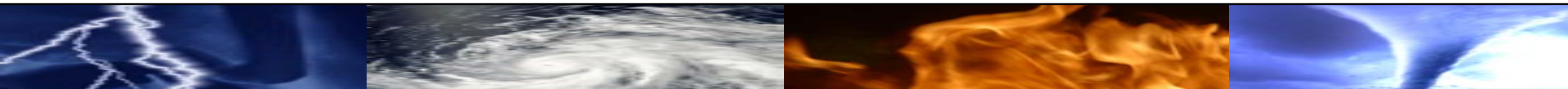


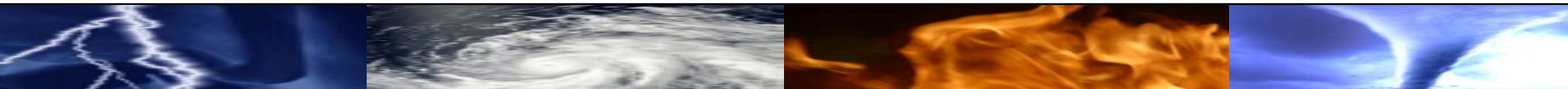
Business Resiliency, Lessons Learned from Hurricane Katrina and Other Events

May 20, 2006



Prior to the recent catastrophes and the resulting regulatory response, the prevailing business continuity model supported:

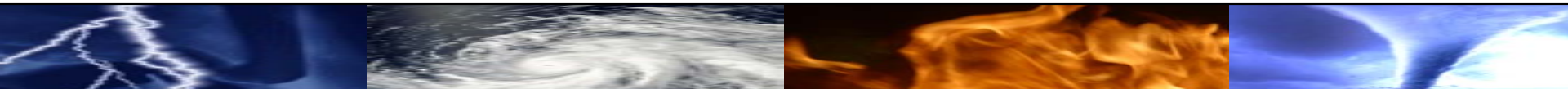
- **Information Technology-Centric Planning**
- **Limited Input from Business Units**
- **Low Priority in Board Level Strategic Planning**
- **Minimal Investment in Preparedness**
- **“It Won’t Happen to Me” Mentality**
- **Complacent regulators and auditors**



Expectations are Greater Than Ever

Important stakeholders are depending on your preparedness:

- **Customers**
- **Employees**
- **Senior Management**
- **Board of Directors**
- **Shareholders**



Your company's very survival may well depend on your ability to recover from a disaster!

80% of businesses without a well structured recovery plan are forced to shut down within 12 months of a flood or fire.

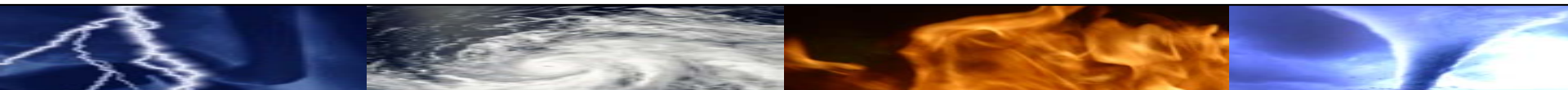
(Source: London Chamber of Commerce and Industry, 2003)

Almost half of the companies that lose their data through disaster never re-open, and 90% are out of business within two years.

(Source: Univ. of Texas Center for Research on Info. Systems, 2004)

Most businesses that suffered through Hurricane Katrina that were not able to get back up in 90 to 120 days will likely not make it.

