

# Fujitsu's Business Continuity Plan Development Methodology

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In today's high-risk business environments, more and more companies are focusing on the Business Continuity Plan (BCP) as a management methodology for improving their ability to respond to any contingency. However, BCP development methodologies suitable for the business environment of Japanese companies have not progressed much beyond the theoretical stage, and the persons in charge of BCP development in companies have been struggling with this issue. Fujitsu has developed a practical methodology and software tool called BCEXPERT to streamline development of its own BCPs for business formations within the Fujitsu Group. This paper describes Fujitsu's BCP development methodology that has been standardized as the Fujitsu Business Continuity Management Model. This methodology mainly consists of three steps: 1) structuring business processes and resources required for the processes, 2) extracting essential resources for business continuity; and 3) analyzing the business impact of assumed resource damages in various risk scenarios. This methodology can be applied not only to BCP development but also to business resource optimization.

## 1. Introduction

The persons in charge of risk management in Japanese companies have been talking more about the concepts of the Business Continuity Plan (BCP) and Business Continuity Management (BCM) since the September 11 terrorist attacks in 2001. However, while the risk environments surrounding companies have become increasingly severe over the past five years, BCP remains a key concept that managers often hear about but do not fully understand. Moreover, various requests for responses to the internal control required by the soon-to-be-enforced Japanese SOX act, information security, the environment, privacy, and other management issues have yet to be addressed, and many persons in charge of risk management regard the need for BCP development as yet another burden to shoulder.

This paper describes how BCP development

methodology can be made more practical and efficient based on the business conditions of Japanese companies by making use of Fujitsu's experience of BCP development. The methodology will help reduce the burdens of the persons in charge of risk management in these companies.

## 2. What is a BCP?

Fujitsu defines a BCP as follows:

The purpose of a BCP is to allow critical business activities to continue when an unexpected situation such as a large-scale disaster occurs. A BCP is an action plan for achieving the goals of business continuity (recovery time objectives for critical business activities) determined based on the analysis of the management environment, business structure, and risk environment.

In BCP development, only analyses such as the analysis of the business impact tend to draw

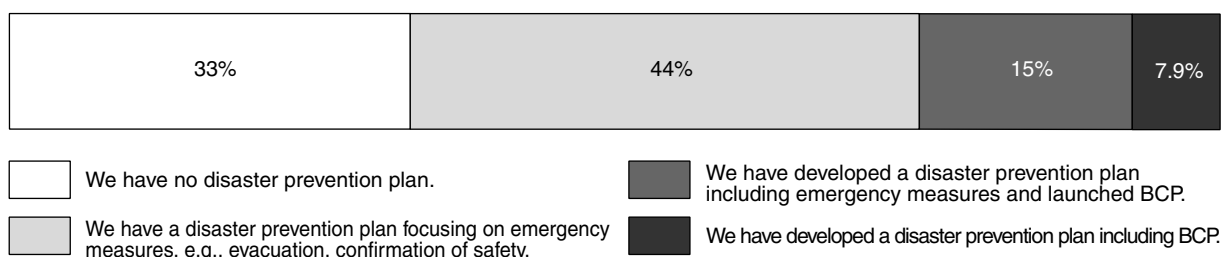
attention. However, the final purpose is basically to develop an effective action plan that specifies the items to be handled, the people who will handle them, and the deadlines to be met in an emergency. Fujitsu's BCP consists of an emergency action plan and the analysis of business continuity requirements based on the analysis data that supports the action plan development.

### 3. Change in business environment

The risk environment surrounding companies is becoming increasingly severe. The risks companies face include an earthquake in the northern part of Tokyo Bay or an inland earthquake in the capital; large-scale earthquakes in the eastern sea, southeastern sea, southern sea, and other areas; flooding (which is becoming an increasingly severe problem); terrorism; and a bird flu pandemic. These risks are constantly present and largely unpredictable. Because these risks are universally recognized, international standardization activities have been started to realize an adequate level of business continuity management by 2008. The Japanese government publicized a series of guidelines for developing a BCP in 2005 that demonstrated a very proactive administrative approach for business continuity enhancement. The guidelines are the "Business Continuity Guidelines 1<sup>st</sup> ed."<sup>1)</sup> by the Cabinet

