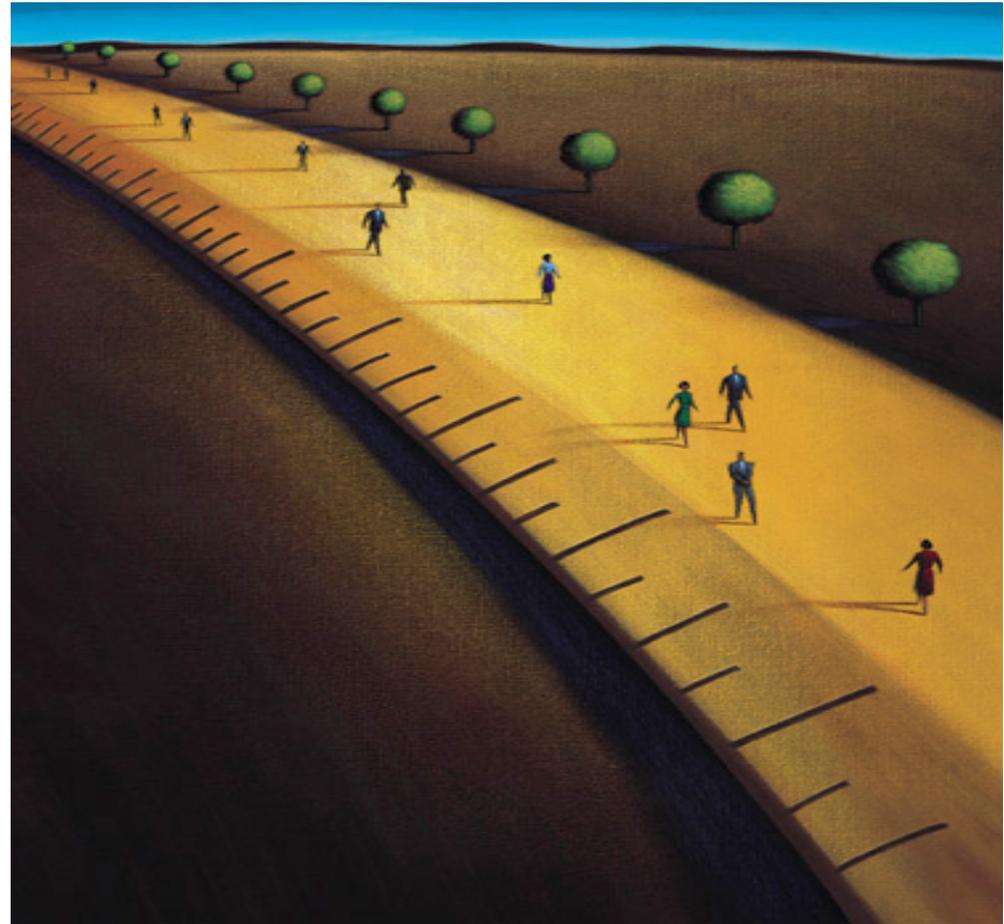


Building a Business Impact Analysis (BIA) Process



Graphic by Richard Cardoza

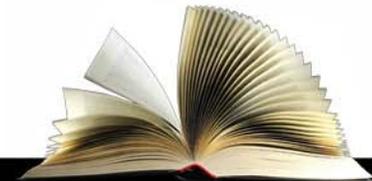


What *Is* a Business Impact Analysis ?

The BIA measures the *potential quantifiable and qualifiable impact* that *could occur* if any business function was unable to operate for a period of time *for any reason*.

That measurement becomes the basis on which we prioritize our efforts in building an efficient Business Continuity Plan (BCP).

The Federal Financial Institutions Examination Council (FFIEC) has said that “the institution’s first step in building a Business Continuity Plan (BCP) is to perform a BIA.” Other regulators are making similar statements.



BIA is *Not* a Threat Analysis

THREAT ANALYSIS

	Breadth	Duration	Probability	Priority
Hurricane/Tsunami	High	High	Low	High
Fire	Medium	Medium	Medium	Medium
Terrorism	Medium	High	Low	Medium
Contaminants	Medium	High	Low	Medium
System Failures	High	Low	High	High
Utility Failures	Medium	Medium	Medium	Medium
Communicable Disease	Medium	High	Low	Medium
Flood	Low	Medium	Low	Medium
Workplace Violence	Low	Low	Low	low
Civil Disorder	Medium	Medium	Low	Medium
Radiation	High	High	Low	High

	BREADTH OF IMPACT	DURATION	PROBABILITY
High	Widespread or Regional impact.	Possibly weeks.	Happens relatively frequently.
Medium	Localized impact	2-7 days.	Happens, but infrequently.
Low	Single facility impact	24 hours or less.	Unlikely to occur.



BIA is *Not* a Facility Risk Analysis/Assessment

Business unit managers aren't the best people to ask about the potential cost of facility loss.

For that, one would need to speak with the people who can estimate those costs, and that would probably involve real estate people, engineers, technology resources, records managers, and many other people both inside and outside the institution who have expertise in their own specific areas. It basically comes down to doing an inventory of what would be lost.



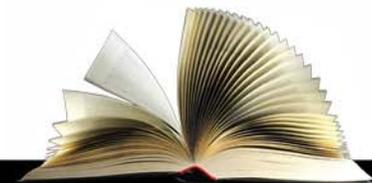
A BIA is *Not* A Risk Analysis

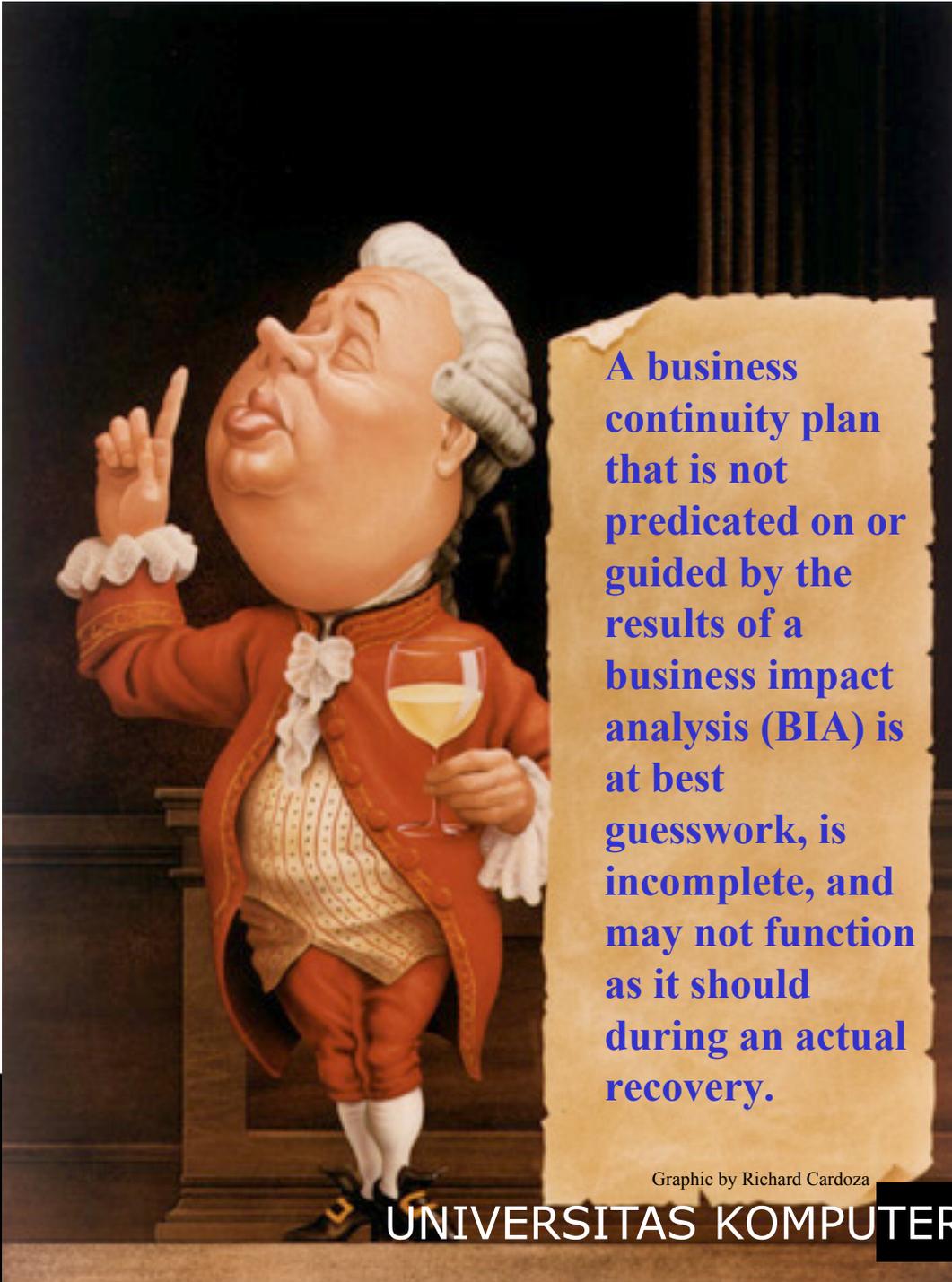
- A Risk Analysis identifies operational risks, defines controls to mitigate those risks, and monitors residual risk that remains after the controls have been put into place.
- The BIA identifies the quantitative (measurable) and qualitative (usually reputational) impact that could occur if a Department or Business Function was unable to function for any reason.



