Creating a Value Stream-Based Business Impact Analysis

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Agenda

• Define Business Impact Analysis and its use
• Collection of department information
• Methods to consolidate data
• Implications
Learning Objectives

Participants will be able to:

• Locate Business Impact Analysis (BIA) tools
• Understand data collection trade-offs
• Gain knowledge on methods for combining department information into an organization-wide BIA

Summary Findings/Recommendations

In conducting our BIA, we were able to:

• Identify groups/processes that, while not considered critical by themselves, were viewed as critical by key services
• Highlight constraints in mission-critical services
“Everyone has a plan till they get hit in the face.”

- Mike Tyson

Hierarchy of Needs or It is all About Risk – Not if, But When

Business continuity management (BCM) is focused on risk reduction and mitigation.

Types of risk:
How Does it Fit With BCM and EM?

While there is substantial overlap, the perspective of the two areas differs:

• Emergency management (EM) focus is on response and recovery
• Business continuity management focus is on maintaining and restoring

Why Do We Need to Do it?

Conducting a BIA will provide:
• Opportunity to mitigate future events
• Better respond if/when an event occurs

Also, it is a requirement:
• CMS-4159-F2 for Medicare Advantage and Part D
• Encouraged by others
Background

“Plans are useless, but planning is essential.”

– Winston Churchill

Business Continuity Institute Defines Four Types of BIAs

• **Initial** – framework to refine scope
• **Strategic** – prioritize services, time scales and tolerable disruption levels
• **Tactical** – Identify the dependent activities and most urgent impacts
• **Operational** – Determine the required resources for continuity and recovery
Basic Strategic – Business Impact Analysis Tool

CHA’s emergency preparedness website, calhospitalprepare.org, has a simple department reporting tool:


Operational – Business Continuity Planning Tool

CHA’s emergency preparedness website also has a more complete planning tool that could be used in response management:

[Link to Excel file: http://www.calhospitalprepare.org/sites/main/files/file-attachments/bcp_tool_0.xls]
A wide range of commercial business continuity planning tools are also available:

<table>
<thead>
<tr>
<th>Tool</th>
<th>Tool</th>
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</thead>
<tbody>
<tr>
<td>Clear View Recovery Planner</td>
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<tr>
<td>Continuity Logic Strategic BCP</td>
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<tr>
<td>Fusion Risk Management SunGuard</td>
<td></td>
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<tr>
<td>Global AlertLink Veoci</td>
<td></td>
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<tr>
<td>Metrics Stream Virtual Corp</td>
<td></td>
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<tr>
<td>Mir3</td>
<td>Mir3</td>
</tr>
</tbody>
</table>

Many of these companies include Business Impact Analyses in their standard products.

Critical vs. Time-Sensitive

Every function is critical, but some are more time-sensitive than others

Few, if any, of our organizations have the luxury of non-critical people or systems.
Terminology Translation Guide

**Event**

<table>
<thead>
<tr>
<th><strong>Timeline</strong></th>
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</thead>
<tbody>
<tr>
<td><strong>RPO</strong></td>
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<tr>
<td><strong>RTA</strong></td>
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<tr>
<td><strong>MTPD</strong></td>
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</tbody>
</table>

**RPO – Recovery Point Objective** ↔ How much is ok to lose?

**RTA – Recovery Time Actual** ↔ Planned time for systems to be back in full operation

**RTO – Recovery Time Objective** ↔ Agree on goal for systems to be back in full operation

**MTPD – Maximum Tolerable Period of Disruption** ↔ How long until you are missed?

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**BIA Process**

- Establish governance
- Design and define the scope
  - What impacts will be reviewed? (Build on your Hazard Vulnerability Analysis – HVA)
- Gather business process data
- Synthesize information
- Report
Management Support → Governance Model

Two requirements for management support:

• Conducting a Business Impact Analysis will require time from all departments across the health system
• Management support will be needed to put findings into action

Understanding Risks

“It is not a disaster till resources are scarce.”

- Michael Byrne

Corollary: Planning can prevent disasters
**Types of Events**

<table>
<thead>
<tr>
<th>Limited</th>
<th>Large-Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Advance Notice</td>
<td>Unannounced</td>
</tr>
<tr>
<td>Unannounced</td>
<td>Advance Notice</td>
</tr>
<tr>
<td>Unannounced</td>
<td>Unannounced</td>
</tr>
</tbody>
</table>

**Example**
- Flooding
- Plane Crash
- Hurricane
- Large Earthquake

**Areas of Increased Activity**
- Call Center
- ED Clinics Scheduling
- ED Communication

**Areas of Reduced Activity**
- Elective Procedures, Staff Travel
- Supporting Roles, such as Marketing or Strategy
- Elective Procedures

**Hazard Vulnerability Analysis (HVA) and Event Scenarios**

- Starting point for some types of impact analyses
- Cross-check for the HVA (is the rated impact confirmed in the BIA?)
Availability of IT Services Will Have a Major Impact on Events

<table>
<thead>
<tr>
<th>IT Systems Fully Operational</th>
<th>Limited or no IT Systems</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single Area or Service</td>
<td>Remote support and monitoring possible</td>
</tr>
<tr>
<td>Large Area</td>
<td>Fully operational pace</td>
</tr>
</tbody>
</table>

The public’s assumption is that we will use the best tools available and scale gracefully.