Office and the "BCP Development Operational Guidelines for Small and Medium Enterprises"<sup>2)</sup> by the Small and Medium Enterprise Agency. Also, the Business Continuity Advancement Organization (BCAO)<sup>3)</sup> was established in June 2006 and has been actively promoting business continuity since July. This is the first registered non-profit corporation in Japan aimed at promoting BCP standardization and fostering BCP specialists. A serious problem that needs to be addressed by companies is that BCP development is becoming mandatory. The growing international recognition of the need for business continuity enhancement has emerged as a request to improve the business continuity capabilities of business partners in the business-to-business transactions that secure the global supply chain. More and more companies check for the presence or absence of BCP development by suppliers before starting a transaction. Particularly, most European and American companies strongly recognize the risk of business continuity in Japanese companies due to the threat of large earthquakes. BCP development is needed not only for ensuring business continuity during a disaster but also during everyday operation.

Despite the rapid changes in our environment, only 7.9% (23% including the companies who have just started to introduce BCP) of domestic companies have developed a BCP (**Figure 1**).<sup>4)</sup> This figure is much lower than the



Source: Development Bank of Japan: Special Survey Concerning Companies' Approaches to Disaster Prevention (Chart 2-1 Development situation of disaster prevention plan and business continuity plan [BCP])<sup>4)</sup>

Figure 1  
BCP development situation in domestic industries (November 2005).

47% figure determined by the Business Continuity Institute<sup>5)</sup> for major overseas companies. The Central Disaster Prevention Council wants all of Japan's major companies and more than 50% of the country's small and medium companies to develop a BCP within 10 years.<sup>6)</sup> To attain this goal, further supportive activities based on public-private partnerships will be necessary as well as improved management awareness.

#### 4. Fujitsu's Business Continuity Management

Fujitsu is an information system vendor that plays a major role in the social infrastructure and also a manufacturer participating in the global supply chain. In keeping with these roles, since its establishment, Fujitsu has developed disaster prevention and emergency response plans and conducted various training to prepare for emergency situations. Moreover, in 2004, a company-wide BCP development project was set

up, and in 2005, a specialized organization was established to develop BCPs and enhance business continuity throughout the Fujitsu Group. Fujitsu has a variety of business operations with different business environments, structures, bases, and management resources. To develop a BCP for each operation, company-wide business continuity management has been implemented in three layers: management, a specialized organization for business continuity, and the business unit (Figure 2).

The specialized organization for BCP development plays a key role in this system. This expert group consists of Fujitsu staff having special skills in, for example, disaster prevention, procurement, information system operation, consulting, system development, and outsourcing. The organization for BCP development has also developed various tools and software products to make BCP development and maintenance efficient.