However, if your company wants to put Threat Analysis, Risk Analysis, or whatever under the BIA “umbrella,” no problem.

All aspects will need to be covered in a comprehensive Business Continuity Plan.

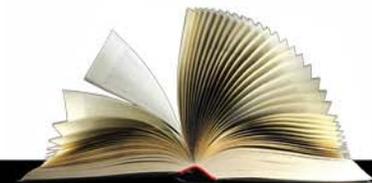




A business continuity plan that is not predicated on or guided by the results of a business impact analysis (BIA) is at best guesswork, is incomplete, and may not function as it should during an actual recovery.

Graphic by Richard Cardoza

Eugene Tucker, CPP, CFE, CBCP
Risk Analysis and the Security Survey
Butterworth-Heinemann, Copyright 2006



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It's a Process, Not a Project

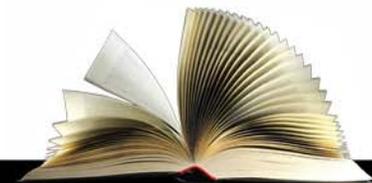
If you plan your BIA as a project that is going to happen every so many months or years, two things will happen:

- First, you will be “dinged” by everyone who reviews/audits your BIA because they will say your data is out of date.
- Second, you'll need to admit they're right! The BIA needs to be a continuous *process* that will keep your data up-to-date and not overwhelm you.



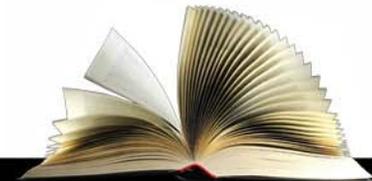
So how do you make your BIA a continuous process?

- 1) By making sure that you will have a continuous flow of *current* data regarding the status of your Departments and Business Functions.
- 2) Establishing a cycle in which the Departments will review and update their data on an annual or (preferably) more frequent basis.
- 3) Stressing to your departments that the first time around is the hardest. After that, it's just about a periodic review to note what may have changed in their business environment.



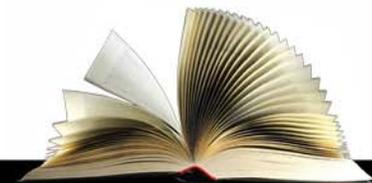
Gaining Executive Support

- **Regulators expect us to have a BIA**
- **Auditors expect us to have a BIA**
- **Customers expect us to have a BIA**
- **Insurers expect us to have a BIA**
- **Board Directors expect us to have a BIA**
- **Shareholders/investors expect us to have a BIA.**



Gaining Executive Support

- For an institution to accurately determine recovery goals and establish recovery priorities, it is essential to know *where* impact could occur, and *how much* impact could occur in each area of the institution.
- The BIA not only ensures that we apply our resources appropriately toward protecting the company's most critical assets, it also saves the unnecessary expense of applying an inappropriate level of resources to less critical areas.



Include Stakeholders in the Planning Process

- **Regulators**
- **Compliance**
- **Risk Management**
- **Audit, both internal and external**
- **Executive Management**
- **Line-of-business departments**

If they are not happy with the results, you won't be happy either.



Define the High-level Goals

- **Goal #1: Identify the impact that any individual Department or Business Function could have on the institution if it was unable to function *for any reason*.**
- **Goal #2: Have a final deliverable that will satisfy Goal #1 in clear and understandable language.**
- **Goal #3: Make the process as easy as possible for the Departments.**



Determine What You Need to Learn

- *Where* could critical *financial* (quantifiable) impact occur and what is the potential amount of the impact?
- *Where* could critical *reputational* (qualifiable) impact occur and what is the potential amount of the impact?

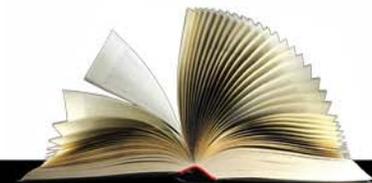
(Where” can mean two very different and equally important things. Do we mean within which department, or do we mean within which geographic region?)

- *When* would critical impact occur and what is the effect of the impact over a timeline?



Define “Critical Impact”

- The definition of critical impact needs to be based upon something measured, proven, and dynamic enough to change as your company changes.
- You won’t know the appropriate definition of critical impact until you have implemented a BIA process that can keep up with changes in the company.
- What is considered non-critical today could become critical tomorrow.



Note that the “A” in “BIA” stands for “Analysis,” not subjective opinion. It is important that we remove as much subjectivity as possible.



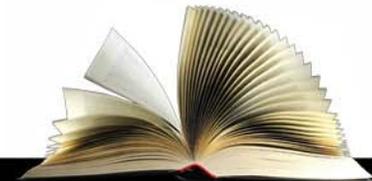
One Definition of “Critical” Impact

“Critical Impact is any hard dollar or reputational loss that could endanger the survival of the company.

“To determine what is critical, the impact represented by every area of the company must be compared to the company as a whole.

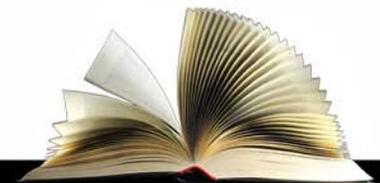
“We won’t have documentation showing what is truly critical until we have performed a BIA.

“The BIA provides the measurements to determine what is critical at any given time.”



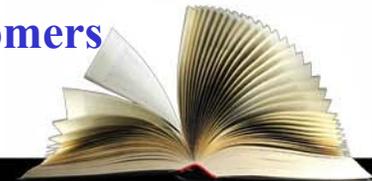
Define Impact Categories That Are Appropriate For the Particular Institution

- **Impact can occur within different Departments or Business Functions in different ways.**
- **Different types of impact can have different measurables to be used for determining the extent of potential impact.**
- **Defining Impact Categories can make it easier for a Department to respond because they have a “prompt” to consider various potential types of impact.**



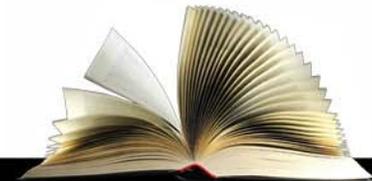
Quantifiable Impact Categories for a financial institution might include:

- **Inability to collect or receive payments**
- **Inability to process and record payments**
- **Inability to invest funds**
- **Inability to set up new customers**
- **Inability to make price, structure, or rate changes**
- **Regulatory/contractual impact**
- **Inability to meet federal processing deadlines**
- **Penalties for delayed tax filings**
- **Penalties for delayed benefits filings**
- **Penalties for failure to meet regulatory deadlines**
- **Liability for failure to meet agreements with customers**



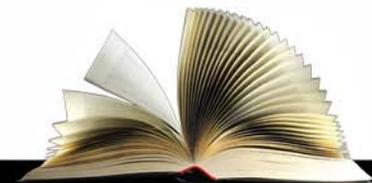
Quantifiable Impact Categories for a retail company might include:

- **Inability to record sales**
- **Inability to accept returns**
- **Inability to process credit cards, checks, gift cards, certificates**
- **Inability to replenish merchandise**
- **Inability to move merchandise between locations**
- **Inability to respond to customer communications**
- **Inability to advertise**



Quantifiable Impact Categories for a manufacturing company might include:

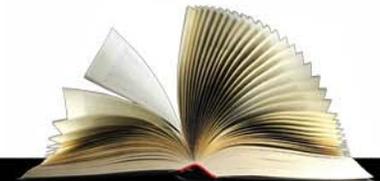
- Inability to order materials
- Inability to receive materials
- Inability to assemble materials
- Inability to advertise products
- Inability to process orders
- Inability to ship products
- Inability to collect payment



None of these examples are by any means comprehensive or “boilerplate.”

Every company needs to define the measurables and categories that are relevant to them.

The important thing is that you must take the time to define your measurables and impact categories, and decide exactly how you are going to use them, before you begin to collect any data.

