Beyond disaster recovery: becoming a resilient business.

An object-oriented framework and methodology

by Richard Cocchiara
Chief technology officer for business resilience
Executive summary
As you probably understand all too well, today’s business environment is characterized by rapid, unpredictable change. Some changes bring opportunities for your business, while others bring challenges and sometimes even threats. But no matter what, your business has to be responsive and resilient—seamlessly taking advantage of opportunities while mitigating risks. Your IT infrastructure must be designed to help ensure the continuity of your business operations in the event of an unexpected disruption, and to secure data integrity. It also must help you comply with government regulations and integrate risk strategies to reduce costs, and it must be able to scale rapidly and automatically as the market changes.

To help organizations understand and manage the process of becoming resilient, IBM has developed an object-oriented framework and transformation lifecycle. Borrowing from the concept of an object-oriented database, IBM has created a business resilience framework that is designed to help you identify the object layers that make up your company—ranging from the strategic overlay, all the way down to the nuts-and-bolts technologies and facilities. Within each layer, the objects are assigned specific attributes that...
help manage the risks associated with each object. Once you understand these objects, their attributes and the relationships among them, you can begin to identify areas for improvement. IBM can take you through the business resilience transformation lifecycle to help you:

- *Determine which risks may affect your organization*
- *Calculate the potential impact that these risks could have on your organization*
- *Plan for how the objects in your current infrastructure could respond to these risks*
- *Design or update your infrastructure to mitigate these risks and to leverage any opportunities that might arise from market changes*
- *Execute your strategy for improving your business resilience*
- *Implement the changes to each object layer*
- *Test your overall resilience*
- *Manage your resilience program to incorporate improvements and changes in technology.*

This white paper explores the business and technical advantages of an object-oriented framework and transformation lifecycle for business resilience.
Coping with continuous change

As you know, fluctuating business conditions are a double-edged sword. Almost any risk—whether it comes in the form of an opportunity or a threat—requires a response from your business. If you respond inappropriately or too slowly, you could lose ground to your competitors. For example, while too much success may not sound like a threat to your business, it can become one if you’re not prepared to handle a surge in customer demand. When Victoria’s Secret televised a fashion show during the 1997 American football Super Bowl, the company was unable to scale to meet the ensuing demand for access to its Web site, resulting in significant performance degradation and customer dissatisfaction.

On the other hand, a disruption in business operations and services, whether from a natural disaster, a terrorist strike, a cyber attack or a simple malfunction, can seriously reduce your revenues and even do long-term damage to your brand. Industry estimates indicate that upwards of 40 percent of organizations without business continuity and recovery plans will go out of business within a few years of a major disaster.

The best response to the threat of disaster is to combine several disparate risk management strategies into a single, integrated resilience strategy that will allow your organization to adapt and respond rapidly to opportunities, regulations and risks—in order to maintain highly secure continuous business operations, be a more trusted partner and enable growth. Because such an approach addresses both the positive and negative ramifications of risk, IBM uses the term “business resilience” to distinguish between this comprehensive strategy and narrower approaches, such as disaster recovery, high availability, security and business continuity.
What business resilience means—some basic requirements

In worldwide studies conducted by The FactPoint Group, a Silicon Valley-based research company, for IBM in both 2004 and 2005, CEOs highlighted the six key areas that a business resilience framework should address:

- **Continuity of business operations**—become more anticipatory, adaptive and robust, from IT through all business processes
- **Regulatory compliance**—comply with new and changing government rules and regulations more quickly and cost-effectively
- **Integrated risk management to reduce costs**—stay competitive by managing risk more efficiently and cost-effectively
- **Security, privacy and data protection**—protect against internal and external threats, and help develop a critical information management policy
- **Access to expertise and skills (via outsourcing or training)**—develop the infrastructure to support the easy acquisition and management of expert assistance in maintaining continuous business operations
- **Market readiness**—anticipate and respond to changing market conditions and accelerating research and development as necessary to get the right products to the right buyers at the right time.

In the past, businesses typically have addressed these concerns separately. However, many companies now recognize that it’s more cost-effective to combine them into a single, integrated strategy. A holistic approach can help minimize risks, maximize opportunities and address compliance needs—all at the same time. But how do you perform a holistic risk assessment of your entire enterprise without missing any critical element? IBM has found that an object-oriented framework can help you model your total business infrastructure and clearly identify issues that must be addressed to make your business more resilient.
The business resilience framework—an object-oriented approach

IBM has spent years analyzing what is necessary to ensure business resilience. In the process, IBM has identified a collection of components—called objects—that together can be used to model your entire business infrastructure. Inspired by the concept of database objects, these components have attributes that help define them in terms of their ability to address the six basic requirements of business resilience. Objects can share similar attributes, and these shared attributes, in turn, help define the relationships among objects. And objects with shared attributes can be grouped into object classes. Companies can then use these classes to understand common issues and to speed the deployment of improvements and upgrades designed to promote resilience.

<table>
<thead>
<tr>
<th>Resilience layer</th>
<th>Object class</th>
<th>Object</th>
<th>Attribute</th>
<th>Value</th>
<th>Maturity value</th>
<th>Attribute relationships</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process</td>
<td>IT process</td>
<td>Problem management</td>
<td>Owner</td>
<td>John Smith</td>
<td>3</td>
<td>Common primary owner with change management, with no secondary or tertiary owner defined</td>
</tr>
<tr>
<td>Change management</td>
<td>Owner</td>
<td></td>
<td>Value</td>
<td>Maturity</td>
<td>Attribute relationships</td>
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<td>Maturity</td>
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<tr>
<td>Maturity levels</td>
<td></td>
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<td>1 = No owner 2 = Multiple owners 3 = Primary owner defined, no backup 4 = Primary and secondary owner defined 5 = Primary and secondary owner with defined authorities</td>
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Table 1. Sample objects and attributes
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