementation

levels of BCP, 1) BCP planning companies, 2) BCP implementing companies and 3) RTO companies. Fig 6.1 shows four areas of key factors of BCP activities, BCP policy and organization (upper/left), BCP core measures (upper/right), other BCP related measures (lower/left) and PDCA cycle (lower. right) The clear differences are observed in implementation ratio of the core BCP measures, such as BIA, identifying critical business and bottleneck and setting RTO (recovery time objective).

In BCP policy and organization items, there is not much difference as above core BCP measures. But common differences are noted between items, such as DP.BCP policy vs. Unit in charge. In other related measures which are commonly done by DP program, there are not many differences, although RTO show higher implementation ratio. As noted, back office seems to a most difficult measure to implement.

6.2 Individual advanced measures

By focusing on eight advanced measures, the companies which have done one of those are selected and their levels of performance in DP. / BCP is reviewed. The selected eight measures are as follows;

- 1) Identifying special skilled staff
- 2) Identifying utilities (electricity gas, water etc) and communication (phone, internet, etc.) as bottlenecks
- 3) Alternate order procedures at suppliers' disruption events
- 4) Vial record backup manual
- 5) Production recovery and transfer manual
- 6) Vital record storage at safe places
- 7) Back office arrangement
- 8) Disclosure of DP/BCP

The companies which have implemented one of above measures are 2% to 20% of all surveyed companies. (See Figure 6.2)

As Figure 6.2 shows by three arrows, there are

three areas, one is DP related measures, second is BCP core measures, the third is PDCA cycle. In DP related measures, most companies of this group shows the similarly higher percentage of implementation, But interestingly, in BCP core measures, there are three different levels, 20-40%, 50-60% and over 80%. In PDCA cycle, the all graph lines go down to 60-70% (inspection) and further to 40-50% (management review).

Among three levels of BCP core measures, over 80% group are the companies which implemented the above 1) special skilled staff 2) Utility & communication bottleneck, of which 100% are aware of BCP and 82-83% have set RTO.

50-60% group have done above 3) Alternate order procedures 4) Vital record backup manual, 5) Production recovery manual, of which 77-100% know BCP, and 53-65% have set RTO.

RTO 20-40% group have implemented 6) Vital

record storage, 7) Back office, 8) Disclose, of which 50-70% know BCP and 23-31% have RTO.

All of those three groups have highly implemented DP related measures but as shown there is clear difference in BCP implementation. Lower perception of BCP leads to lower BCP implementation. Individually advanced measures such as alternative order procedure or production recovery/transfer manual are done, but BCP policy does not seem to be shared in organizations and implemented measures are not well balanced.

As illustrated here, the above those measures can be useful as indicators of BCP implementation (or maturity) levels as well as others referred in this paper.

