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Risk Assessment Threat Matrix and Heat Map

Excerpt from the SEC Business Continuity Playbook, Dean Correia Contributing Editor

Business disruptions can take many forms. Before a BCP can be developed to address these disruptions, one must understand what the risks to the organization are and how these risks might affect the business. This is the goal of the first core element of the BCP, called the "risk assessment".

Risk assessments should be conducted by a team of individuals who represent various business functions and support groups. As business plans change, risks and their possible effects on the business may change. Therefore, risk assessments need to be reviewed on a regular basis to ensure they remain relevant and effective.

The assessment process should include hazard identification, determination of the likelihood of occurrence and possible impact on the business. This information becomes the needs or requirements that the remainder of the BCP must address.

Hazard Identification

Hazards are typically grouped into three categories: natural (fire, flood, pandemic), human-caused (hazardous material spill or release, terrorism, fraud), and technological (software/hardware malfunction). Risk information should be gathered from all local, regional, and national industry, association, and governmental sources. During this process, keep in mind that threats and vulnerabilities can be internal or external to the business. For example, disruption to the business can be indirectly caused by crises suffered by suppliers, customers, the local community or government.

Vulnerability Assessment

Not all risks are equal. Risks that are extremely improbable or that have little impact on the organization may need to be treated differently than high cost events. Therefore, after identifying the hazards to the organization the next step is to determine the likelihood and possible impact of the events.

Threat Matrix and Heat Map

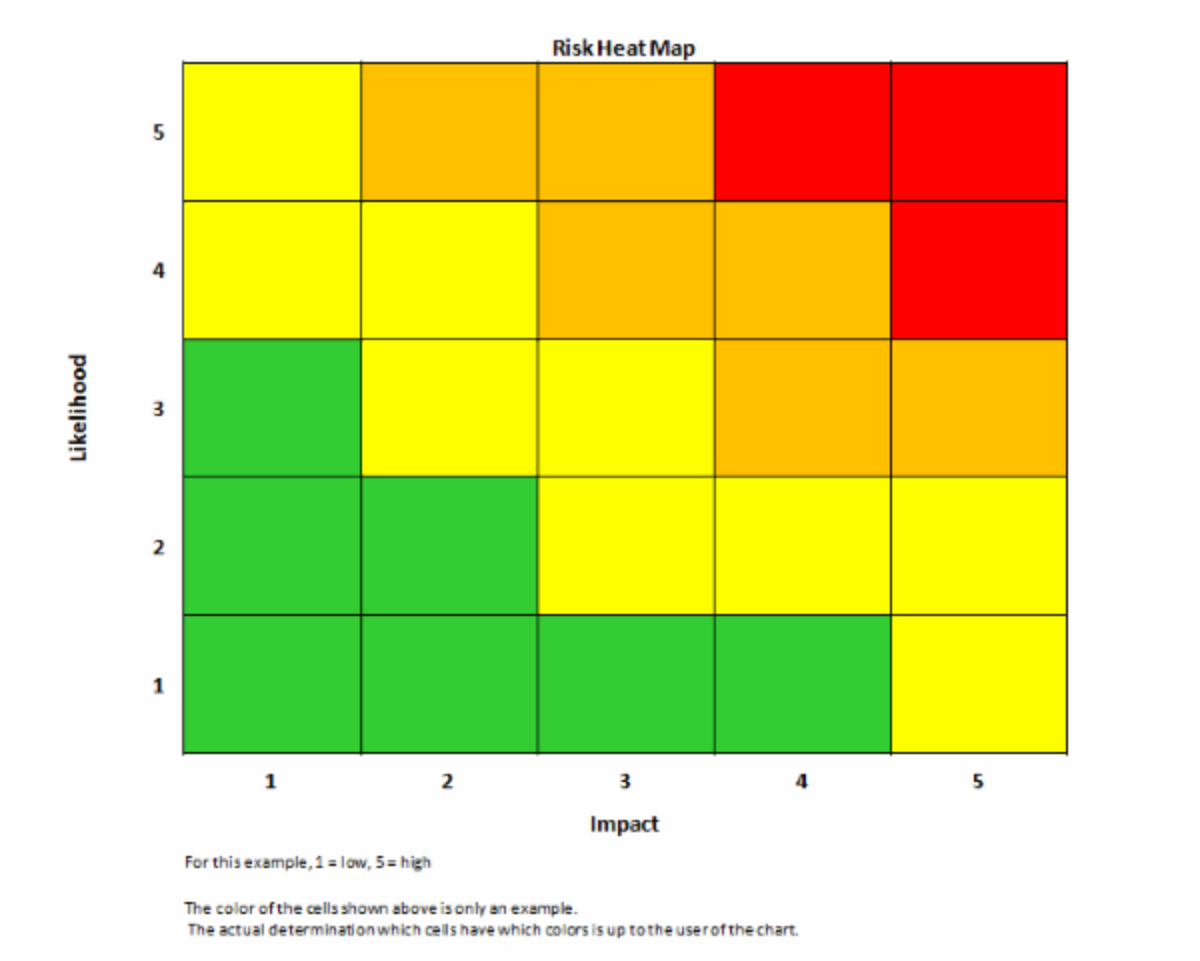
In order to effectively analyze and communicate the results of the assessments, they frequently lead to the construction of a threat matrix and "heat map" which show the relationship of risks to their probability and amount of expected damage to the organization.

The sample matrix below illustrates threat examples and demonstrates how risks can be categorized and quantified. *Note: this list is not exhaustive and should be tailored to reflect the organization's operating environment.*

> Rate "Probability" as: 1 = Very Low; 2 = Low; 3= Medium; 4 = High; 5 = Very High Rate
> Rate "Impact" as: 1 = Negligible; 2 = Some; 3 = Moderate; 4 = Significant; 5 = Severe;
> Risk Rating = Probability X Impact

Threat	**Impact**	**Probability**	**Risk Rating**
Bombing			
Workplace Violence			
Robbery			
Supply Chain Disruption			
Loss of Key Talent			
Loss of Key Supplier			
Hurricane			
Fire			
Pandemic			
Tsunami			
Product Contamination			
Information Systems Disruption			
Loss of Proprietary Information			
Foreign Exchange Fluctuation			
Power Failure			
Work Stoppage			

The various identified threats can be placed in their corresponding positions within a heat map based on their assigned probability and impact. The color of the cells in the heat map should be determined by the user to communicate the information appropriately to the intended audience.



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The SEC is the leading research and advisory firm focused on corporate security risk mitigation solutions. Having worked with hundreds of companies and organizations we have witnessed the proven practices that produce the most positive transformation. Our subject matter experts have deep expertise in all aspects of security risk mitigation strategy; they collaborate with security leaders to transform security programs into more capable and valued centers of excellence. Watch our 3-minute video to learn more.

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