PRACTICAL APPLICATIONS FOR BUSINESS CONTINUITY MANAGEMENT

Karl D Bryant, MBCP, MBCI, CBCLA, PMP
Senior Vice President
Business Continuity Management (BCM) Defined

- Holistic management process.
- Identifies potential impacts that threaten an organization.
- Provides a framework for building resilience with the capability for an effective response that safeguards the interests of its key stakeholders, reputation, brand, and value-creating activities.
- Management of recovery or continuity in the event of a disaster.
- Management of the overall program through training, rehearsals, and reviews to ensure the plan stays current.
The Four Main Components of BCM

1. **Crisis Management (CMP)**
   - Overall coordination of the response to a crisis, in an effective, timely manner, with the goal of avoiding or minimizing damage to the organization’s profitability, reputation, and ability to operate.

2. **Emergency Response (ERP)**
   - Immediate reaction and response to an emergency situation commonly focusing on ensuring life safety and reducing the severity of the incident.

3. **Business Continuity Planning (BCP)**
   - Identification and protection of business processes required to maintain an acceptable level of operations in the event of sudden, unexpected, or not so unexpected interruption of these processes and their supporting resources (i.e., to do what is necessary to keep the critical business units running).

4. **Disaster Recovery (DR)**
   - Technical or IT portion of the BCP that includes mainframe, midrange (i.e., VAX, AS/400), client server (i.e., UNIX, NT), etc.
Business Continuity Planning
How Does It All “Fit” Together

ERP: Emergency Response Plan
Event Driven Response
(Site Impact)
Contamination
Bomb-threat
Fire
Earthquake
Wind
Etc.

IT-DRP: IT Disaster Recovery Plan
(Technology – Voice & Data Impact)
Network Failure
Sabotage
Virus
Physical Loss of Systems
Etc.

CMP: Crisis Management Plan
Event Escalation Response
(Corporate Impact)
Non-physical or physical impacts
Examples:
Exxon – Valdez Oil Spill
J&J – Tylenol Tampering
Hudson Foods – Meat Threat

Depending on the Event, the Integration of All Plans is Possible

Business Continuity Plan

BCP: Business Continuity Plan
Time Driven Response
(Site and Business and Image Impact)
Infrastructure Disruptions
Business Unit Disruptions
Department Disruptions
Supply-chain Disruptions (Failure to deliver product or service)
Methodology and Approach

BI→BCP: The Components of a BI Loss

BCP will bridge the gap after suffering a catastrophic loss in areas not addressed by traditional business interruption (BI) coverage.

- Loss of market share.
- Loss of critical customers.
Event Neutral Planning
Business Continuity Management
Planning Methodology

- **Maintain**: Plan testing, training and maintenance.
- **Identify**: Perform Risk Assessment.
- **Implement**: Develop and implement business recovery plans.
- **Analyze**: Perform Business Impact Analysis.
- **Develop**: Select Recovery Strategies.
Methodology and Approach
BCM Planning Objectives

• Create standard for enterprisewide BCP.
  – Establish a standard planning toolkit and implement the same “look and feel” for all operations.
    • Helps to engender the plan as a part of the organizational culture.
    • Increases the likelihood that plans will have congruence and work in harmony at a time of crisis.
  – Gather data for recovery resource requirements – Business Impact Analysis (BIA).
    • Avoid creating or documenting catalog information – recovery period will not be identical to “business as usual” and recovery requirements will not be an inventory of what is currently in place.
    • Focus on capturing resources and infrastructure requirements to establish an acceptable level of operations – the optimal solution set for getting back in business and maintaining baseline operations until normal functional levels can be restored.
Methodology and Approach

BCM Planning Objectives

• Identify and analyze gaps between recovery requirements and existing recovery capabilities.
  – Make every effort to reuse, retool existing infrastructure (i.e., alternate workspace, IT environments, common areas) in the development of recovery solutions.

• Develop viable recovery strategies for all operating units.
  – It is critical that during the planning process great care is taken to ensure that the solutions developed are reasonable and practical.
  – It is not sufficient to develop recovery strategies based on “conventional wisdom,” especially if they are not fully vetted and validated through plan exercising.
Methodology and Approach

BCM Planning Objectives

• **Conduct training and awareness sessions.**
  – Make sure all program stakeholders (i.e., executives, employees, customers, supply chain partners) understand why the plan was implemented and how it protects their interests.
  – Increases likelihood that plan owners and constituents know what to do in a crisis situation.