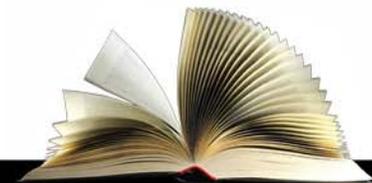


Define Your Deliverables

Report #1: Compared to other Departments or Business Functions in the company, each Department/Function's criticality is this.

Report #2: Based on when a Department/Function could cause Quantifiable Impact, its Recovery Time Objective (RTO) would be this.

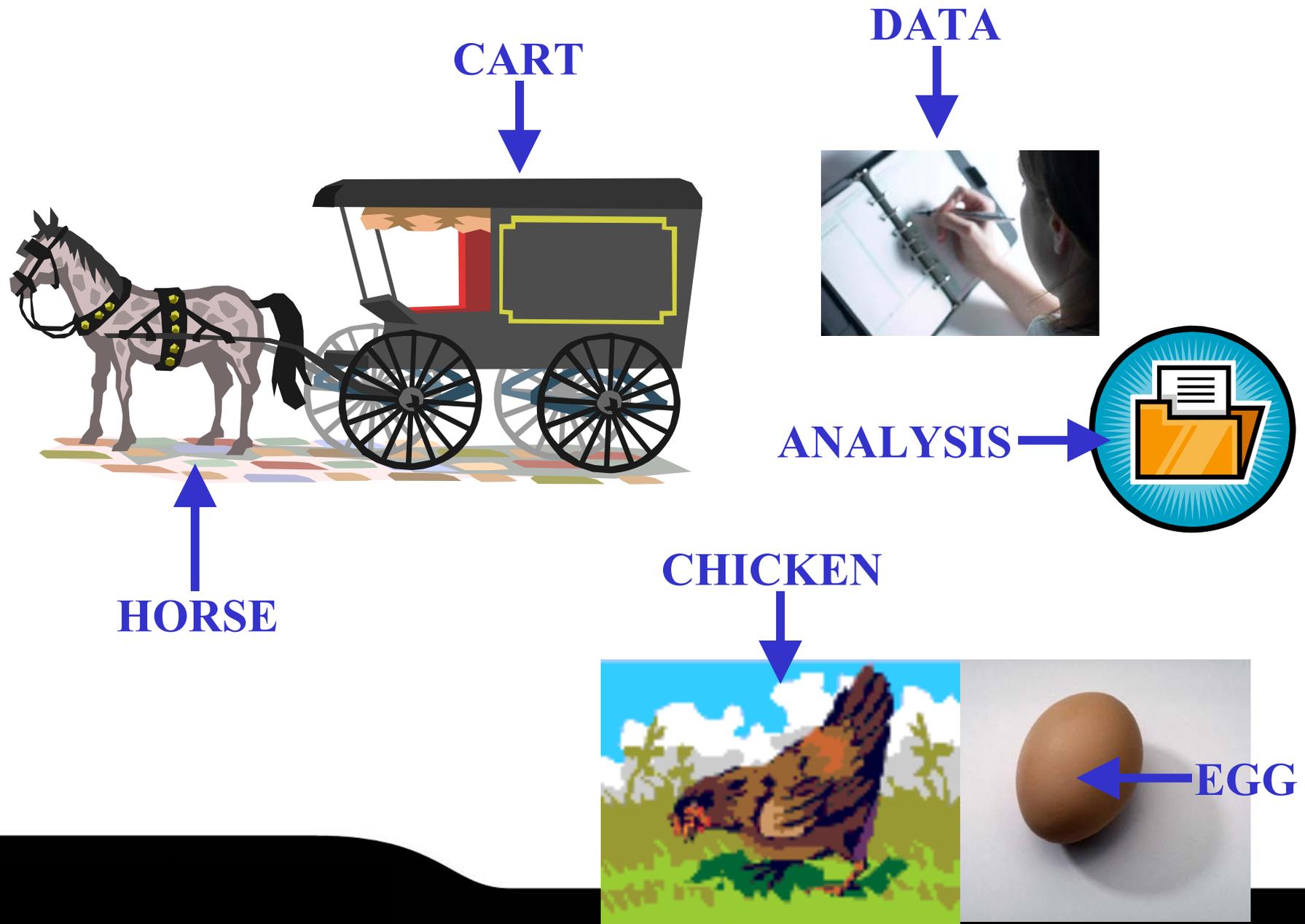
Report #3: Based on when a Departmental/Function could cause Qualifiable/Reputational Impact, its RTO would be this.



**You can't perform your analysis until
you have collected your data.**

**So, isn't it reasonable to assume that the
final analysis is the *last* thing you will
need plan?**

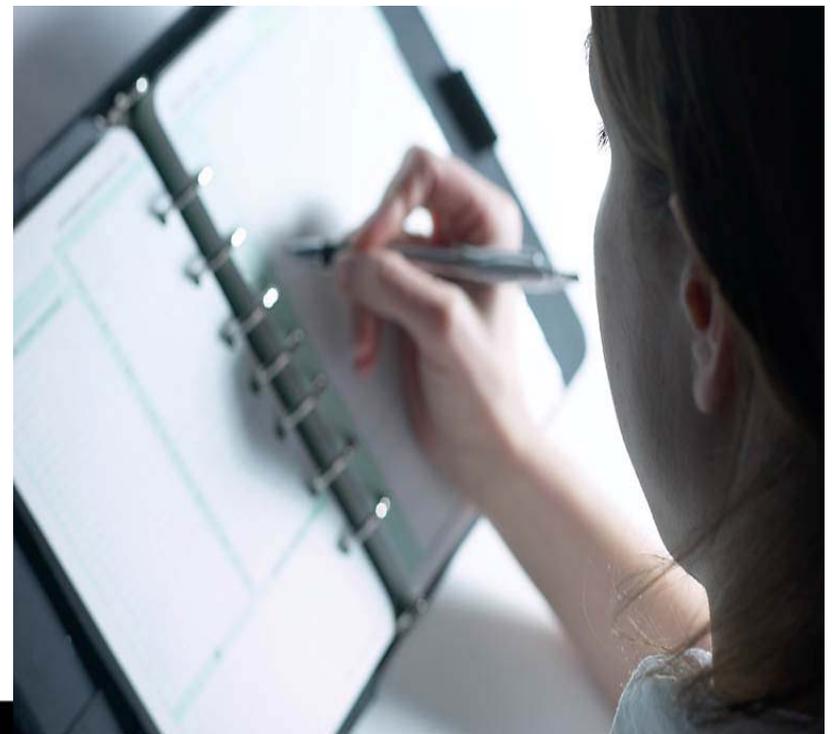




Which comes first.....?

Actually, the Analysis Phase and the final product are the FIRST thing you need to consider.

You won't know what data to collect until you know what must be included in the final product.



Decide what the final deliverable will include and what it will look like.

BANK-WIDE POTENTIAL QUANTIFIABLE IMPACT

Reflects the total potential impact of a business unit's inability to function during the first 72 hours of a crisis.

Sample Data

EVALUATION USING WEIGHT SET #4

TRANSACTIONAL IMPACT	Bank-Wide Impact	Wght	Minimum Tier 1	Wght	Minimum Tier 2 up to Tier 1	Wght	Minimum Tier 3 up to Tier 2
Item #1 Total Reported for Inability to Collect or Receive Payments, Dollars:	\$18,182,596,716	0.01%	\$1,454,640	0.01%	\$509,130	0.00%	\$345,450
Item #2 Total Reported for Inability to Process and Record Payments, Dollars:	\$5,311,705,472	0.03%	\$1,487,278	0.02%	\$1,009,224	0.01%	\$478,693
Item #3 Total Reported for Inability to Invest Funds, Dollars:	\$1,001,704,543	0.15%	\$1,502,537	0.10%	\$1,001,705	0.05%	\$500,852
OPPORTUNITY IMPACT							
Item #4 Total Reported for Inability to Set Up New Customers, Dollars:	\$18,014,389	8.33%	\$1,499,596	3.55%	\$999,590	2.78%	\$499,506
Item #5 Total Reported for Inability to Make Price, Structure or Rate Changes, Dollars:	\$563,300	166.15%	\$1,499,998	0.03%	\$175	88.73%	\$499,999
REGULATORY/CONTRACTUAL IMPACT							
Item #6 Total Reported for Inability to Meet Federal Reporting Deadlines, Dollars:	\$3,254,045,526	0.05%	\$1,496,261	0.00%	\$1,008,754	0.02%	\$488,307
Item #7 Total Reported for Delayed Tax Filings, Dollars:	\$7,729,885						
Item #8 Total Reported for Delayed Benefits Filings, Dollars:	\$5,133,000						
Item #9 Total Reported for Penalties to meet Regulatory Deadlines, Dollars:	\$25,463,250						
Item #10 Total Reported for Liability for Failure to Meet Agreements w/ Institutions, Dollars:	\$10,375,684,346						
Item #11 Total Reported for Liability for Failure to Meet Agreements w/ Customers, Dollars:	\$10,401,401,346						

Number of reporting Business Units: 1 Coverage:

Note that the bank-wide figures will include some appropriate double-reporting. For instance, if 2 departments, both departments would report that potential impact. However, that doesn't mean that the

igBU_ResultsAnalysis

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ANALYSIS OF POTENTIAL IMPACT BY BUSINESS UNIT

A comparison of each business unit's reported potential impact to the Bank-wide reported potential impact.

