Michael Feigin
Global E&C Forum X Address
Rice University
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The Evolving Risk Landscape

It is a pleasure to be here and have the opportunity to discuss what has become a critical issue for every business—understanding the impact of an ever-changing risk landscape. Risk is a familiar concept in the construction industry. In fact, I would argue that risk is a one of its defining elements and success is achieved only by those who have the confidence to embrace it.

Today, I'd like to talk to you about our Shrinking World, and how it potentially can impact our local construction business. We will talk about what we at Marsh perceive to be 3 of the most important global risks facing companies today, 3 key drivers of the changing landscape of risk, and, finally, how all of us can take advantage of our knowledge of these risks and drivers of risk to first manage them, and then to find the opportunity in them.

Consultants at one of the major strategic forecasting firms have called the current global environment "volatile, uncertain, complex and ambiguous." Supporting this view is a research report prepared by Marsh in collaboration with selected participants at this year's World Economic Forum.

The report examined 23 core global risks in five key areas: economic, environmental, geopolitical, societal and technological. I invite to you to download the report from our website at MMC.com. The key takeaway from the Global Risks 2007 is the fundamental disconnect between risk and mitigation. The report concluded that risks are rising in all of the recognized areas, but in spite of this, efforts to mitigate these risks by government and business are woefully inadequate.

As risk levels intensify, volatility rises as well. Increased volatility is frequently seen as a threat to stability, when it really is an essential component of risk. When looked at this way, volatility can be seen as a catalyst in a rapidly globalizing world that offers unprecedented opportunities for development and growth. The key is how to leverage volatility to take advantage of the unique opportunities it provides.

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Getting a handle on volatility is not a new challenge. Think of what's been happening in the international currency markets over the past twenty years. Despite financial instability, national deficits, and control by certain governments that keeps currencies below equitable values, global trade has continually increased. In this case, currency volatility has been a factor in bringing the world closer together as nations attempt to position themselves along with trading partners on a common economic ground.

The rising risk profile is a consequence of the accelerating pace of globalization occurring in the context of exploding population growth around the world. It had taken from the beginning of recorded history until 1950 for the global population to reach 2.5 billion people. However, only 40 years later, in 1990, the population doubled to 5 billion and passed 6 billion just before the end of the 20th century. In the next hour, 10,000 babies will be born, a rate of ~3 per second.

We're confronting a rapidly changing world driven by three major imperatives: an interconnected global community, the need for efficiency, and a focus on short-term performance.

When considered in a strategic context, individual risk elements can be defined and managed. With creativity and discipline, unprecedented challenges can be the catalysts that stimulate innovation and growth. Finding opportunity in risk is less likely to happen if risk is managed purely as a function, rather than incorporated into your overall strategic planning.

Let's begin by discussing the broad sweep of risk issues. Many of the challenges – and the related opportunities – presented by changing dynamics and markets will demand more than risk management. They will also require integrated operational and financial expertise.

Today, business leaders must anticipate risks never before imagined. In terms of the construction industry, let's think about the implications of the global threats that we at Marsh focus on when we talk to our large clients: climate change, terrorism and pandemic.

The sheer complexity and scope of the new realities of risks can be a bit overwhelming. At 379 parts per million, carbon dioxide levels in the atmosphere are now 27 percent higher than at any point in the last 650,000 years, based on research conducted on Antarctic ice cores. Carbon dioxide is the principal "greenhouse" gas thought to be driving global warming.

Regardless of your scientific beliefs about what is, or is not, causing the dramatic climate changes we've seen—it doesn't matter. Climate change has major implications for all of us— weather is a consideration in just about every construction project. Any change in our ability to depend on a reliable forecasting calendar, or seasonal expectations, has serious consequences.

Hurricane Katrina had a severe impact and left scars from the Gulf coast to the Northeast. In the wake of its destructive path, the post-storm demand for temporary structures and restoration caused the prices of certain materials to skyrocket. Not just in hard-hit Louisiana, but around the US. Labor resources were strained. People saw opportunity and thought they could make money following the storm prompting an influx of labor into Louisiana and draining the labor pool from surrounding areas. Fuel prices shot up because of refinery disruptions, which had a ripple effect throughout the rest of the world as the price of gas hit record levels.