• **Establish a process for updating and maintaining business continuity plans.**
  – The plans will become out of date almost immediately.
  – It is critical that the plans be relevant and topical in the event they are needed.
  – Well maintained plans enhance audit compliance.
Complete Testing

A testing program is developed and implemented to provide training and to identify areas for improving business continuity plans.

3. Functional Testing
Demonstration of emergency management capabilities of several groups practicing a series of interactive functions, such as direction, assessment, control, operations and planning; actual or simulated response to alternate locations/facilities using actual communications capabilities; mobilization of personnel and resources at varied geographical locations; and actual response to actual, as opposed to simulated, notification and resource mobilization.

4. Full Scale Testing
Validation of crisis response functions; demonstration of knowledge and skills as well as management response and decision-making capability; on-scene execution of coordination and decision-making roles; actual notification and resource mobilization and communications of decisions; activities conducted at actual response locations/facilities; enterprise-wide participation and interaction of internal and external jurisdictions (with the involvement of external organizations); actual processing of data using backup media; exercises generally extending over a long period of time to allow issues to fully evolve as they would in a crisis and allow realistic role play of all involved groups.
Why Are Companies Focusing on Resilience Now?

- Companies that are not resilient in a crisis face a strong probability of irreversible share price damage.
- Definitions of impact are often too narrow - focusing on BI, when broader operational and financial impacts should be considered and quantified.
- In a crisis, a lack of liquidity can easily precipitate bankruptcy despite the fact that any given company is well-capitalized.
- There is pressure on executives to deliver future earnings assurance.
- Risk professionals are under pressure to optimize investments in resilience as many companies are not achieving the right blend — and overspending/underprotecting as a result.
- The attritional losses and claims experienced by a company can often be a proxy for wider governance and resilience issues.
Preparedness Program Maturity

**Optimized**
Continuous improvement and full range and cycle of program activities being accomplished, part of culture, best in class.

**Embedded**
Integration and validation between teams, ongoing individual and team training, integrated exercising, ongoing regular awareness programs, preparedness in job descriptions.

**Established**
Internal and external linkages established, team training and exercises complete, program to manage in place.

**Formalized**
Enterprisewide programs and policies, plans developed, minimum standards met.

**Emerging**
Individual programs, including IT disaster recovery and emergency response, are more mature (i.e., formalized/established).

**Undeveloped**
Ad hoc actions with little or no documented plans and procedures.
Business Resilience Maturity Levels
Companies are evolving their risk management thinking to address this universe of threats.

Value Added for Your Organization

Insurance and compliance
“Risk management equals buying insurance” → Risk transfer via insurance

“Regulators are demanding risk management activities” → Over-reliance on ‘checklists’, false sense of security

Core risk management
“We need a sustainable process for monitoring all our risks” → Qualitative risk management

“Risk needs to be quantified comprehensively” → Over-control by centralized risk management, initial quantitative models too primitive

Risk-return optimization
“Shareholders demand a risk/return framework” → Risk and growth appetite defined, risk dynamically measured and aggregated properly

“Decision making across the firm is linked to building economic value” → Risk adjusted resource allocation at all levels

Evolution of Risk Management Thinking

Disaster Recovery
(Component level contingencies and data center solutions)

Business Continuity
(Integrating Business Recovery and Disaster Recovery)

Business Resilience
(Integrating Crisis Management with Business Continuity and aligning it with overall Risk Management)
Document Business Continuity Plans

Strategies for non-high impact and/or non-high effort resources are selected and procedures for implementing recovery strategies are formally documented in business continuity plans to support more efficient implementation at time of disaster.

Illustrative – Plan Documentation
Resource Prioritization

Resources (e.g., people, physical, technology, and relationships) are prioritized to support the identification and the development of both tactical and strategic options.

- **Low Impact/High Effort**
  - Tactical options.
  - Quick hits.
  - Minimal investment to provide greater resiliency.
  - Knowledge/strategy exists, but not formally documented.