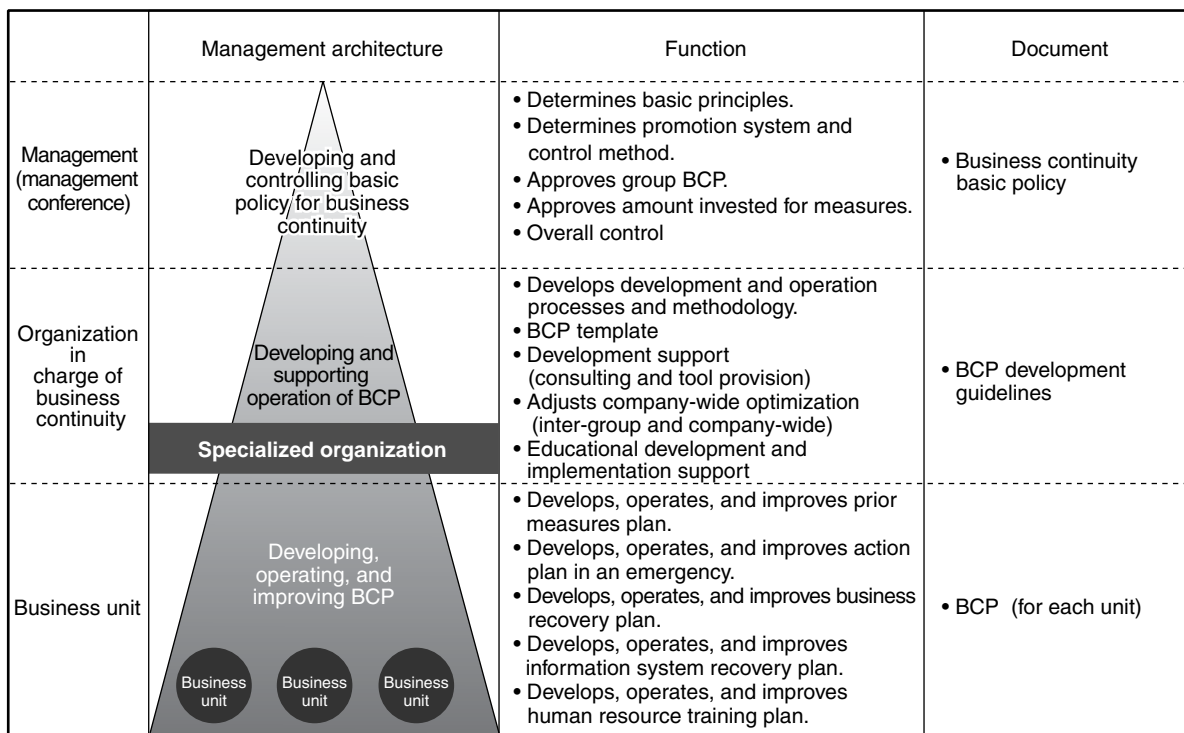


Figure 2 Business continuity management in Fujitsu.

## 5. Fujitsu's BCP development methodology

Fujitsu's BCP development methodology has been standardized as the Fujitsu Business Continuity Management Model (**Figure 3**). This model covers the phases from planning to operation. BCP development and operation management performed in accordance with this model enable visualization and standardization of an entire business process regardless of differences in the business environment and structure.

This model consists of the following six phases:

### 5.1 BCP system development (Phase I)

This phase develops collaborative projects between the specialized organization for BCP development and the target business operation.

### 5.2 Analysis of business continuity requirements (Phase II)

This phase structures the current business processes and resources and sets a goal for business continuity. **Figure 4** shows the flow of

business continuity requirement analysis.

- 1) Collect and analyze information required for BCP development (research of the business environment and structure) (①).
- 2) Based on the information collected by interviews and questionnaires, analyze the impact of business interruption (Business Impact Analysis) (②).
- 3) Based on the analysis results, determine the Recovery Time Objective (RTO) (③).
- 4) Analyze the business processes, resources that support the processes (people, facilities, information systems, etc.), and physical resource assignment to create a structured influence diagram (**Figure 5**) (④).

The influence diagram clarifies the conditions for implementing business using the structured business processes and resources.

- 5) Analyze the risk environment surrounding the business to make assumptions about the risk factors and risk occurrence status. Although the possibility of an earthquake is often considered in risk analysis, it is important to study a wide range of situations that