Department X

D System Recommendation: Tier 1

Business Unit Data Provided By: Michael Daly

EVALUATION USING WEIGHT SET #4

Section 1: Quantifiable Impact, Over-all Criticality to the Bank

	Transactional Impact			Opportunity Impact		Regulatory/Contractual Impact					Total Potential Impact Within 72 Hours	
	Inability to collect or receive payments or deposits	Inability to process and record payments or deposits	Inability to invest funds	Inability to set up new customers	Inability to make price, structure or rate changes	Inability to meet related processing deadlines	Unmet Regulatory	Unmet Benefits	Penalties for failure to meet Reg. Deadlines	Liability for failure to meet contractual obligations to institutions		Liability for failure to meet contractual obligations to customers
	Item #1	Item #2	Item #3	Item #4	Item #5	Item #6	Item #7	Item #8	Item #9	Item #10		Item #11
Daily Volume, Dollars:	\$4,000,000,000	\$176,006,645	\$27,283,083	\$0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Daily Vol, Transactions:	10,280	29,208	23,021	0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Blocklog Process/Day:	100%	100%	100%	0%	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Total Potential Impact:	\$10,000,000,000	\$6,292,108,656	\$81,160,148	\$0	\$0	\$6,248,877,188	\$46,000	\$76,000	\$0	\$6,292,09,856	\$6,292,09,856	\$33,101,286,220
% of Bank-wide Impact:	50.00%	59.631%	97.849%	0.000%	0.000%	59.681%	0.952%	1.461%	0.000%	51.000%	50.000%	
Impact Score:	1	1	1	4	4	1	4	4	4	1	1	

* The percentage of backlog that could be processed each day in addition to the current day's volume.

Based on criticality to the bank in one or more categories, above, the recommended Score/Tier Rating would be: 1

Section 2: Reputational Impact to Determine Over-all Criticality and Recovery Time Objective (RTO)

Note: Tier Difference

(No critical reputational impact has been reported for this business unit)

When Potential Impact Would Occur:
 2 hrs or less Within 2-8 hrs Within 8-24 hrs Within 24-48 hrs Over 48 hrs

Description of Reputational Impact is missing.

Based on potential Reputational Impact only, the recommended Score/Tier Rating would be: 2

Higher exposure under Quantifiable Impact

Note: Tier Difference

Let's take a look at the data elements that make up this sample report.

Section 1: Quantifiable Impact, Over-all Criticality to the Bank

Sample Data	Transactional Impact			Opportunity Impact:	
	Inability to collect or receive payments or deposits.	Inability to process and record payments or deposits	Inability to invest funds	Inability to set up new customers	Inability to make price, structure or rate changes
	Item #1	Item #2	Item #3	Item #4	Item #5
Daily Volume, Dollars:	\$6,000,000,000	\$1,764,036,545	\$327,053,383	\$0	N/A
Daily Vol, Transactions:	10,350	29,338	23,021	0	N/A
Backlog Process/Day*:	100%	100%	100%	0%	N/A
Total Potential Impact:	\$18,000,000,000	\$5,292,109,635	\$981,160,149	\$0	\$0
% of Bank-wide Impact:	98.994%	99.631%	97.949%	0.000%	0.000%
Impact Score:	1	1	1	4	4

* The percentage of backlog that could be processed each day

We're showing the department's daily volume in dollars, so we know that we will need to collect that information.

Section 1: Quantifiable Impact, Over-all Criticality to the Bank

Sample Data	Transactional Impact			Opportunity Impact:	
	Inability to collect or receive payments or deposits.	Inability to process and record payments or deposits	Inability to invest funds	Inability to set up new customers	Inability to make price, structure or rate changes
	Item #1	Item #2	Item #3	Item #4	Item #5
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Impact Score:	1	1	1	4	4

* The percentage of backlog that could be processed each day

We're showing the department's daily volume in number of transactions, so we will need to collect that information.

Section 1: Quantifiable Impact, Over-all Criticality to the Bank

Sample Data	Transactional Impact			Opportunity Impact:	
	Inability to collect or receive payments or deposits.	Inability to process and record payments or deposits	Inability to invest funds	Inability to set up new customers	Inability to make price, structure or rate changes
	Item #1	Item #2	Item #3	Item #4	Item #5
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Total Potential Impact:	\$18,000,000,000	\$5,292,109,635	\$981,160,149	\$0	\$0
% of Bank-wide Impact:	98.994%	99.631%	97.949%	0.000%	0.000%
Impact Score:	1	1	1	4	4

* The percentage of backlog that could be processed each day

We're showing the department's ability to process a percentage of backlog, over and above their normal daily volume.

Section 1: Quantifiable Impact, Over-all Criticality to the Bank

Sample Data	Transactional Impact			Opportunity Impact:	
	Inability to collect or receive payments or deposits.	Inability to process and record payments or deposits	Inability to invest funds	Inability to set up new customers	Inability to make price, structure or rate changes
	Item #1	Item #2	Item #3	Item #4	Item #5
Daily Volume, Dollars:	\$6,000,000,000	\$1,764,036,545	\$327,053,383	\$0	N/A
Daily Vol, Transactions:	10,350	29,338	23,021	0	N/A
Backlog Process/Day*:	100%	100%	100%	0%	N/A
Total Potential Impact:	\$18,000,000,000	\$5,292,109,635	\$981,160,149	\$0	\$0
% of Bank-wide Impact:	98.994%	99.631%	97.949%	0.000%	0.000%
Impact Score:	1	1	1	4	4

* The percentage of backlog that could be processed each day

And, of course, we're asking for the potential dollar impact if this unit cannot function for any reason.

Section 1: Quantifiable Impact, Over-all Criticality to the Bank

Sample Data	Transactional Impact			Opportunity Impact:	
	Inability to collect or receive payments or deposits.	Inability to process and record payments or deposits	Inability to invest funds	Inability to set up new customers	Inability to make price, structure or rate changes
	Item #1	Item #2	Item #3	Item #4	Item #5
Daily Volume, Dollars:	\$6,000,000,000	\$1,764,036,545	\$327,053,383	\$0	N/A
Daily Vol, Transactions:	10,350	29,338	23,021	0	N/A
Backlog Process/Day*:	100%	100%	100%	0%	N/A
Total Potential Impact:	\$18,000,000,000	\$5,292,109,635	\$981,160,149	\$0	\$0
% of Bank-wide impact:	98.994%	99.631%	97.949%	0.000%	0.000%
Impact Score:	1	1	1	4	4

* The percentage of backlog that could be processed each day

That's all of the ⁴ data elements. Everything else in this report is a calculation or notation.

Section 1: Quantifiable Impact, Over-all Criticality to the Bank

Sample Data	Transactional Impact			Opportunity Impact:	
	Inability to collect or receive payments or deposits.	Inability to process and record payments or deposits	Inability to invest funds	Inability to set up new customers	Inability to make price, structure or rate changes
	Item #1	Item #2	Item #3	Item #4	Item #5
Daily Volume, Dollars:	\$6,000,000,000	\$1,764,036,545	\$327,053,383	\$0	N/A
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Total Potential Impact:	\$18,000,000,000	\$5,292,109,635	\$981,160,149	\$0	\$0
% of Bank-wide Impact:	98.994%	99.631%	97.949%	0.000%	0.000%
Impact Score:	1	1	1	4	4

* The percentage of backlog that could be processed each day

However....

If we wanted a report that would also show potential Reputational Impact, then we would need to ask about that type of impact as well.

This department processes transactions for businesses. If we have a crisis, they will understand a delay of a few hours. But, depending on the business, some of them will not be able to tolerate a delay over 24 hours, and others would be unable to tolerate a delay of longer than 8 hours.

When Potential Impact Would Occur				
2 hrs or Less	Within 2-8 hrs	Within 9-24 hrs	Within 25-48 hrs	Over 48 hrs
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Based on potential Reputational Impact only, th
Higher exposure unde

Hey....that's 5 data elements....



We're showing the department's daily volume in number of transactions, so we will need to collect that information.