(Source: Processor[®], 2006)

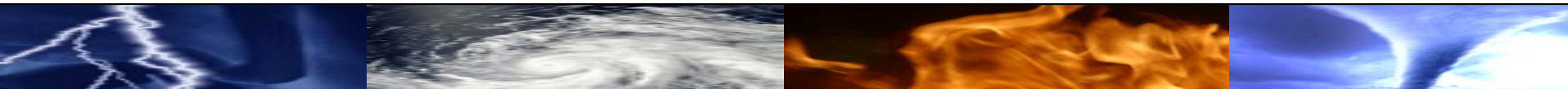


**“Let our advance worrying become advance thinking and planning”
Winston Churchill.**



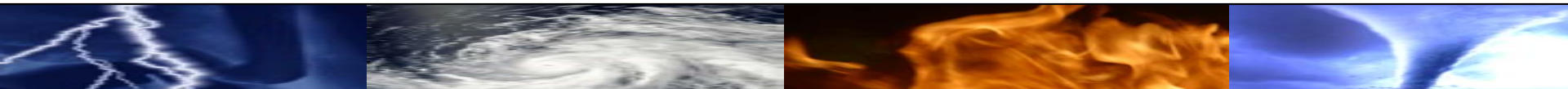
Plan Audit

Review and analysis of existing plans in order to determine completeness, validity and to establish requirements for revision.



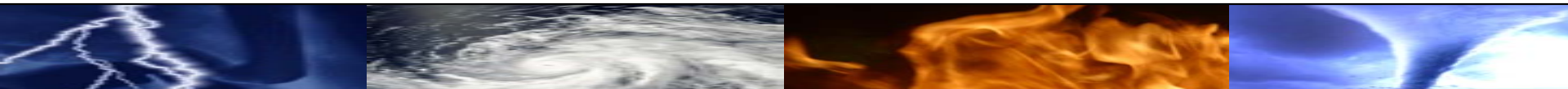
A thorough audit of plans may have uncovered:

- A distributor's lumber shipments rerouted to Houston during Katrina could not be unloaded as warehouse availability was overlooked.
- That the just-in-time inventory strategy would leave PC makers scrambling to find chips after a 1999 earthquake interrupted the supply from Taiwan for several weeks.
- There was no contingency plan for the disruption of employees' pay due to the vendor's inability to originate ACH files.



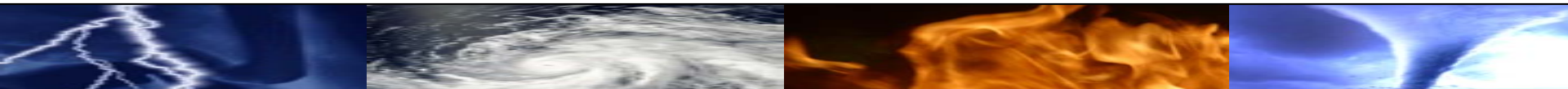
Audit your current plan to grade the level of mitigation for:

- **Large scale employee absenteeism**
- **Inventory disruption**
- **Vendor failure**
- **Viability of alternate locations**



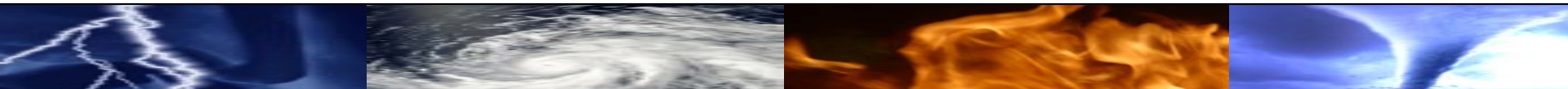
Risk Assessment

Determination and analysis of potential threats and vulnerabilities that may be the cause of future disruption. Formulate potential mitigation strategies, and implement selected strategies based upon investment versus impact.



A hurricane resulting in a levee breach was not an unrealistic scenario in New Orleans

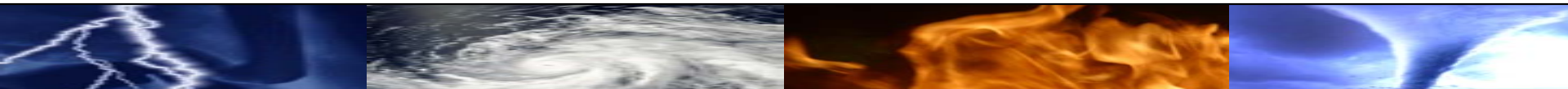
“A FEMA storm surge model, NOAA's SLOSH model, and now ADCIRC experimental storm surge models based on the most recent levee heights and detailed land elevation data for southern Louisiana, have verified that a slow-moving Category 3 hurricane or greater of these tracks have the potential to flood the New Orleans "bowl." (Source: Louisiana State University Center The Center for the Study of Public Health Impacts of Hurricanes)