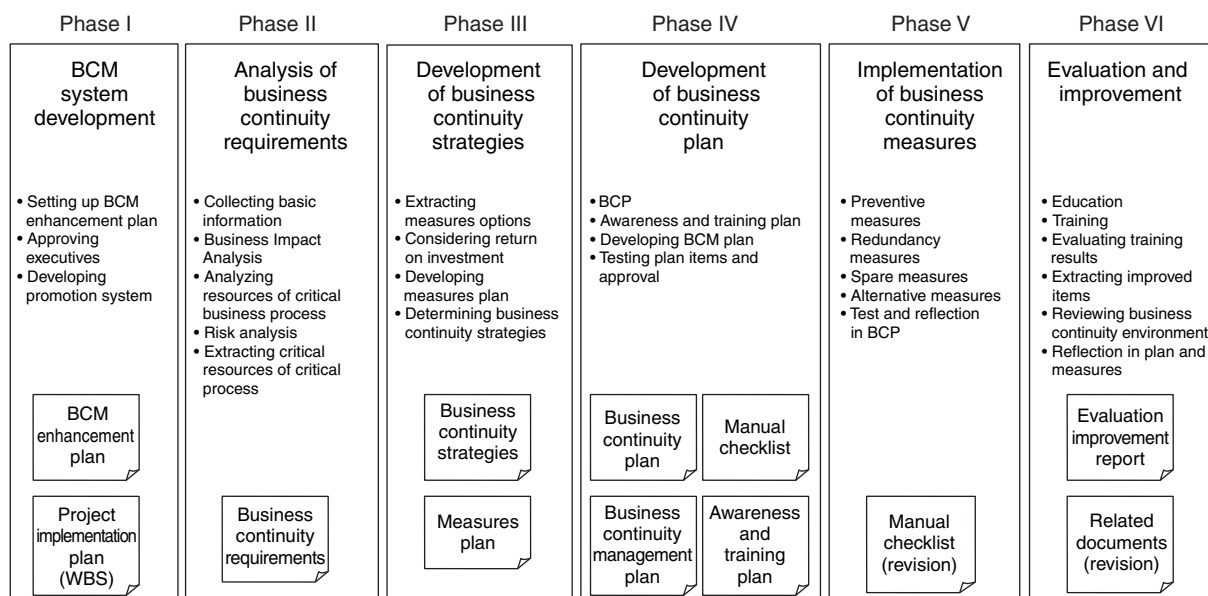


Figure 3  
Fujitsu's Business Continuity Management Model.

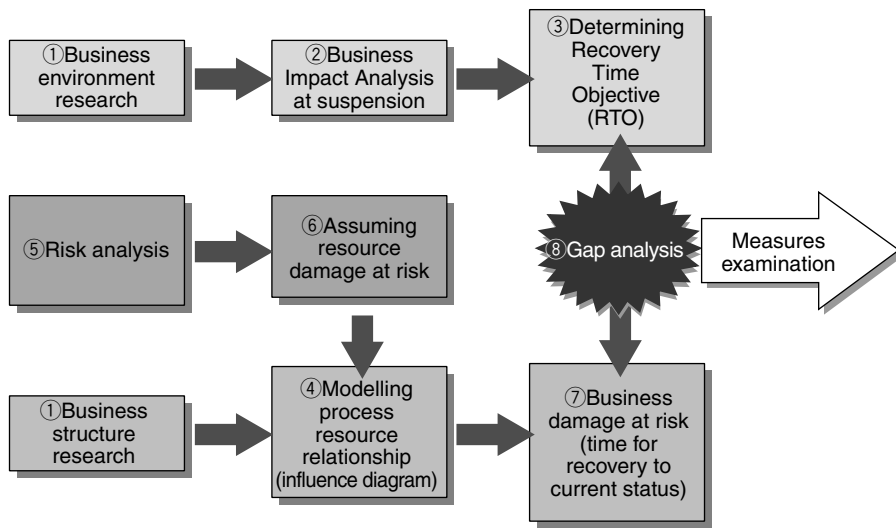


Figure 4  
Flow of business continuity requirement analysis.