Section 1: Quantifiable Impact, Over-all Criticality to the Bank

Sample Data	Transactional Impact			Opportunity Impact:	
	Inability to collect or receive payments or deposits.	Inability to process and record payments or deposits	Inability to invest funds	Inability to set up new customers	Inability to make price, structure or rate changes
	Item #1	Item #2	Item #3	Item #4	Item #5
Daily Volume Dollars:	\$6,000,000,000	\$1,764,036,545	\$327,053,383	\$0	N/A
Daily Vol, Transactions:	10,350	29,338	23,021	0	N/A
Backlog Process/Day:	100%	100%	100%	0%	N/A
Total Potential Impact:	\$18,000,000,000	\$5,282,100,635	\$981,160,149	\$0	\$0
% of Bank-wide Impact:	98.994%	99.631%	97.949%	0.000%	0.000%
Impact Score:	1	1	1	4	4

The number of transactions is interesting to have, but is probably not particularly useful to the analysis.

* The percentage of backlog that could be processed each

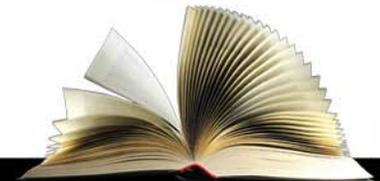
In-house or Outsource; Buy or Build?

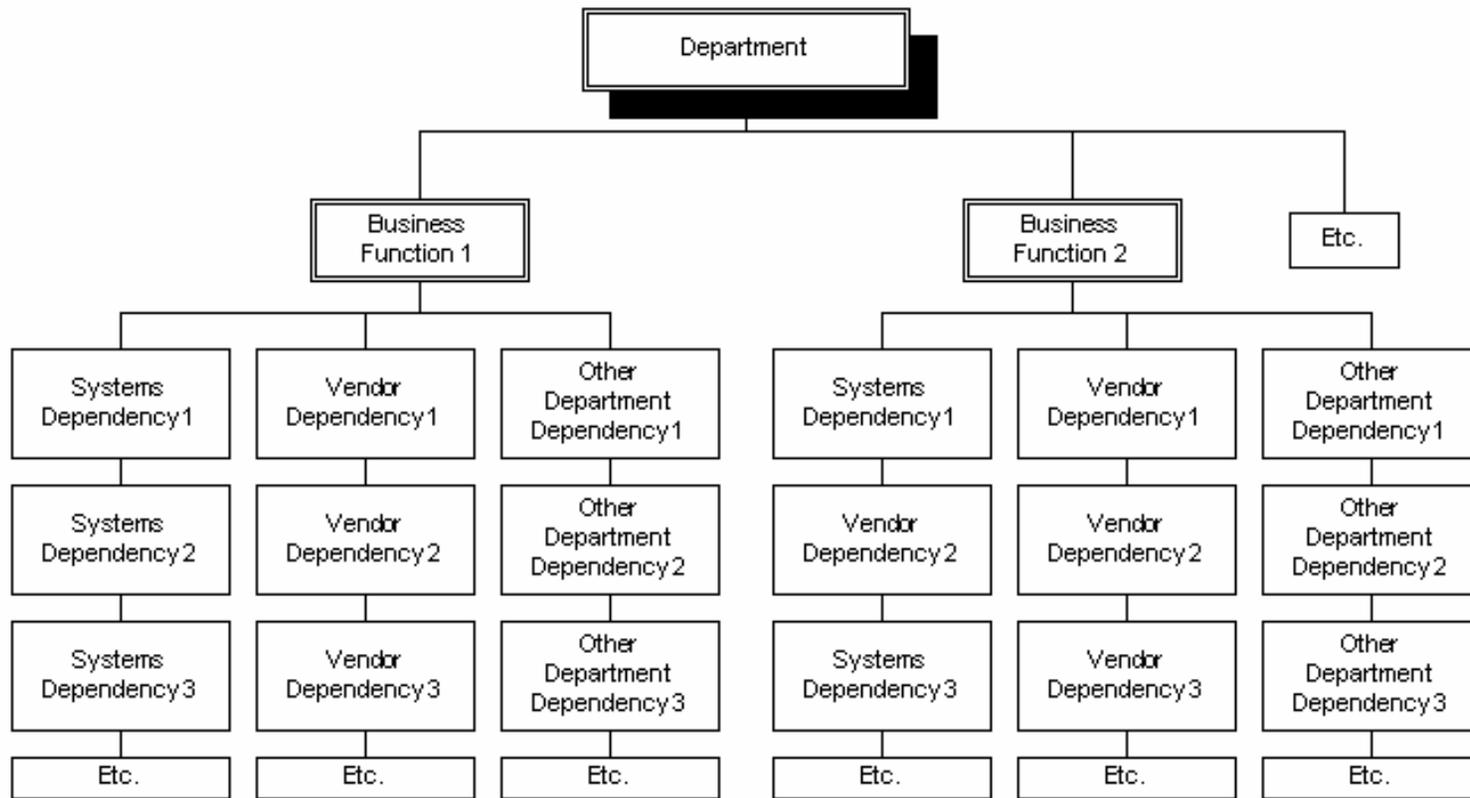
- **Do you have the resources you need or will you need to bring in some assistance?**
- **Do you have the in-house expertise to develop a “tool” to manage, analyze, and report on the data?**
- **Have you established your Goals and Objectives For a BIA and defined the deliverables?” If not, stop here before considering a service or a product.**
- **If you don’t know what you want to accomplish with a BIA, you won’t know if what is being offered will satisfy your needs.**



Bottom-up or Top-down? The Right Approach To Your BIA

- **Intuitively, we know that we must include an evaluation of all our Business Functions in the BIA.**
- **But will the BIA actually be done at the Business Function Level or at the Departmental level?**
- **A Department can have many Business Functions, and those Business Functions can span across Departments.**
- **Corporate management tends to think in terms of “Departments” because that is how the management structure is aligned.**





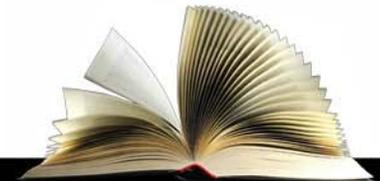
You could do your analysis by Department, including all of the Business Functions within each Department, and then identify the Dependencies of each Business Function,



Identifying Dependencies

- **System/technology dependencies**
- **Vendor dependencies**
- **Supporting internal department dependencies**
- **Other dependencies**

While Dependency identification could be an entirely separate process, incorporating it into your BIA can add significant value to the final deliverables.



Topple the Silos When Measuring Impact

- **To ask managers to prioritize their own Departments without giving them a company-wide perspective is, in effect, forcing them to think in a silo.**
- **The highest priority on one manager's list might have negligible impact when compared to Departments in other areas of the company.**
- **Don't ask managers to prioritize their Business Functions. Ask managers to give you the information you need in order to prioritize their Functions in comparison to the company as a whole.**



Impact & RTO; About How Much or When?

And the answer is...it depends on what you want to know.

Department	Total Potential Impact Within 72 Hours
West Coast Manufacturing	\$18,000,000
East Coast Manufacturing	\$11,900,000
Foreign Distribution	\$9,000,000
Materials Purchasing	\$9,000,000
Sales and Marketing	\$8,000,000

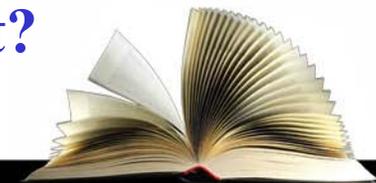
If you want to know which Departments are the most critical, a report such as this one should provide the answer. However...



Impact & RTO; About How Much or When?

Department	Impact Within 8 Hours	Impact Within 9-24 Hours	Impact Within 25-48 Hours	Impact Within 49-72 Hours
West Coast Manufacturing	0	\$500,000	\$8,000.00	\$9,500,000
East Coast Manufacturing	0	\$400,000	\$5,000,000	\$6,500,000
Foreign Distribution	\$500,000	\$1,000,000	\$3,000,000	\$4,500,000
Materials Purchasing	\$1,000,000	\$2,000,000	\$3,000,000	\$3,000,000
Sales and Marketing	0	\$0	\$4,000,000	\$4,000,000

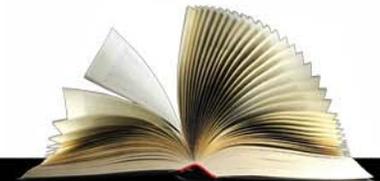
If you want to establish recovery goals/priorities, then this report (over a timeline) would be a better representation of the potential impact. Which departments need to recover first to avoid impact?



The Data Collection Phase

You have options regarding the way you collect your BIA data:

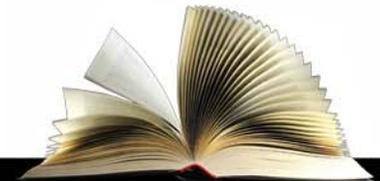
- 1) Distribute a survey**
- 2) Meet with individual Department managers**
- 3) Gather groups of managers into a room for a workshop**
- 4) Any combination of the above**



Asking the Right People

Who should you ask to get the BIA information you need from individual Departments?