- **High Impact/Low Effort**
  - Strategic options.
  - Focus on the priorities.
  - Identify risk mitigation and financing options.
  - Model and price.
  - Require longer term programs and solutions, probably some degree of risk acceptance.

- **High Impact/High Effort**
Our Resiliency Discussion Targets Unmanageable or Unplanned Volatility

Volatility – Risk Events

Focus

Goal: Minimize the impact of extreme events (volatility)

Impact

Unmanageable Threshold

Manageable Threshold

Events

Time

19
Risk Investment

Building the business case for risk investment requires the modeling and analysis of risk mitigation, finance, and avoidance options ("levers").

**High Impact/High Effort**

- Insurable/Transfer
- Insurable but not Insured
- Alternative Financing
  - Retained & Mitigated
  - Retained but not Mitigated

**Transfer Strategy (sample)**
- Marine & Cargo
- (Contingent) Business Interruption
- Supply Chain Interruption
- Terrorism
- Product Risk
- Cyber-threat
- Trade credit

**Risk Mitigation Programs (sample)**
- Business Continuity
- Crisis Management
- Disaster Recovery
- Crisis Management
- Environmental, Health & Safety
- Emergency Management
- Product Recall
- Quality

Other (mitigation levers to be applied within each of the categories below; however, description of specific levers not provided in this illustration)
- Labor
- Technology & Processing
- Physical Assets (excluding inventory, example provided)
- Relationships
- Processes
BCM Methodology and Approach
Value Stream Mapping
Bringing Together Risk, Finance, and Operations

ABC Manufacturing – Plant A, Springfield USA
“Extended” Supply Chain Mapping

Any failure may materially impact your ability to deliver value. Understand resource dependencies and their maximum loss across the extended supply chain.

Determine the Exposure

- Raw materials/In process products
- Finished products
- Information flow
- Cash flow

(end user) Retail Stores

Division 1 Location A
Division 2 Location B
Division 3 Location C

3PL Warehouse and Dist. Centers
Location Y Location Z

Corporate

Inactive and Material Suppliers
Active Ingredient Suppliers

Location E Location F
Location C Location D
Location W Location X

Bulk Crew Production
Packaging and Materials

Forecast SAP
Forecast SAP
Sales Orders Inventory Data
Sales Orders SAP

3PL Orders
Milk Orders
Milk Orders

$1b
$500m
$500m
$250m
$1.1b
Value Alignment
The ocean is too big to boil. Begin by segmenting product/service lines then rationalize product/service mix.

Product Families
- Product A
- Product B
- Product C
- Product D
- Product E

<table>
<thead>
<tr>
<th>Product</th>
<th>C-Brand Widgets</th>
<th>D-Brand Widgets</th>
<th>E-Brand Widgets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenue</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Margin</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total Sales %</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total GM</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
A “system” is needed to identify and measure impact as well as allow for measurement of return on risk investment (RORI).

- The “system” should represent a business-aligned, measureable, adaptable, and repeatable process for efficiently and effectively allocating risk resources (time, management attention, capital, resources).
- It should begin by focusing on what the organization has established as its business priorities, i.e., what products and/or services create the greatest value.
- The “system” should then identify and measure the impacts of disruptions across the extended supply chain.
- These impacts should be quantified, qualified, and prioritized.
- The “system” should identify options for managing the risk, including risk mitigation, avoidance, and finance.
- The options should be quantified and modeled to measureable effect on reducing disruption risk.
- The options that provide the greatest return on investment are then approved, funded, and executed.
- The options should be documented, executed, validated, monitored, and maintained.
The “system” is used to identify, measure, and prioritize investment decisions.

Value Alignment
- Value segmentation and product rationalization.
- Scoping/cropping.
- Flow mapping and analysis.
- Risk paradigm set, listening posts and market sensing, client and market alignment.

Risk Identification
Impact assessment
- Line of sight (business process and resource mapping) and scoping.
- Impact failure analysis and modeling.
- Relevance and threat analysis and modeling.

Prioritization and Allocation
- Current state evaluation.
- Risk tolerance index (current state and benchmark).
- Risk effect analysis (current state and benchmark).

