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VIEWPOINT

By Greg Blonder

"Platforms" for Disaster Planning

As the U.S. tries to cope with preparing for future calamities, one approach has the most promise for covering many possibilities

The problem with the future is there are so many of them. In one future, we spent \$10 billion on flood control in the Mississippi delta and avoided hundreds of billions in economic losses and thousands of tragic deaths. In another, the Y2K problem remained undetected, and for three months in the early winter of the new century, the U.S. power grid went down unexpectedly, killing thousands.

Rogue asteroids will be deflected from hitting Earth -- or maybe not. Terrorist attacks on Las Vegas, or was that Dallas? Rotting infrastructure, tsunamis in Los Angeles, melting ice caps, and more future scenarios than time, money, or probability can ever rank in order. It's overwhelming.

And that's before the inevitable distortions of politics.

FLEXIBILITY FACTOR. The past is limited by memory, and the future by imagination. But if we simply remember the past, we're likely to fight the last war over and over again. And if we imagine every possible future, we risk betting on scenarios which never materialize.

As Katrina unfortunately makes clear, we have to confront the central question facing our nation: How to manage boundless uncertainty with finite resources? Fortunately, such challenges aren't unique to the political sphere -- they're encountered every day in business. Perhaps the approach businesses rely on to manage risk could work equally well for government.

The key is to turn the problem inside out -- and concentrate on identifying solutions, instead of stack-ranking risks. Remarkably, one size sometimes does fit all. As used by venture capitalists, the concept is called a "platform technology." Rather than relying on "point solutions -- betting the ranch on a single theory of the future -- savvy investors often reduce risk and increase returns by seeking flexibility when the future is unclear.

Such flexible platforms enable a single core technology to solve a multitude of problems -- often problems one can only dimly envisage ahead of time. A classic platform technology is plastic molding. Ever since *The Graduate* made "plastics" a one line Haiku, the ability of plastics-molding technology to produce an infinite variety of shapes at low cost and in high volume has created tremendous value.

NO CRYSTAL BALL NEEDED. Developing this platform took patient investment and many hands, but in the end, it efficiently displaced one point solution after another. An entrepreneur in the 1960s would have been wise not to buy lathes to make steel gears, glass-blowing equipment to make soda bottles, or leather cutting and sewing equipment to make suitcase handles. Instead, smart entrepreneurs investing in a plastic-molding platform were able to serve all these markets simultaneously, displacing older technologies as the opportunity presented itself.

They didn't have to time the market, and they could share the capital expense of one machine across multiple -- previously disparate -- applications. These farsighted entrepreneurs molded a new future without needing a crystal

ball.

The Internet is an example of another platform technology -- in this case, a common nexus for everything from communications and news to logistics and voyeurism. People who bet on point solutions like single-purpose data networks or proprietary image formats, quickly found themselves outmaneuvered and outnumbered by Internet platform adherents

GROUPTHINK. How does this concept relate to America's disaster planning? Like our mythical entrepreneur, we don't know exactly where and when our next catastrophe will arise. Mere point solutions, no matter how well executed, will always fall short. Higher levees in New Orleans, for example, would not have spared Biloxi from total devastation. And stronger cockpit doors won't prevent a truck-bomb attack.

We need to cluster important future scenarios into groups sharing related solutions, and in doing so, dilute the risk of choosing poorly.

Although this is, admittedly, an unscientific list of examples, my whole career has been spent reducing large, complex problems into actionable insights. In that spirit, here are three potential "platform technologies" in which America should vigorously invest:

- **Population Haven.** Today -- as we just experienced with Katrina -- there's no reliable system in place to quickly relocate large numbers of people. Such a system would address multiple scenarios: everything from tsunamis to a nuclear attack to cities made uninhabitable by infectious disease.

The solution would include a clear chain of command, decentralized stockpiles of food and shelter, staging areas, robust communications, and enabling laws. Simultaneously, we need to rethink the role and mission of the National Guard and the possible organization of a civilian volunteer corps. But it requires no imagination to believe mass relocations will be necessary in the coming years -- even if the timing and cause are uncertain.

- **Energy Cushion.** In light of current geopolitical threats and worst-case natural disasters, we would be foolish not to maintain a two-year energy cushion from dependence on the rest of the world. That compares to our current 40 days worth of oil in the Strategic Petroleum Reserve.