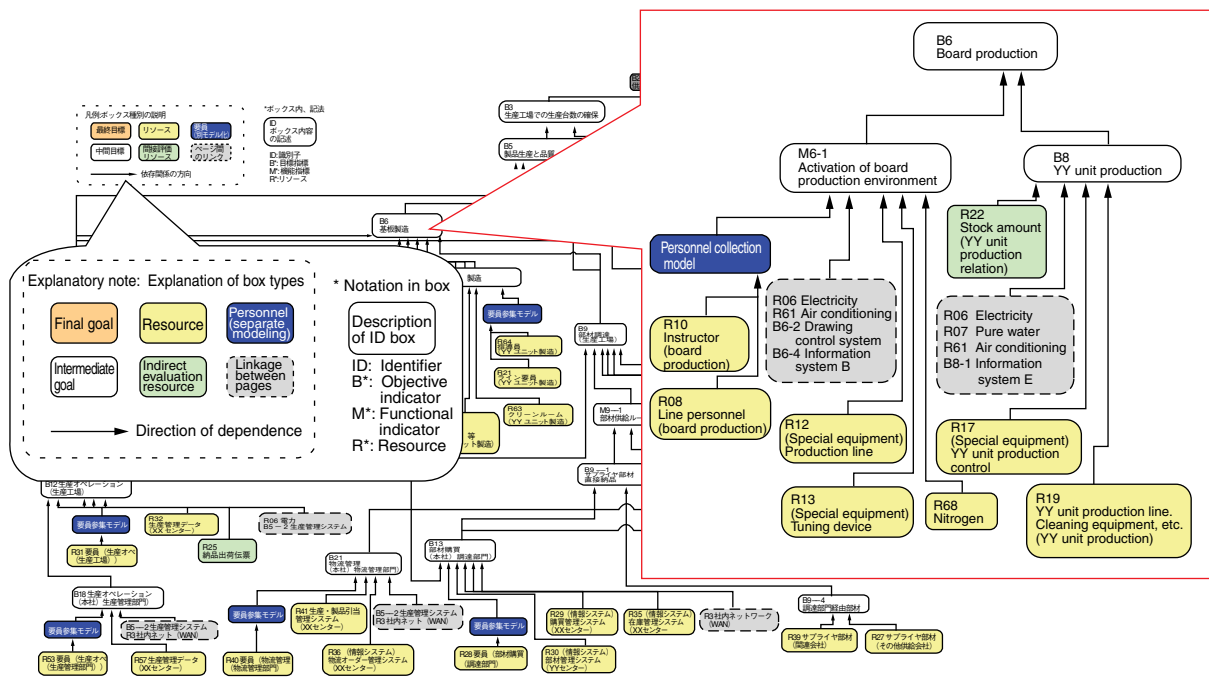


Figure 5  
Influence diagram.

can occur. For example, a bird flu pandemic would leave buildings and equipment undamaged but would incapacitate an estimated 40% of the population. This situation clearly differs from that of an earthquake and consequently requires different countermeasures. While it is a waste of time to think of unrealistic situations, it is important to look beyond the obvious risks to business continuity (⑤).

- 6) Based on the above risk analysis, apply the situation (resource damage) to the influence diagram (⑥).
- 7) Based on the resource damage, determine how much damage the current business will suffer (time for recovery to current status). Also, identify the critical resource that will have the largest impact on the stop time (⑦).
- 8) Achieve the goal of BCP, which is to bridge the gap between the present recovery time and the RTO that has already been specified (⑧).

### 5.3 Development of business continuity strategies (Phase III)

This phase determines measures and strategies for attaining the above-mentioned goal of BCP. There is an inverse relationship between the amount invested in the measures for business continuity and the effects they produce. If it were assumed an earthquake would make a critical production base unusable, it would be better to build a plant having the same production capability elsewhere in advance. An information system can be made continuously available simply by building a second or even a third information center. However, for many companies, these measures are prohibitively expensive. This phase determines the optimum balance between the improved responsiveness to an unexpected situation and the investment amount and also determines the measures and business continuity method to be employed in an emergency. To achieve these goals, the return on investment in

the business continuity enhancement investment must be visualized to support management decision-making. **Figure 6** shows a matrix chart of the return on investment. Based on this matrix, priority will be given to measures with lower investment and higher effect. A measure with a higher investment and effect (construction of a second plant, dual information system centers, etc.) will be addressed as a medium-term to long-term management challenge at the management's discretion.

### 5.4 Development of business continuity plan (Phase IV)

This phase creates a practical action plan based on the business continuity strategies. The action plan consists of an implementation plan of various measures, an education and training plan, and an emergency action plan. The most significant of these is the action emergency plan, which must be optimized so that the persons in charge will rapidly and steadily perform their roles. This plan should be in the form of a concise manual or checklist that clarifies the individual roles and contains only the required information.

### 5.5 Implementation of business continuity measures (Phase V)

This phase implements the measures specified in the action plan. The measures include employee education and the fostering of specialists as well as measures for physical resources (i.e., preventive, redundancy, spare, and alternative measures).