- 1) The best approach is probably to start as high on the organizational chart as possible, and then drill down.**
- 2) If high-level management decides it is appropriate to delegate, that's OK, and it also means you should have their support in getting responses.**
- 3) But even if the work is delegated, your contact should be at the managerial level. Someone needs to “sign off” on the data that is being provided.**



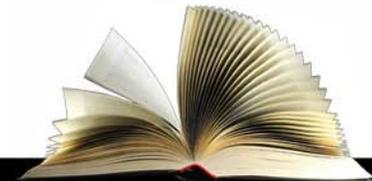
Asking the Right Questions in the Right Way

1) Put a box around your questions so they cannot possibly be misinterpreted and options for answers are limited.

For example, don't ask "what is your daily volume?"

- Volume on what day?
- Are we asking for an average?
- If so, over what time period?
- How else might a manager interpret this question?

Instead ask, "what was the volume in dollars on the busiest day of last year" (or other period) if that is what we really want to know.

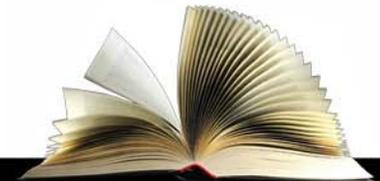


Asking the Right Questions in the Right Way

2) State up-front that you are looking for the “worst case scenario.”

3) Define all terms, even if you think everyone knows the definitions.

4) Be careful how you structure the questions. Some companies choose to offer ranges of numbers, rather than asking for specific numbers. However....



Be careful because this....

Potential Impact Within:	1-8 hrs	9-24 hrs	25-48 hrs	49-72 hrs
Impact Category #1:	\$550,000			
Impact Category #2:				\$1,200,000
Impact Category #3:			\$725,000	

...could become this.

Impact Category #1				
Potential Impact Within:	0-\$50,000	\$51,000-\$500,000	\$501,000-\$1,000,000	Over \$1,000,000
1-8 hrs			X	
9-24 hrs				
25-48 hrs				
26-72 hrs				

Potential Impact Within:	1-8 hrx	9-24 hrs	25-48 hrs	49-72 hrs
Impact Category #1:				
Impact Category #2:	0-\$50,000			
Impact Category #3:	\$51,000-\$500,000			
	\$501,000-\$1,000,000			
	Over \$1,000,000			
49-72 hrs				X

Impact Category #3				
Potential Impact Within:	0-\$50,000	\$51,000-\$500,000	\$501,000-\$1,000,000	Over \$1,000,000
1-8 hrs				
9-24 hrs				
25-48 hrs			X	
49-72 hrs				



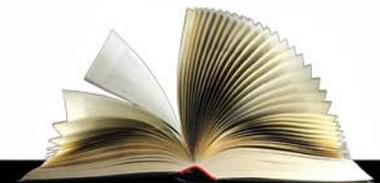
The Analysis Phase; Remember the Deliverables

We wanted to generate reports that would show, clearly and concisely:

1) *Where* could critical *financial* (quantifiable) impact occur and what is the potential amount of the impact?

2) *Where* could critical *reputational* (qualifiable) impact occur and what is the potential amount of the impact?

3) *When* would critical impact occur and what is the effect of the impact over a timeline?



The very FIRST thing we do is combine all of the data we have collected into a company-wide picture.

BANK-WIDE POTENTIAL QUANTIFIABLE IMPACT

Reflects the total potential impact of a business unit's inability to function during the first 72 hours of a crisis.

Sample Data

EVALUATION USING WEIGHT SET #4

TRANSACTIONAL IMPACT	Bank-Wide Impact	Wght	Minimum Tier 1	Wght	Minimum Tier 2 up to Tier 1	Wght	Minimum Tier 3 up to Tier 2
Item #1 Total Reported for Inability to Collect or Receive Payments, Dollars:	\$18,182,996,736	0.01%	\$1,454,640	0.01%	\$509,150	0.00%	\$545,490
Item #2 Total Reported for Inability to Process and Record Payments, Dollars:	\$5,311,705,472	0.03%	\$1,487,278	0.02%	\$1,009,224	0.01%	\$478,063
Item #3 Total Reported for Inability to Invest Funds, Dollars:	\$1,001,704,543	0.15%	\$1,502,357	0.10%	\$1,001,705	0.08%	\$500,832
OPPORTUNITY IMPACT							
Item #4 Total Reported for Inability to Set Up New Customers, Dollars:	\$18,014,389	8.33%	\$1,499,896	5.53%	\$999,990	2.78%	\$499,995
Item #5 Total Reported for Inability to Make Price, Structure or Rate Changes, Dollars:	\$563,900	266.19%	\$1,499,998	0.03%	\$175	88.73%	\$499,999
REGULATORY/CONTRACTUAL IMPACT							
Item #6 Total Reported for Inability to Meet Federal Processing Deadlines, Dollars:	\$3,254,045,526	0.06%	\$1,496,861	0.03%	\$1,008,754	0.02%	\$488,107
Item #7 Total Reported for Delayed Tax Filings, Dollars:	\$7,729,885	19.41%	\$1,500,023	12.94%	\$999,999	6.47%	\$500,033
Item #8 Total Reported for Delayed Benefits Filings, Dollars:	\$5,135,000	29.21%	\$1,499,985	19.47%	\$999,990	9.74%	\$499,995
Item #9 Total Reported for Penalties to meet Regulatory Deadlines, Dollars:	\$25,463,250	5.89%	\$1,499,785	3.93%	\$999,940	1.96%	\$499,974
Item #10 Total Reported for Liability for Failure to Meet Agreements w/ Institutions, Dollars:	\$10,375,684,346	0.01%	\$1,452,596	0.01%	\$1,037,588	0.01%	\$518,784
Item #11 Total Reported for Liability for Failure to Meet Agreements w/ Customers, Dollars:	\$10,401,401,346	0.01%	\$1,456,196	0.01%	\$936,126	0.01%	\$520,070

Number of reporting Business Units: 48 Covering this many R/C's: 313

Note that the bank-wide figures will include some appropriate double-reporting. For instance, if 2 departments could cause the same \$5mm impact if they were unable to function, both departments would report that potential impact. However, that does not mean that there would be a \$5mm impact if they were both unable to function.

You won't want to analyze individual Departments/Functions until you have a company-wide baseline to which they can be compared.

Once we have the company-wide baseline, we can compare each department to that baseline and begin to see how our departments rank in perspective to each other and to the company as a whole.

BANK-WIDE POTENTIAL QUANTIFIABLE IMPACT
 Reflects the total potential impact of business unit's inability to function during the first 72 hours of a crisis.

EVALUATION USING WEIGHT SET #4

TRANSACTIONAL IMPACT	Bank-Wide Impact	Wght	Minimum Tier 1	Wght	Minimum Tier 2 up to Tier 1	Wght	Minimum Tier 3 up to Tier 2
Item #1 Total Reported for inability to Collect or Receive Payments, Dollars:	\$3,382,996,716	0.01%	\$1,451,640	0.01%	\$109,150	0.00%	\$45,490
Item #2 Total Reported for inability to Process and Record Payments, Dollars:	\$3,311,705,472	0.03%	\$1,487,270	0.02%	\$1,009,224	0.01%	\$478,043
Item #3 Total Reported for inability to Invest Funds, Dollars:	\$1,001,704,543	0.15%	\$1,502,587	0.10%	\$1,001,705	0.05%	\$500,852
OPPORTUNITY IMPACT							
Item #4 Total Reported for inability to Set Up New Customers, Dollars:	\$18,014,889	8.33%	\$1,499,886	5.55%	\$999,950	2.70%	\$499,905
Item #5 Total Reported for inability to Make Price, Structure or Rate Changes, Dollars:	\$503,900	364.39%	\$1,499,990	0.03%	\$175	88.73%	\$499,999
REGULATORY/CONTRACTUAL IMPACT							
Item #6 Total Reported for inability to Meet Federal Processing Deadlines, Dollars:	\$3,254,045,205	0.02%	\$1,496,263	0.03%	\$1,006,724	0.02%	\$495,307
Item #7 Total Reported for Delayed Filings, Dollars:	\$7,729,885	19.41%	\$1,500,023	12.9%	\$999,580	6.47%	\$500,883
Item #8 Total Reported for Delinquency Filings, Dollars:	\$5,125,000	29.21%	\$1,499,585	19.47%	\$999,990	9.74%	\$499,985
Item #9 Total Reported for Penalties to Meet Regulatory Deadlines, Dollars:	\$2,463,250	5.09%	\$1,499,753	3.00%	\$999,942	1.90%	\$499,944
Item #10 Total Reported for Liability for Failure to Meet Agreements or Commitments, Dollars:	\$10,275,654,346	0.01%	\$1,450,000	0.01%	\$1,037,500	0.01%	\$518,754
Item #11 Total Reported for Liability for Failure to Meet Agreements or Commitments, Dollars:	\$10,401,403,346	0.01%	\$1,450,000	0.01%	\$998,125	0.01%	\$510,000

Number of reporting Business Units: 1 Covering this many R/C's: 313

As we will include some support departments in our reports, for instance, IT2 departments could cause the same \$1mm impact if they were unable to work upon that potential impact. However, that doesn't mean that a \$1mm impact if they were unable to work upon that potential impact.