Tomorrow, the Saudi oil fields could be destroyed, or volcanic clouds could block the sun and double the need for heating oil. Our most immediate priority should be to expand the SPR by at least a factor of 10, and, simultaneously, to institute a national plan for emergency energy conservation. Longer term, we should work to decentralize our energy reserves to produce and store energy near consumers, rather than under a few salt domes vulnerable to attack or isolation.

With this solution, hospitals and other critical emergency-response centers could tap into local energy sources even if a large central power station had been put out of commission by a tornado or terrorism. In other words, our emergency-ready energy network would, like the Internet, have the ability to repair itself.

- **Disease Containment.** This is one problem that, if we don't take action immediately, may lead to an unrecoverable disaster that cannot be solved retroactively with money and good intentions. Today, we have no way to quickly detect the presence of disease, to track its progress, treat the ill, protect the healthy, and contain the threat.

What if someone poisoned the milk supply with salmonella? What if someone made New York City uninhabitable by spreading anthrax? What if the next plane from Hong Kong carried two passengers ill with a virulent mutation of avian flu? The answer, obviously, is an out-of-control disaster, if we didn't respond quickly and knowledgeably (see BW, 9/19/05, "[A Hot Zone In The Heartland](#)").

We need a multilayered solution, starting with detectors at all stages of our air, water, and food supplies. Only such a system allows us to clamp down on an outbreak before it becomes dangerous. Recent studies suggest that one extra day's notice about a communicable disease can make all the difference between a minor inconvenience

and a true disaster.

It's the power of networks. Infecting one node in a network means you've lost all the spokes. Software is essential here, too. We need the ability to track people's medical histories via networked databases and a more accessible national medical system.

INITIATIVE SPUR. Such measures don't have to be drags on the economy -- there are sound economic offsets cross-subsidizing many of these investments. For example, the same system that locates an outbreak of disease could provide key epidemiological insights to help cure cancer. And we could shift materials and supplies reserved for helping Americans after a disaster into the foreign-aid supply line, before they expire.

Moreover, one of the beauties of effective platforms is that they often encourage individual initiative. Perhaps decentralizing energy distribution might encourage municipalities to look for alternate sources of energy -- like methane from garbage dumps or solar power -- that today are difficult to justify.

Yet we must face the fact that critical programs require immediate investment. Without them, we're doomed to incur far greater, more painful expenses later on. Think of these platforms as insurance policies, which have to be paid every year. Think of them as capital expenses, for which all sound businesses accrue yearly. General solutions -- that is, platform technologies -- represent by far, our best hope to greet the future with confidence.

READER COMMENTS

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Nickname: dianna

Review: This is a good article and truly the best approach to use. My only specific comment is that for contagious illness we already have community health districts across the country that already do this job, but they have been seriously underfunded. They already have the infrastructure and training and only need to be better supported and have on-going training in detection and response. dianna

Date reviewed: Sep 11, 2005 6:44 PM

Nickname: Walter

Review: What ever happened to the Civil Defense system I grew up with? We had mass shelters stocked with canned water and food. That sure would have done the starving, thirsty people at the New Orleans Superdome, waiting for an almost forgotten rescue, a lot more good than chaos.

Date reviewed: Sep 11, 2005 9:55 AM

Nickname: Lance Olsen

Review: Great conversation-starter. I'll be sharing it widely.

Date reviewed: Sep 11, 2005 12:23 AM

Nickname: none-age 84yrs

Review: Money is a tool! We must prevent disease at the root. I have sent my contribution. Really it's self preservation! Typhoid spreads like wildfire. No one is invincible!

Date reviewed: Sep 10, 2005 2:21 AM

Nickname: RB

Review: This is exactly what we need to do!! Instead of sitting back saying, well we don't need to spend any money right now, we need to set up our contingencies and be prepared so we don't have to play the blame game.

Date reviewed: Sep 9, 2005 9:33 PM

Greg Blonder is a general partner at Morgenthaler Ventures and is based in Princeton, N.J. Full disclosure: Morgenthaler invests widely in companies that might contribute to -- and benefit from -- the initiatives outlined above

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