### 5.6 Evaluation and improvement (Phase VI)

This phase performs yearly training in accordance with the developed BCP and updates the BCP every year after a review of the business continuity requirements based on the changes in the business environment. This phase is the most important phase for keeping the BCP effective at all times. To reduce the load on the continuous



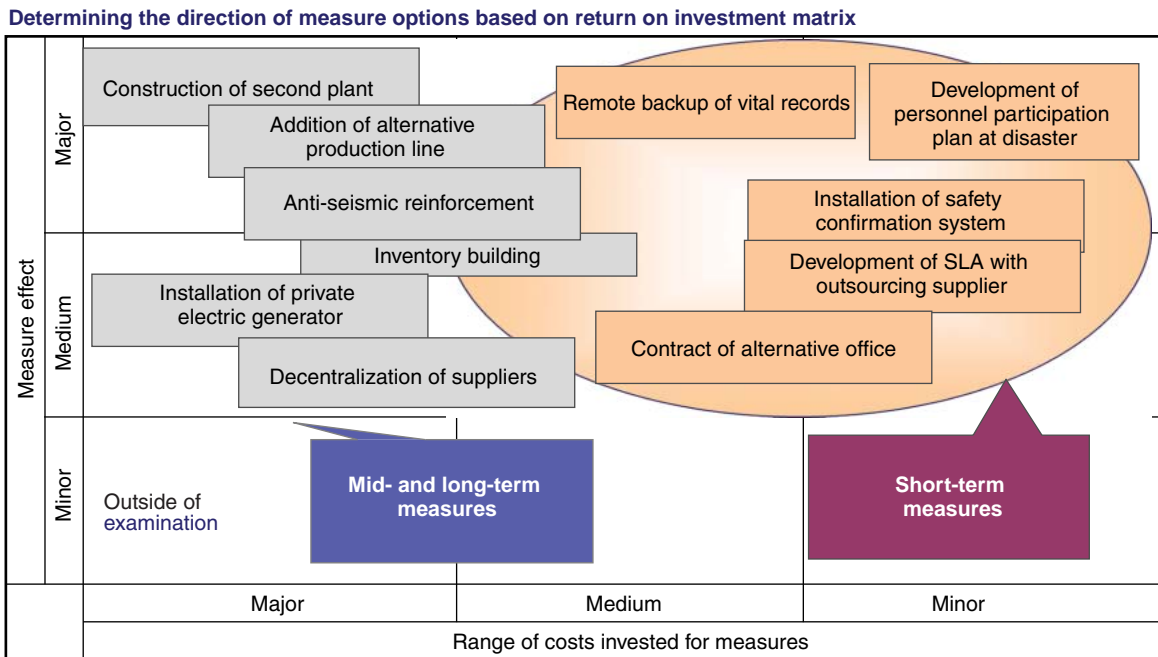


Figure 6  
Concept of measures examination (example for manufacturing industry).

improvement activities, in addition to keeping the BCP up-to-date, it is also important to pursue BCP document composition with easy maintenance and efficient updating.

## 6. Tool for promoting BCP development efficiency

Fujitsu uses the BCEXPART software tool to promote standardization and efficiency of BCP development and updating operations (Figure 7).

BCEXPART provides standard processes from BCP development planning to BCP update operation. It consists of BC-Navi, which supports project management; tools that support simulations in each process; and document template groups. The goal of BCP development is to create an effective action plan for continuing business in an emergency. This action plan is based on the results of researchers who have analyzed the business environment, business structure, risk environment, and other factors. The environment surrounding business is constantly changing, and to quickly and accurately reflect these changes

in the action plan, a proactive approach to BCEXPART and other software tools is essential.