Gathering Department/Process Information

“Everything should be made as simple as possible, but no simpler.”

- Albert Einstein
### Three Methods for Gathering Department/Process Information

#### Self-reporting – email the basic BIA form
- Advantage: fast to send
- Disadvantage: inconsistent data

#### Interview – visit each group
- Advantage: high-quality information
- Disadvantage: time-consuming process

#### Hybrid – email and follow up to complete
- Advantage: balance of time and quality
- Disadvantage: may miss some key groups

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### Challenge is Building the Full Picture

- Process will generate a large volume of information, even for a mid-size organization
- Challenge is to consolidate departmental information into a system-wide view of the business impact risks
Synthesize BIA Information

Data is interesting – knowledge is useful

Types of System Analysis Tools

- Event or fault tree
- Dependency or Network Graph
- Scenario
- Previous incidents
- Value stream
Building a Dependency Graph — Google Fusion Table

1. Extract the dependencies from the department tables in the BCP tool
2. Import into the fusion table and map

Department Dependency Graph — Network Analysis
Uses of a Dependency Graph  
(Are There Planning Gaps?)

A next step is to view the Dependency Graph for a single department:

- What processes or groups are needed to support their operations?
- Reversing the graph, you see what groups are impacted if a dependent department is not available

Goal is to identify critical groups that do not see themselves on a critical path

Value Model —  
Mission and/or Community Need

Stanford Health Care (SHC) Mission:
SHC seeks to serve humanity through science and compassion, one patient at a time, through a commitment to care, educate and discover

Community Position:
Only Level 1 Trauma Center between San Francisco and San Jose
Developing a Value Stream

ED & Trauma
Clinics
Affiliates
Referral Network

Specialized
OR
Ambulatory
Inpatient

Information Technology Services
Materials Management
Sterile Processing
Dietary

Mapping services from the patient perspective may highlight constraints

Impacts Will Be Uneven

Actual impacts in a major event will be uneven by:
• Departments
• Locations

<table>
<thead>
<tr>
<th>Business Continuity Plan</th>
<th>Print All Worksheets</th>
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<tbody>
<tr>
<td>View by Tier</td>
<td></td>
</tr>
<tr>
<td>Tier 1 (0-2 hours)</td>
<td></td>
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</table>

<table>
<thead>
<tr>
<th>Department</th>
<th>Critical Business Function/Process</th>
<th>Priority</th>
<th>Functional Yes/No?</th>
<th>Work Around?</th>
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</thead>
<tbody>
<tr>
<td>ED</td>
<td>Incident</td>
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<tr>
<td>ED</td>
<td>Diagnostic Testing</td>
<td>1</td>
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<td></td>
</tr>
<tr>
<td>ED</td>
<td>Registration</td>
<td>1</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>ED</td>
<td>Discharge</td>
<td>1</td>
<td>Yes</td>
<td></td>
</tr>
<tr>
<td>ED</td>
<td>Admissions</td>
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<td></td>
</tr>
<tr>
<td>ED</td>
<td>Transfer</td>
<td>1</td>
<td>Partial</td>
<td></td>
</tr>
<tr>
<td>ED</td>
<td>Dietary &amp; Food</td>
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<td>Yes</td>
<td></td>
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<tr>
<td>ED</td>
<td>Meal Planning</td>
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<tr>
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<td>Receive Food</td>
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<td>Receive Request</td>
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<tr>
<td>ED</td>
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<tr>
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<td>ED</td>
<td>Execute Task</td>
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<td>Manage Training Assignment</td>
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<tr>
<td>ED</td>
<td>Improve Request</td>
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<td>Yes</td>
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<tr>
<td>ED</td>
<td>Staffing</td>
<td>1</td>
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<tr>
<td>ED</td>
<td>Assess Risk</td>
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<tr>
<td>ED</td>
<td>On-the-Problem</td>
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<tr>
<td>ED</td>
<td>Triage</td>
<td>1</td>
<td>Yes</td>
<td></td>
</tr>
</tbody>
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Planning Response Windows — Decision Points

Recovery Time Objectives can help define when decisions are needed:

• Action needs 2 fuel
• Your fuel will last 3 hours

Summary

• There is more than one way to build your Business Impact Analysis
• Find a methodology that fits your needs and use case
CHA website has most of the tools you need to prepare a BIA

Questions?
Thank you

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