5/13/2005

ANALYSIS OF POTENTIAL IMPACT BY BUSINESS UNIT
 A comparison of each business unit's reported potential impact to the Bank-wide reported potential impact.

CBMSG 37105, SECURITIES PROCESSING ADMIN, Tier 1B System Recommendation: Tier 1

Section 1: Quantifiable Impact, Over all Criticality to the Bank

Section 2: Reproductive Impact to Determine Over all Criticality and Recovery Time Objective (RTO)

ANALYSIS OF POTENTIAL IMPACT BY BUSINESS UNIT
 A comparison of each business unit's reported potential impact to the Bank-wide reported potential impact.

STP 317, IP OPERATIONS-ORIG, Tier 1B

Section 1: Quantifiable Impact Timeline to Determine Recovery Time Objective (RTO)

Section 2: Reproductive Impact to Determine Over all Criticality and Recovery Time Objective (RTO)

ANALYSIS OF POTENTIAL IMPACT BY BUSINESS UNIT
 A comparison of each business unit's reported potential impact to the Bank-wide reported potential impact.

CSG 51148, FUNDS DEPARTMENT, Tier 1a System Recommendation: Tier 4

Section 1: Quantifiable Impact, Over all Criticality to the Bank

Section 2: Reproductive Impact to Determine Over all Criticality and Recovery Time Objective (RTO)

ANALYSIS OF POTENTIAL IMPACT BY BUSINESS UNIT
 A comparison of each business unit's reported potential impact to the Bank-wide reported potential impact.

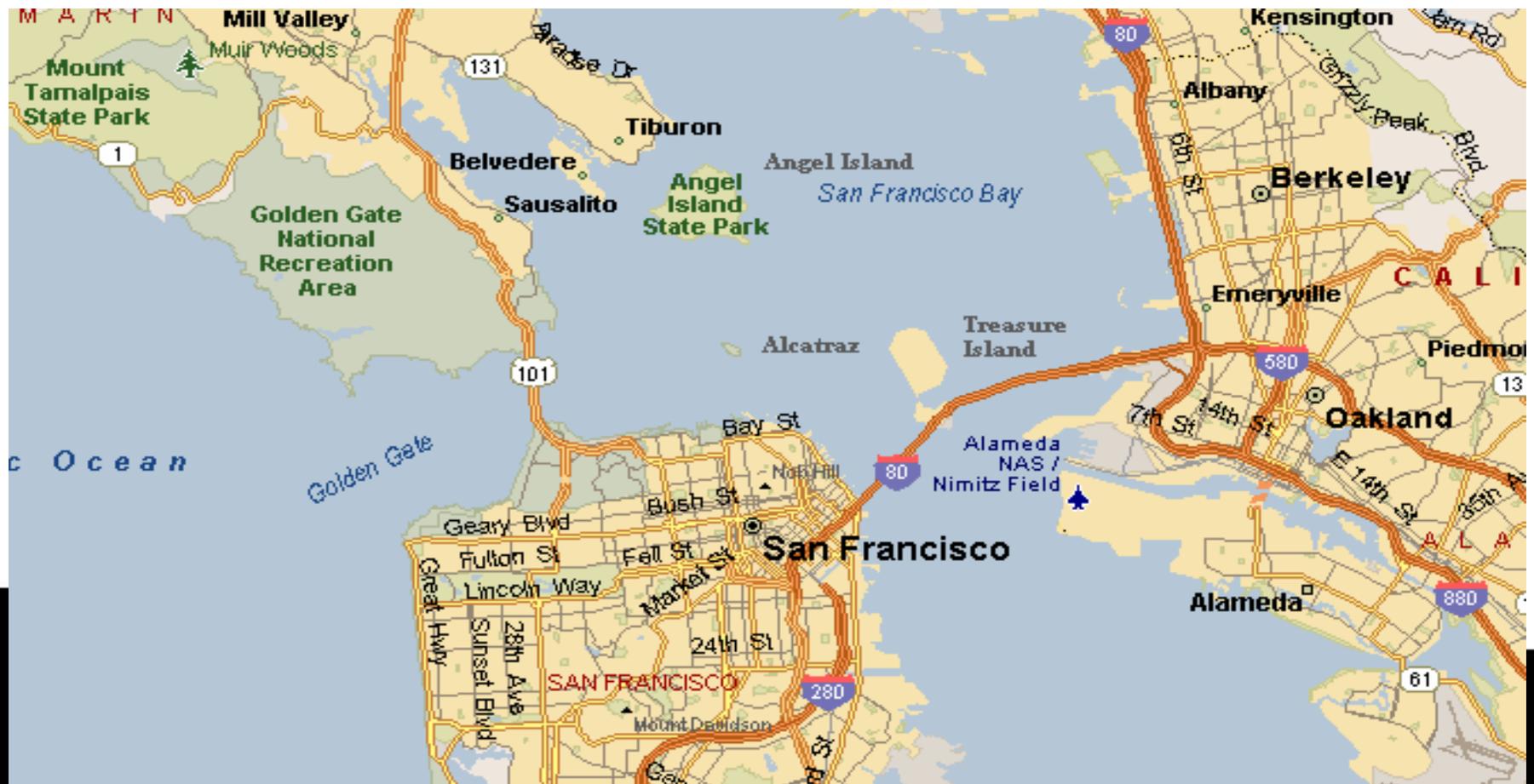
CSG 3550, WIRE SERVICES ADMIN, Tier 4 System Recommendation: Tier 1

Section 1: Quantifiable Impact, Over all Criticality to the Bank

Section 2: Reproductive Impact to Determine Over all Criticality and Recovery Time Objective (RTO)

We've Covered "How Much and When; " What About "Where?"

If a geographic Region in which you do business is impacted by a crisis, wouldn't you want to know the potential impact?



We Collected Impact Data by Location of Potential Impact; Here's Why.

If you know where your Departments and Business Functions are located....

...and the BIA has identified the potential impact that they could represent if they cannot function for any reason....

...then if Pomona (for instance) is impacted by a crisis....

...you can estimate the potential impact to your company.

Facility	Department	Potential Impact Within 72 Hours
Pomona	Manufacturing	\$700,000
Pomona	Finance	\$60,000
Pomona	Sales	\$1,850,000
Pomona	Distribution	\$40,000
Pomona	Procurement	\$90,000
Pomona	Payroll	\$360,000
		<hr/>
		\$3,100,000

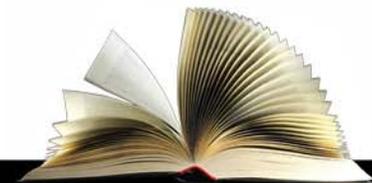
GeoAnalysis

What if we wanted to focus on facilities or employees in the San Francisco Marina District?

(Which was more heavily impacted than other areas of San Francisco by the 1989 Loma Prieta Earthquake.)

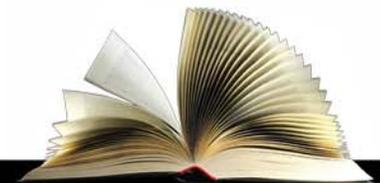
Then we could filter on all 5 digits of the ZIP code because 94123 is the ZIP code for the Marina District.

ID	First Name	Last Name	Zip Code	First 3
001	Tom	Jones	94123	941
009	Jeremy	Smith	94123	941
002	Henry	Wong	94123	941
011	Frank	Renaud	94123	941
017	Arthur	Yee	94123	941
010	John	Derere	94123	941



Have we met the high-level goals ?

- **Goal #1: Identify the impact that any individual Department or Business Function could have on the institution if it was unable to function *for any reason*.**
- **Goal #2: Have a final deliverable that will satisfy Goal #1 in clear and understandable language.**
- **Goal #3: Make the process as easy as possible for the Departments.**

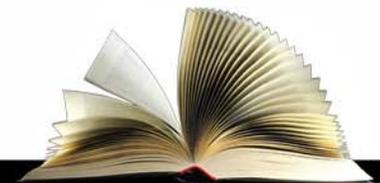


Have we produced the deliverables ?