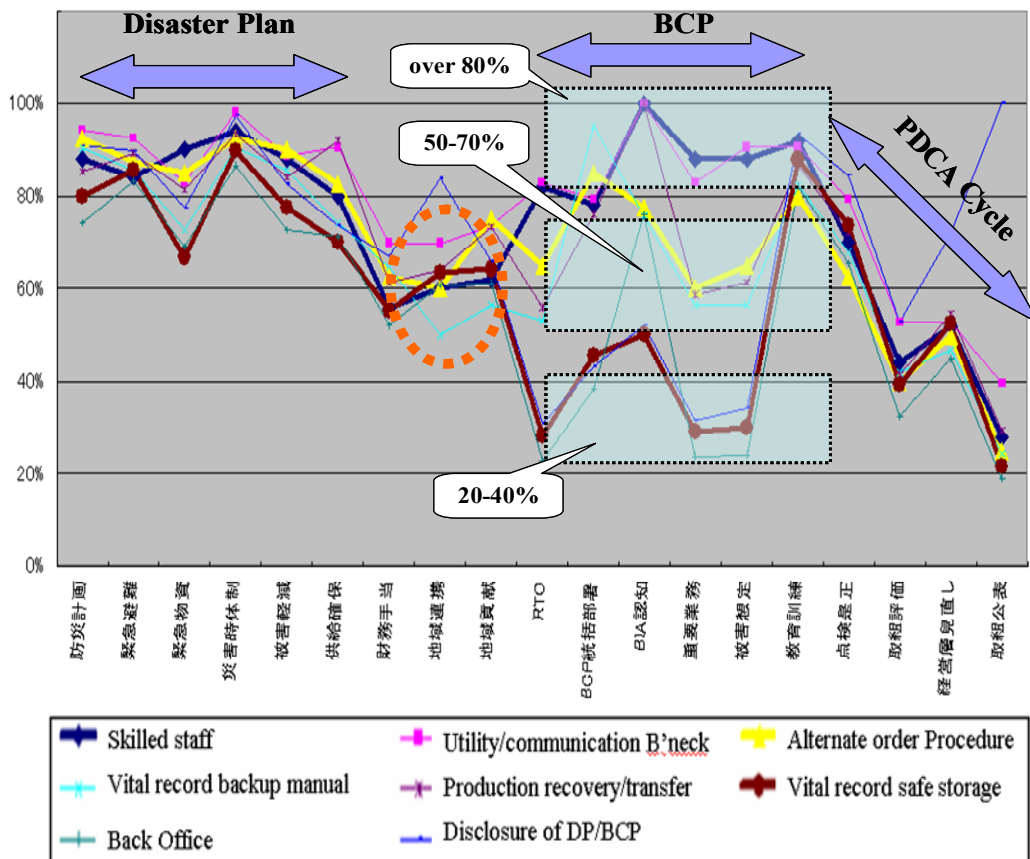


Figure 6.2 Comparison by 8 advanced measures

7. PROBLEMS OF BCP IMPLEMENTATION

This survey casts a dozen of questions if there are any problems or difficulty related to the subject questions.

The Table 7.1 shows those selected 13 questions and they are asked at various parts of the survey paper such as emergency response, back office, mitigation measures, education & exercise, periodical inspection, management review and BCP related ones.

Table 7.1 Problems & Difficulty in DP/BCP

		NO Needs	not worthy of cost	fund not available	no staffs	lack of skills.know-how	lack of information
Q19-1	Emergency evacuation	21.7	2.8	14.9	33.8	62.1	33.1
Q21-2	Emergency supply	41.6	17.9	19.5	16.7	43.5	26.1
Q23-1	Emergency operational procedure	33.1	7.3	11.2	34.8	53.7	34.9
Q24-2	Back Office	32	42	38.9	18.2	28	16.8
Q25-2	Mitigation of Employees houses	25.6	12.6	22.1	22	47.6	32.7
Q26-2	Anti-seismic mitigation of structures	28.8	23.9	32.8	18.6	44.9	27.9
Q29-2	Financial arrangement	31.9	19.3	30.4	11.2	37.9	29.1
Q30-3	Education & exercise	25.8	9.6	18.2	32	59	35.2
Q34-2	Inspection and corrections	26.9	13.7	22.2	36.3	53.5	32.4
Q35-2	Evaluation	25.7	8.2	12.1	29.2	56.2	32.3
Q36-2	Management review	25.5	9.9	15.3	30.7	53.3	34.4
Q11-17	Reason not to make BCP	-	-	17.1	36.5	41.5	-
Q11-15	Problems of introducing BCP	-	-	-	37.9	40.4	21.1

It is surprising to note that top answers of 12 questions out of 13 are the same “lack of skills and know-how”. Half of those are over 50%. The second from the top is lack of information with more than 30% in 7 questions out of 13. The third place is lack of staffs with 30% in 7 questions out of 13.

There are other expected answers such as “no available fund” and “does not worth cost” but percentages of those answers are mostly less than half of “lack of skills and know-how”.

This clearly tells that guidance outside organizations from governments, industry associations and other sources are definitely needed

8. IN SUMMARY - TOWARD BCM MATURITY MODEL

8.1 What this survey tells us

From the secondary analysis of the raw data of 2008 Cabinet Office survey, the followings are noted;

- 1) There is a strong correlation between Disaster Plan and Business Continuity Plan. It would be a natural for companies to proceed from DP to BCP. On the other hand, even companies which achieved higher level of various DP measures have not always achieved higher level of BCP. The Figure 8.1 is drawn from the survey data to roughly show composition of companies in DP and BCP implementation status. Since Japanese companies have been preparing for natural disasters, many companies have done community contribution when disasters hit and affected local communities. The writer believes that this is one of strength of Japanese approach of DP/BCP.