There were three pandemics in the 20th century:

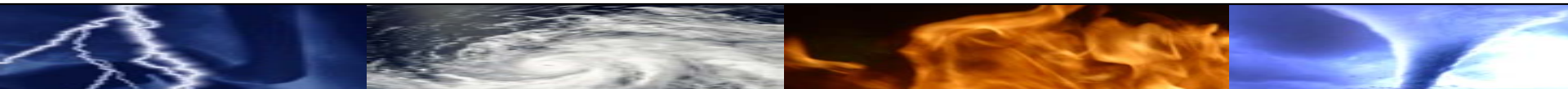
- Spanish Flu: 1918-19 (20 – 50 million deaths)
- Asian Flu: 1957-58 (1 – 2 million deaths)
- Hong Kong Flu: 1967-68 (1 million deaths)

If you haven't already, consider forming a task group to begin the research process to identify possible mitigates to a pandemic.



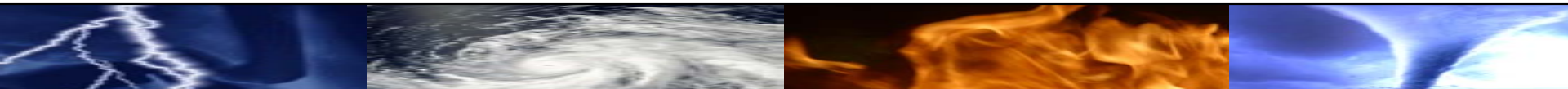
Impact Analysis

Identification of critical business functions and processes, quantifying the potential impact of not recovering these functions over periods of time, and determining realistic recovery time and recovery point objectives.



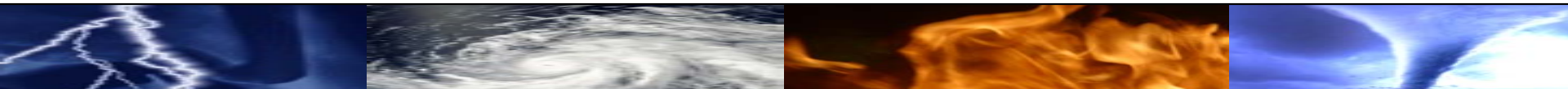
Functions and workflows that are overlooked can have devastating consequences:

- **Evacuating and sheltering the poor and those without private transportation resulted in serious impacts during Katrina**
- **Misunderstanding the market pricing forces when components were interrupted by a Taiwanese earthquake resulted in a one day 7% decline in Dell's stock price and was blamed for a drop in HP's quarterly income.**



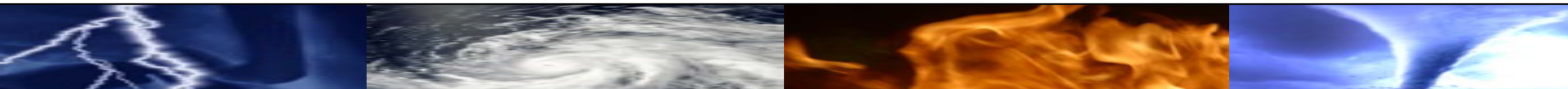
A Business Impact Analysis should:

- **Identify the inherent risks (financial, reputation, etc)**
- **Measure impacts resulting from loss of function**
- **Chart work inflows and outflows to identify critical points of failure**
- **Identify minimum required resources (floor space, employee, vendor, tangible assets or application recovery**
- **Prioritize recovery resource allocation accordingly**