Gap Recognition
- Risk option analysis and modeling (finance, alternate finance, mitigation, acceptance).
- Integration impact analysis and modeling (cost, service, social, quality).

Risk Measurement
Modeling Investment Decisions
- Risk option analysis and modeling (finance, alternate finance, mitigation, acceptance).
- Integration impact analysis and modeling (cost, service, social, quality).

Option Analysis and Modeling
- Solution pricing and modeling.
- Business case creation with roadmap.
- Decision modeling.

Pricing and Measurement
- Decision support modeling.
- Intelligence management and analytics.
- Integrated risk program.
  - Risk mitigation program.
  - Risk financing program.
  - Risk retention strategies.

Risk Execution
Mitigation, Financing, Retention, Monitoring, and Optimization
- Risk transfer optimization analysis and modeling.
- Risk mitigation optimization analysis and modeling.
- Risk portfolio optimization analysis and modeling.

Continuous Improvement
- Overall program assessment, validation, continuous improvement.

Risk Investment Modeling

Options can be modeled to the return on risk investment (RORI) for both strategic and tactical decisions.

**EXAMPLE 1**
Strategic Option
e.g., 1 vs. 2 DCs

**EXAMPLE 2**
Tactical Options
e.g., investment in safety stock

*Modeled Network*

1 DC Model Reaches 99% Fill Rate in 17 Weeks
2 DC Model Reaches 99% Fill Rate in 4 Weeks

*Modeled Network W/Additional Levers*

1 DC Model Reaches 99% Fill Rate in 4 Weeks
2 DC Model Reaches 99% Fill Rate in 4 Weeks

![Network Diagrams](image1.png)

![Network Diagrams](image2.png)
Risk Strategy (summary)

Efficient and effective allocation of scarce risk resources ("Risconomics") is best aligned by business value rather than asset value.

Attributes of the value chain approach that support greater return on investment.

- Identifies and quantifies the business “need” for enterprise resiliency both at a macro level and at a detailed level.
- Product modeling and analysis illustrates risk mitigation and financial allocation against risk exposures.
  - Stakeholder thresholds (e.g., customer, regulatory, etc.) are identified and are incorporated into the modeling process.
  - Modeling process illustrates the potential impact the implementation of mitigation and recovery strategies (“levers”) has on overall enterprise resiliency.
- More efficient and effective deployment of limited resources (e.g., financial, people, etc.) to products and services that are the most critical.
Summary

• Risk Identification and Impact Assessment.
  - Value alignment.
  - Prioritization and allocation.
  - Gap recognition.
• Risk Measurement and Investment.
  - Option analysis and modeling.
  - Pricing and measurement.
• Execution.
  - Program management.
  - Monitoring and optimization.
  - Continuous improvement.
Marsh is one of the Marsh & McLennan Companies, together with Guy Carpenter, Mercer, and Oliver Wyman. This document and any recommendations, analysis, or advice provided by Marsh (collectively, the “Marsh Analysis”) are not intended to be taken as advice regarding any individual situation and should not be relied upon as such. The information contained herein is based on sources we believe reliable, but we make no representation or warranty as to its accuracy. Marsh shall have no obligation to update the Marsh Analysis and shall have no liability to you or any other party arising out of this publication or any matter contained herein. Any statements concerning actuarial, tax, accounting, or legal matters are based solely on our experience as insurance brokers and risk consultants and are not to be relied upon as actuarial, tax, accounting, or legal advice, for which you should consult your own professional advisors. Any modeling, analytics, or projections are subject to inherent uncertainty, and the Marsh Analysis could be materially affected if any underlying assumptions, conditions, information, or factors are inaccurate or incomplete or should change. Marsh makes no representation or warranty concerning the application of policy wording or the financial condition or solvency of insurers or reinsurers. Marsh makes no assurances regarding the availability, cost, or terms of insurance coverage. Although Marsh may provide advice and recommendations, all decisions regarding the amount, type or terms of coverage are the ultimate responsibility of the insurance purchaser, who must decide on the specific coverage that is appropriate to its particular circumstances and financial position.

Copyright © 2015 Marsh LLC. All rights reserved. MA15-13749