## 7. Future issues

To continuously promote business continuity enhancement activities based on BCP development, the following issues must be addressed:

### 1) Visualization of activity results

It is easy to understand the costs of BCP development and these activities but difficult to understand their achievements. Therefore, the continuous improvement activities are liable to lose momentum. One effective way to promote these activities is to set activity results benchmarks. These benchmarks establish standards (maturity models) for the measurement of a company's business continuity capability and link the standards with the activities' status. To create a maturity model, benchmarks regarding the approaches of advanced companies and other companies in the same industry are necessary. However, there is no accumulation of effective data in Japan. We expect that the BCAO and industry

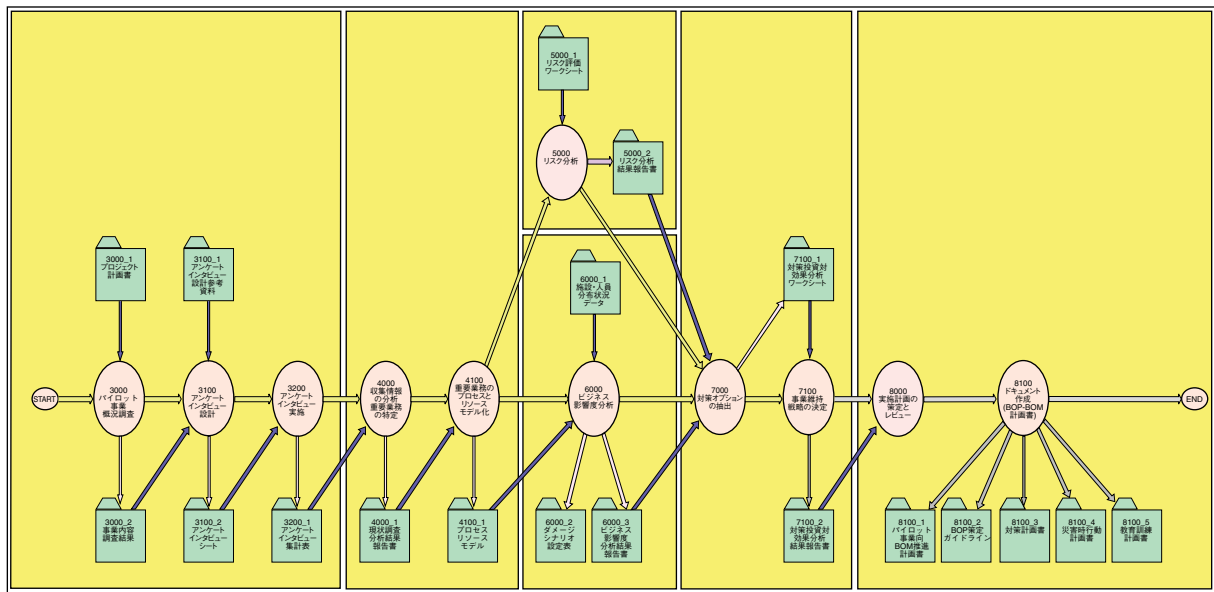


Figure 7  
BCM operation support tool (BCEXPERT).

groups will promptly develop these benchmarks.

## 2) Linkage with internal control

It is important for each company to implement measures to ensure the level of internal control that will be required by the soon-to-be-enforced Japanese SOX act. Internal control and business continuity have one thing in common in their implementation processes in which process-oriented examinations are made and risks are clarified and controlled. However, they differ fundamentally in their purpose and scope because internal control is intended to guarantee reliability of financial reports, while business continuity is intended to continue critical business activities in an emergency. Essentially, it would be ideal if BCP development and continuous improvement activities were both controlled by internal control activities. However, at the moment they must be developed as separate efforts. In the future, integration between internal control and business continuity activities will be promoted in line with the expansion of the scope of internal control.

## 3) Business continuity enhancement in the supply chain

Because Fujitsu has been developing various businesses in the global supply chain, a company-specific BCP is unlikely to enhance business continuity. Fujitsu will continuously review the service level agreements (SLAs) with its clients and evaluate how its business partners have developed their BCPs.

## 8. Conclusion

Sometimes, BCP development work is described as a tunnel that has no exit because, despite the extensive research analyses and large volumes of documentation associated with BCP development, the effectiveness of a BCP cannot be demonstrated until an emergency occurs. However, from a completely different standpoint, BCP development work provides a big opportunity for management restructuring. As mentioned above, the work includes creating a relationship model between the business processes of critical business activities and required resources to analyze the impact that resource damage will have on a business. In fact, this model can be used as a simulation model to cope with changes in the management environment and optimally and







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