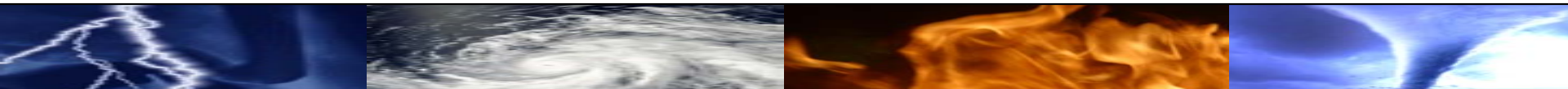
Plan Development

Develop and document detailed contingency plans for recovery of business and IT processes to create an effective business continuity/continuity of operations plan.



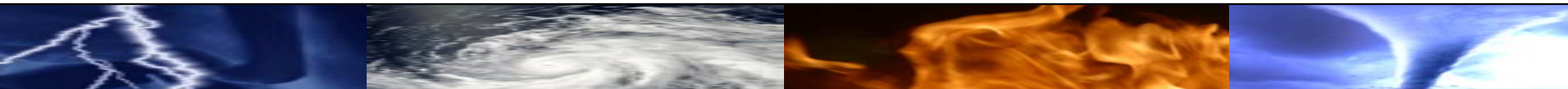
Failure to identify alternate communication channels:

- **Most business depended on the cellular network**
- **Hotlines were often located within the disaster zone**
- **Satellite phones were not in place**
- **Overlooking creative ways to communicate with customers**



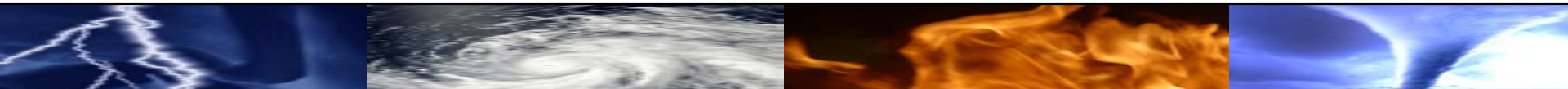
Identify and document various channels to communicate to your various constituencies including:

- **Robust Notification Service**
- **Personal Internet Telephone Service**
- **Satellite Telephones**
- **Talk Radio**
- **Public Access Channels**



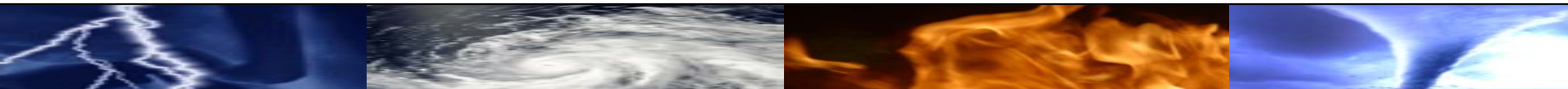
Training & Awareness

Plan awareness and training activities for all staff and designated users on the existence and effective utilization of the organization's business continuity/continuity of operations plan.



Failure of management to engage employees is often a result of:

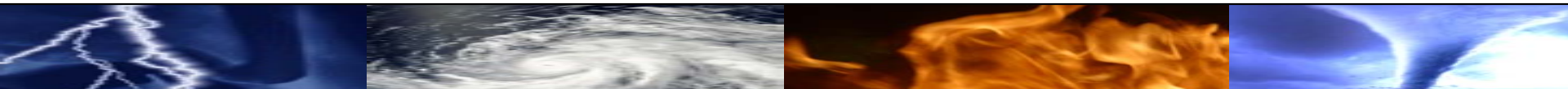
- **No Business Continuity Policy**
- **Non- Existent Evacuation Testing**
- **Resources not being committed**
- **No evaluation metric for risk management**



Here are some suggestions to help engage employees:

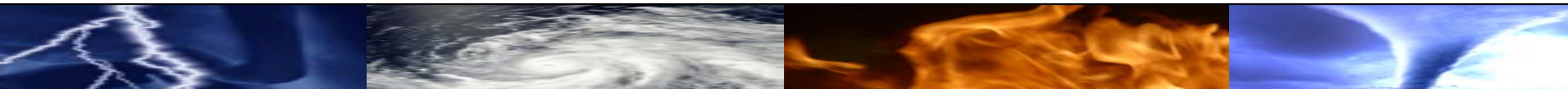
- **Survey employees to determine awareness**
- **Simulate disaster at the unit level**
- **Create an enterprise-wide business continuity policy**
- **Include risk mitigation in management appraisals**
- **Combine training with other periodic requirements**

What's Measured and Rewarded Gets Done!