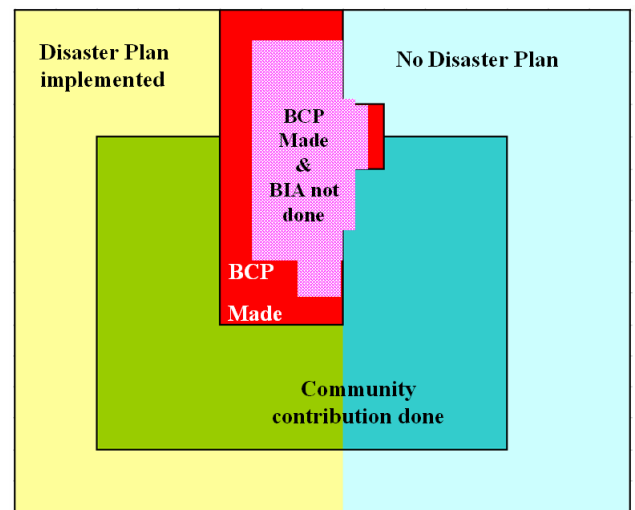


Figure 8.1 DP & BCP map

- 2) The substantial portion of companies which responded that they have implemented BCP has not done the core BCP elements, such as BIA etc. In strict sense, if such core elements are not done, it would not be regarded as BCP is implemented.
- 3) Even individual advanced measures are done; it would not be well balanced from BCP strategic standpoint.
- 4) The companies which have done the core BCP

elements show overall leveling up of disaster management. But it is relatively weaker in activities which ensure PDCA cycle such as periodical inspection, audit, evaluation, and management review.

- 5) It is surprising that larger percentage companies pointed out that lack of skills/know-how, lack of information, and lack of staffs are problems and difficulty in DP and BCP activities. Those reasons are double of other reasons such as fund not available, or not worthy of cost. This shows clear needs of support from central/local governments, industry associations or any other sources.

8.2 From DP to BCP and which ways

The survey answers show us how companies have been tackling with DP and BCP. The comparisons among different levels of surveyed companies indicate steps and routes toward higher BCP activities.

1) Disaster Plan as a starter

It is very natural that a company starts from DP to prepare for disasters. It requires forming an organizational base and an internal framework. The key items are integrated company-wide DP policy, DP Unit in charge and Management commitment. DP measures focus on pre-disaster measures to prevent or mitigate losses and emergency response measures. It needs to note that majority companies which have DP have done community coordination and community contributions.

This leads to key measures for social infrastructure bottleneck.

2) BCP starting point

Once DP is introduced, it is assumed that an organizational base and framework exist. The survey tells higher correlation with DP and BCP. It is easier to place BCP agenda on this base. The key factors are the same as above DP, company-wide BCP

policy, BCP Unit in charge, and Management's proactive BPC leadership. Management commitment is key driver of PDCA cycle scheme.

3) BCP contents and directions

Once BCP organizational base and framework are set, contents and scope of BCP is to be decided.

Usually BCP introduction starts from a single site (or selected sites). A main department or a main factory is selected to introduce one location BCP. (Or to start from a dot)

After one location BCP is determined, the scope will be naturally expanded to include off premises main suppliers, which might be another factory of the company or outside Partner companies. (The scope is expanded from a dot to a line) The company operation is interdependent on various internal or external suppliers. It is very rare that a company operation is totally independent from outside supplies. Hence, supply management factor is very critical but is not easy to implement due to various reasons which are very difficult to control.

Companies are not only dependant on outside business partners but also on social infrastructure. This is also very critical factor to prepare for natural disasters of high severity, because social infrastructure such as electricity, gas, water, roads, and communication lines are often damaged and affected in wide areas. Although it is difficult task, it is necessary at least consider or to build in such factors into own BCP. The advanced companies have done some of measures, which would be good models for others. It would be important to review own organization's recovery as a part of the community recovery at wide area natural disaster. This is why community coordination and contribution measures have importance for private sector.

- 4) Some Business Continuity Management Maturity Models are developed by mainly practitioners based on best practices of advanced

organizations. The writer does not believe there is only one way to develop BCP in a company. There must be various ways to proceed based on specific circumstances of a company. And the writer also believe it necessary to develop a BCM Maturity Model that matches with Japanese companies' situations, which will assist Japanese companies to develop BCP in a well balanced way with least time and costs.

- 5) This survey answers show various potentially useful key indicators, as stated above, in the different levels of BCP implementation. This would be a continuous research task to be reinforced with good practices of advanced Japanese companies.

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