

Disaster in Paradise? Even the Sweetest Dreams Can Become Nightmares without Adequate Information and Preparation, Part 2 of 3



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Previously, Leo and Sharon Wrobel helped us dream of moving to a place that encompasses the earth's natural beauty. But then they reminded us that volcanoes, floods, tornadoes, wildfires, and other calamities may also be part of the bargain. This three-part series continues with a discussion with Ted Sheppard of the Pacific Disaster Center, who literally has "been there and done that."

Balmy Breezes? Or Terrifying Tornadoes?

Have you been lucky enough to move your place of business to somewhere warm, scenic and wonderful? Probably not. If you're still in the dreaming or planning stages, it's important to consult an expert. For this article, we interviewed Ted Sheppard of the [Pacific Disaster Center](#), located on the beautiful island of Maui (see Figure 1), to garner some useful insights on how to assess the probability of a disaster, including some firsthand input from this disaster recovery expert.



Figure 1 Sunset on the beach in [Lahaina](#), on the island of Maui in Hawaii, October 2007

Ted Sheppard knows what he's talking about: First, because he has some extraordinary modeling tools at his disposal; second, because he has taken the plunge many of us long to take—his office is on Maui! Ted talks candidly about what organizations like the Pacific Disaster Center (PDC) bring to the emergency management party, and how such services can be valuable to commercial enterprises.

After the interview, we wrap up this part of the discussion by considering how you should apply this information to your own business.

The Pacific Disaster Center (PDC): A Bit of Background

After Hurricane Iniki devastated the island of Kauai in 1992, the U.S. Congress established the Pacific Disaster Center (PDC). Headquartered on the island of Maui, and in operation since 1995, the PDC has assisted in disaster preparation, mitigation, response, and recovery efforts of emergency managers and decision makers throughout the Asia Pacific and Indian Ocean regions and, more recently, around the world. The PDC is an applied science, information, and technology center, working to reduce disaster risks and impact to people's lives and property; and local, national, and regional economies.

The PDC works to improve early-warning systems and to develop better risk-mitigation practices, which can be applied at all levels from international regions down to individual communities.

The PDC's evolving approach to emergency management shifts the emphasis from being reactive to focusing on response and recovery operations to being proactive, with the focus on mitigation and preparedness. The center

provides detailed assessments of hazards and risks, and helps to prioritize preventive actions, understanding that these are critical components that reduce losses when disaster strikes

Interview with Ted Sheppard

Leo Wrobel: Briefly, what does the PDC do?

Ted Sheppard: By providing applied information research and analysis support to a broad customer base (including policy makers, planners, and executive-level disaster managers), the PDC serves as a bridge between the scientific and decision-maker communities. The latter certainly includes commercial business, and representatives of major industries are always included in stakeholder workshops when the PDC works with government clients.

Sharon Wrobel: How are current and emerging technologies relevant to disaster management, specifically for businesses?

Ted: Disaster management is a constant consumer of the newest technologies, but it's one area where a lot of innovation takes place. The PDC has developed mature systems for acquiring hazard and risk data from historical information to space-based imagery and partnerships around the world to support continuity of data availability. The center also has developed novel processes for the visualization, automated processing, and point-to-point redistribution of the data as needed. The distributive networks range from absolutely secure servers to systems devised for broad dissemination of hazard warnings.

Businesses today are often large economies of frequently, international economies. Among the most devastating effects of any natural disaster is damage to that economy: economic loss and reversal of development in the fiscal strength of the entity, whether it's a nation, a metropolis, or a business enterprise. A primary task of executives at the highest level in any organization is to create and maintain *sustainable* economic growth for the communities it serves. In the case of a business, that could include a board of directors; a corporation-wide community of employees; and, of course, the stockholders as well as the cities, towns, and nations in which business is done.

Not doing a thorough Risk and Vulnerability Analysis and *not* having sound, well-reasoned priorities for disaster preparation, risk mitigation, emergency response, and post-disaster recovery is tantamount to crossing your fingers as a way of warding off a tsunami, or closing your eyes to avoid having to deal with an approaching storm.

Leo: In lay terms, what is *Risk and Vulnerability Analysis*?

Ted: In terms of systems and processes, software and hardware, and the application of subject matter expertise and experience, the Risk and Vulnerability Analysis might seem arcane or even nearly incomprehensible, but it's actually something that people do all the time. When you buy a home, for instance, you look around to see what's on the property that could be a risk to the safety of the home and its occupants. You see trees that may need trimming or removal, find a water supply pipe that may need replacement, notice boulders on the hillside above the property, and so on. You look at the financing in the same way, to ensure that there are as few potential impediments to full ownership as possible.

Naturally, if you're smart, you also look beyond the property. Is the area on a flood plain? If so, what's the risk of damaging flood reaching the home? Do wildfire fuels surround the property, and to what extent can that risk be mitigated? What you choose to do about the dangers discovered in your informal Risk and Vulnerability Analysis of your new home will be based on your best estimate of the risks, the degree to which you're willing to commit resources to offsetting those risks, and other factors. However, if the property really matters to your family will be living there, for instance, you'll get expert help with the assessment of the property (commonly called *inspection*), you'll get expert help in learning how to prioritize and react (*decision support system* in PDC terms), and you'll get systems in place so that you can be informed of changes in the risk picture and respond appropriately. Maybe that's something like asking the gardener, the pool boy, and the housekeeper to be vigilant and report regularly.