Report #1: Compared to other Departments or Business Functions in the company, each Department/Function's criticality is this.

Report #2: Based on *when* a Department/Function could cause *Quantifiable* Impact, its Recovery Time Objective (RTO) would be this.

Report #3: Based on *when* a Departmental/Function could cause *Qualifiable/Reputational* Impact, its RTO would be this.



Departments/Functions by Criticality

DEPARTMENTS BY CRITICALITY, BASED ON THEIR POTENTIAL IMPACT

Total Reported Impact Within 72 Hours For Category 1	Total Reported Impact Within 72 Hours For Category 2	Total Reported Impact Within 72 Hours For Category 2	Total Reported Impact Within 72 Hours
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Showing percentage of company-wide reported impact represented.

123Manufacturing West (Sample Dept.)

\$420,000 22.34%	\$0 0.00%	\$0 0.00%	\$420,000
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123Manufacturing West (Sample Dept.)

\$420,000 22.34%	\$0 0.00%	\$0 0.00%	\$420,000
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123Manufacturing West (Sample Dept.)

\$420,000 22.34%	\$0 0.00%	\$0 0.00%	\$420,000
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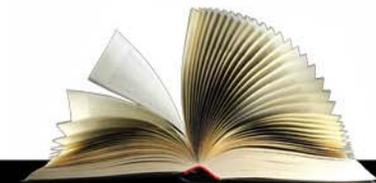
123Manufacturing West (Sample Dept.)

\$420,000 22.34%	\$0 0.00%	\$0 0.00%	\$420,000
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Impact by Impact Category

REPORTED POTENTIAL IMPACT BY DEPARTMENT, BY IMPACT CATEGORY

		Total Reported Impact Within 72 Hours For Category 1	Total Reported Impact Within 72 Hours For Category 2	Total Reported Impact Within 72 Hours For Category 2
123	Manufacturing West (Sample Dept.)	\$420,000 22.34%	\$0 0.00%	\$0 0.00%
123	Manufacturing West (Sample Dept.)	\$420,000 22.34%	\$0 0.00%	\$0 0.00%
123	Manufacturing West (Sample Dept.)	\$420,000 22.34%	\$0 0.00%	\$0 0.00%
123	Manufacturing West (Sample Dept.)	\$420,000 22.34%	\$0 0.00%	\$0 0.00%
456	Finance	\$0 0.00%	\$0 0.00%	\$60,000 10.34%



Impact Analysis by Department

123 Manufacturing West (Sample Contact John Smith (111) 222-3333 Daily Volume \$1,000,000)						
	Impact Within 2 hrs.	Impact Within 3-8 hrs.	Impact Within 9-24 hrs.	Impact Within 25-48 hrs.	Impact Within 49-72 hrs.	Total Impact Within 72
IMPACT CATEGORY #1:	\$80,000	\$140,000	\$200,000	\$0	\$0	\$420,000
IMPACT CATEGORY #2:	\$0	\$0	\$0	\$0	\$0	\$0
IMPACT CATEGORY #3:	\$0	\$0	\$0	\$0	\$0	\$0
REPUTATIONAL IMPA 9-24 hrs	Description of Reputational Impact:			If we were unable to operate production for as long as 12 hours, we would go into a backorder position and our customers would loose faith in our ability to deliver product.		\$420,000

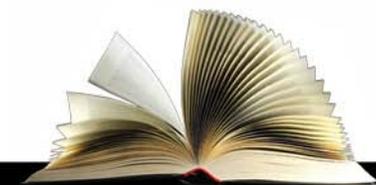
At least 20% of reported impact first hits within 3-8 Hours.

Total impact is less than \$500,000 so this unit may not be critical.

Based on QUANTIFIABLE impact under \$500,000, recommended RTO would be over 72 hours.

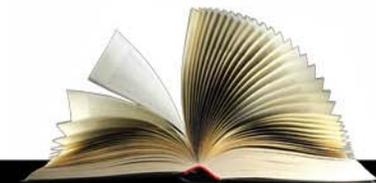
Based on when REPUTATIONAL impact would hit, system recommended RTO would be 9-24 hrs.

General Notes: The dollar impact entered above represents the cost of the chemicals already mixed that would deteriorate and need to be discarded. Within 24 hours, we would have disposed of the entire batch on hand. We would also be paying some disposal costs which I have included.



Impact by Geographic Region

Facility	Zip Prefix	Department	Potential Impact Within 72 Hours
Pomona	917	Manufacturing	\$700,000
Pomona	917	Finance	\$60,000
Pomona	917	Sales	\$1,850,000
Pomona	917	Distribution	\$40,000
Pomona	917	Procurement	\$90,000
Pomona	917	Payroll	\$360,000
Total Potential Impact:			<hr/> \$3,100,000



Impact by Geographic Region Over a Timeline, by Category

POTENTIAL IMPACT BY GEOGRAPHIC REGION

Total Reported Impact Within 72 Hours For Category 1	Total Reported Impact Within 72 Hours For Category 2	Total Reported Impact Within 72 Hours For Category 2	Total Reported Impact Within 72 Hours
--	--	--	--

Fresno

789 Distribution \$40,000	\$0	\$0	\$40,000
789 Distribution \$40,000	\$0	\$0	\$40,000
789 Distribution \$40,000	\$0	\$0	\$40,000
789 Distribution \$40,000	\$0	\$0	\$40,000
789 Distribution \$40,000	\$0	\$0	\$40,000

Sacramento

123 Manufacturing West (Sample Dept.) \$420,000	\$0	\$0	\$420,000
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Dependency Identification

BUSINESS FUNCTIONS AND DEPENDENCIES BY DEPARTMENT

Dept. #789, Distribution

Function: Pack Merchandise

Notes: Pack merchandise for shipping.

Dependency: J&L Packaging Materials
Type: Vendor

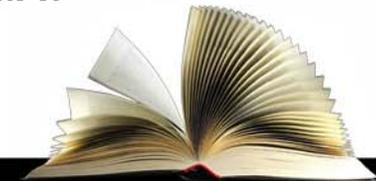
If J&L could not supply the packaging materials, we would need to find another source which could take some time. Hey...maybe we should find alternate vendors now!

Dependency: Manufacturing
Type: Other Department

If manufacturing cannot produce the product, we cannot package it, so that would be a dependency.

Dependency: Packaging Equipment
Type: System

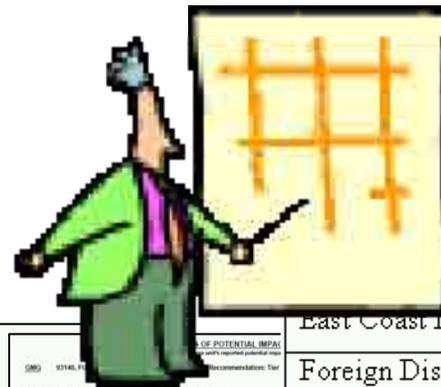
While it would be possible to pack by hand or outsource the packaging, we would lose a considerable amount of



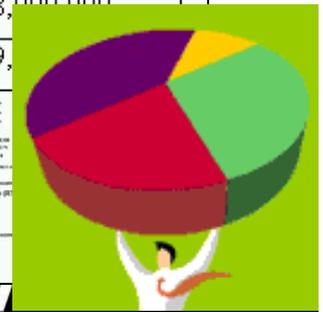
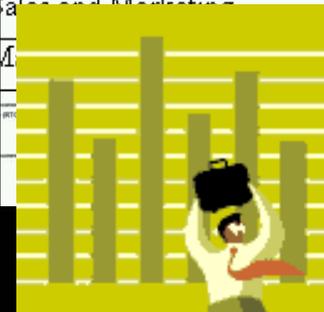
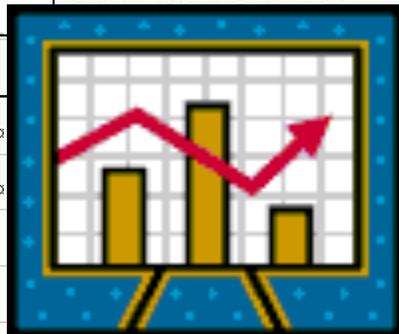
You will want to have a lot of different views of the data included in your BIA Analysis/product, for different purposes and for different audiences.

The good news is that, since you decided on what you wanted for your final product FIRST, you have all of the data you need to provide ALL of these views.

And more....



	Total Potential Impact Within 72 Hours
Manufacturing	\$18,000,000
East Coast Manufacturing	\$12,000,000
Foreign Distribution	\$9,000,000
Global Marketing	\$8,000,000



Materials Purchasing

With proper planning and implementation, we have what we need to accomplish our Goals and Objectives.

Questions?