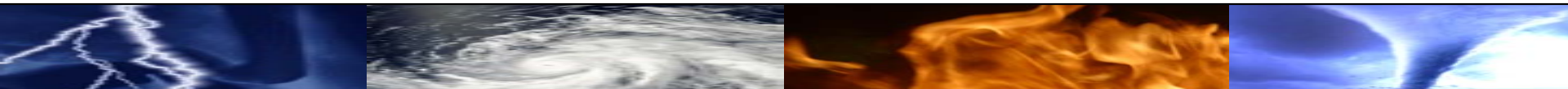
Testing & Exercising

Periodic planned exercises to ensure the validity and effectiveness of the documented business continuity/continuity of operations plan.



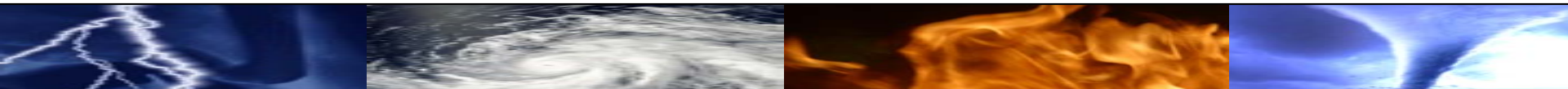
The time to find out what you don't know is not during the disaster!

- **Failure of backup media**
- **Interdependencies or conflicting expectations**
- **Assumptions about vendor readiness**
- **Resource identification**
- **Impractical recovery processes**



Plan Maintenance

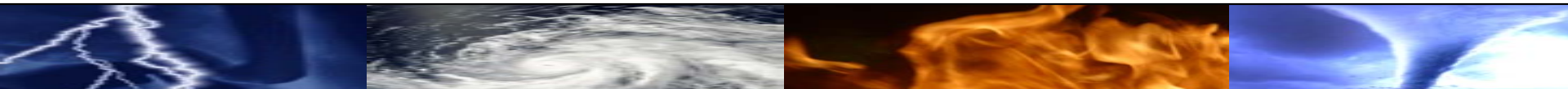
Determination of plan revision schedules, and needed changes to the existing plan based on actual data and/or exercise results, required to keep the plan current and effective.



“If anything is certain, it is that change is certain. The world we are planning for today will not exist in this form tomorrow.”
Phillip Crosby, Reflections on Quality

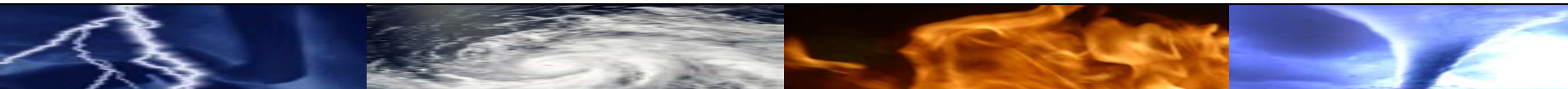
A recent AT&T study indicated:

- **Only 47% of businesses with 500+ employees have updated their business continuity plan in the last 6 months.**
- **Only 37% of small business had update their plans in the last 6 months.**
- **25% of the respondents indicated that their plan had not be update in a year or more**



Your maintenance strategy is effective when:

- **Someone is accountable**
- **It follows a plan test/exercise**
- **Resources are maintained at least semi-annually**
- **Recovery process change aligns with product/service or delivery system change**



Q and A