Sharon: Don't insurance companies offer largely the same service?

Ted: Not at all. Insurance companies assess risk, but remember that insurance companies are businesses, so their top priority is to manage risk for the sake of their own corporate owners and stockholders. If everything works as it should, you get cash after the event when disaster strikes; in advance of that, you may get some advice about reducing risk in the form of a notice that your rates will be higher if you don't fix a hazard, or that such-and-such part of your business cannot be insured because of its risk. But, even with the profit motive to impel action, an insurance

company's interests, resources, expertise, and responsibility are all focused differently than those of the most effective top-level manager who is planning for corporate sustainability and business continuity

For insurers, business is business. Given two entities, one a casino and one a hospital or power plant, if the two have equally valued assets, they're identical to an insurance company. For the PDC, the two entities are not equivalent. Our Risk and Vulnerability Analysis takes into account the communities served and the value of the entity to the communities. It also can consider impacts in the other direction; that is, how the communities should or might affect the business or other entity

Another aspect of the difference is the value of having truly done due diligence, having done all that is possible to mitigate risks. Of course, a business has insurance, but on a day-to-day basis, insurance guarantees payouts in case of disaster. On the other hand, a thorough Risk and Vulnerability Analysis, with an appropriate suite of other services, can provide continuous decision-support for planners and managers. For example, think how the community will look at a resort where a devastating tsunami hits. If the company is well-insured, that's one thing; if it has the data and other resources to prepare for the tsunami, to know exactly what the hazard is, and to respond so that no one is killed or injured, that's an entirely different thing. For that kind of preparedness and responsiveness, the PR value alone is incalculable. Being insured is something else

Leo: How does the PDC work with a business or a business association?

Ted: That varies tremendously depending on the company, industry, or association. However, a large company with distributed assets and a significant population of employees or locations is not significantly different from the corporation of a local or even a national government. So the interests of the corporate entity are not generally different from those of a county or a country. We start with an overall assessment of risks and then develop a clear picture of the need for data streams, information and communications technology, and human resources to meet those needs. Then we compare existing resources with those needs, providing an actual needs-inventory detailing the gaps between what's available and what's essential or ideal. If the corporation is large enough to support it and has assets distributed in such a way that it would be necessary or even useful, we would then develop a complete decision-support system to empower the managers with ongoing data and communications resources; real-time or near-real-time collaborative communication tools, and whatever else the managers may need to confidently and consistently select and execute appropriate responses to risks and disaster events

Assessing Preparedness at Your Organization

After seeing what Ted Sheppard had to say, you probably have some questions for your own experts regarding the vulnerability of your business. Let's consider a few starting questions that you might ask after taking a good hard look at the environment surrounding your company, inside as well as outside, including the effects of the economy you may be supporting.

- What are our risk factors?
- For department heads: What is a priority to you? What is critical to maintaining "business as usual"?
- Where do these critical items reside? Are they easy to replicate if everything is destroyed?
- Suppose you're able to acquire equipment for redundancy, and then you have to move an emergency location. Will the backup equipment be in parity to what you have now? In other words, if you're currently running equipment or software on old versions, will your new site be able to run those versions, or will upgraded equipment and software make what you have obsolete and unusable? Which brings up the next question: Do you have a rapport with your vendor so that if disaster happens, you're taken care of swiftly and reasonably? During a disaster is not the time to find out that your vendor is out to make money from your crisis by offering you inferior equipment, service, or both. You certainly don't want to be charged double the price because you need something right now
- Do our executives need a model to visualize damage before it happens, or do they "just know"? Are they ignoring the facts, or do they have a definite plan?
- If we have a plan, how stout is it? Do the people in charge know how to implement the plan? Are they willing to do so?
- Has the plan been tested? If so, what were the results? Were those results documented? Was the plan tested again, and documented again? If it hasn't been tested, why not? Is it safe to wait until something happens?

Summary

So do you stay, or do you move? A good risk and vulnerability study should help you to make that decision, by providing detailed pros and cons for your individual situation

Your company may not experience the urgency implied in this article. However, even the smallest mom-and-pop store needs to have a risk assessment done, because fire and water damage are almost certain possibilities. Predictably, people are willing to take chances, and often may be caught off-guard. But procrastination certainly does not pay for a large corporation doing volumes of business in an environment that depends on thousands of employees.

In part 3 of this series, we will delve into what *really* important to restore in a disaster. It's not all about money, and not a purely actuarial analysis. As Ted Sheppard pointed out, a hurricane could destroy a \$1 billion gambling casino and at the same time wipe out a \$1 billion power plant. While they seem to be equal risks in terms of monetary impact, the socioeconomic impact of the loss of a power plant is probably far greater. Sometimes the unique input of a quasi-government organization like the PDC lends clarity to these kinds of judgment calls. More on this topic next month.

NOTE

We would like to take this opportunity to thank Ted Sheppard from the Pacific Disaster Center for his insightful contribution to this article

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