With the recent changes brought on by global warming, climatologists have predicted an increase in the intensity of storm activity. This past April in the Northeast, we experienced a record-setting seven inches of rain in less than 24 hours, flooding many homes and business, resulting in significant losses.

In fact, as many of you know, our industry has recognized this issue and has been proactive on the environmental front with a significant number of green building, or environmentally sustainable initiatives.

When Lend Lease, the company that owns the Global Construction Company, Bovis Lend Lease, decided to build its new headquarters in Sydney, Australia, its priorities included a reduction in pollutants, increase in environmental quality, water and waste management, and a green area for employees to enjoy. The new building, known as "The Bond," was the first in Australia with a certified emission that resulted in over a 20% reduction in the stringent targets set by its initial five star design commitment. It achieved this by using chilled beams (a first in Australia), winter garden rooms and automatically controlled external shades to keep the heat out as well as providing external views for 60% of its occupants. It also contains low volatile organic compounds, or VOC, carpets and paints, a roof garden with native plants and timber decking from sustainable sources.

Zachry Construction Corp. has had similar success with its Employment and Conference Center, which is LEEDS platinum certified. The Center uses natural light to reduce the need for artificial light, it has a water reclamation system, under floor HVAC systems and rainwater collection to flush the Center's plumbing. 80% of the building furnishings are GREENGUARD certified (having few or no VOCs).

In addition to more dramatic climate change, the world has also faced the threat of two deadly pandemics—the SARS virus and Avian Flu. The rapid spread of these deadly contagions is a consequence of a newly acquired global mobility, as people migrate from rural areas to major urban centers in search of greater opportunity. Diseases, such as polio, tuberculosis and small pox, which were once considered effectively eradicated in the developed world, have been reappearing as virulent strains, now resistant to conventional treatments.

If any of you have visited China recently, you will see temperature testing at airports and hand sanitizers in the lobbies of Chinese office buildings.

The third global risk is terrorism. Since September 11th, the US and its allies have been vigilantly defending against another major attack. Yet, since then we saw explosive devices rip though commuter trains in Spain and subways in London, while a plot to commandeer and destroy a number of Trans-Atlantic flights over the ocean was uncovered and stopped just before it occurred.

Clearly, time has not dissuaded terrorist groups from planning more deadly incidents. This past May, six foreign nationals were arrested on charges they plotted to attack the Fort Dix Army base in New Jersey and "kill as many soldiers as possible," according to federal authorities. At the time of the arrests, the plot was in the planning stages and no attack was imminent. Tragically, terrorism will continue to be a significant risk and a critical challenge to the construction industry—particularly since the construction industry relies on global resources for a large measure of materials and labor.

Today, the reality is, regardless of size, your business is **globally interconnected**—even if you conduct operations in one country, or a limited regional area. You can physically travel just about anywhere around the globe within 24 hours – and you can do it electronically in less than 4 seconds. Supply chains no longer just cross-countries – they extend across *continents*.

US suppliers hurt by the domestic homebuilding slowdown are profiting elsewhere in the world as the result of an unprecedented surge in global demand for capital equipment. This has created a shortfall in available supplies.

This was favorable for manufacturers as a half-million people descended on Munich this past spring to buy equipment at the largest industry event of the year, Bauma 2007. As a result of a particularly active building comeback in Europe and a continued nonresidential backlog in North America, many machines displayed at the 3,041 exhibits were sold out through 2008.

In the today' s interconnected world, nothing occurs in isolation—breaking news events anywhere in the world are now viewed as they occur, even in the most remote locations. Information, financial instruments and commerce move around the globe with speed and flexibility altering traditional perceptions and working relationships.

Businesses that were once limited by geography and politics now easily leap international boundaries.

Nowhere is this more evident than in the construction industry. The ENR 400 listing of global construction companies now features a greater international diversity of companies than ever before. In fact, the number of US companies in the top ten has been overwhelmed by a growing group of European and Asian firms.

Distance no longer restricts travel, trade, culture, ideas, opportunities, or risks. Professional services in the construction industry are now being provided 24/7 around the world. Global design firms in the US can send jobs in progress to Asia where work continues overnight and when their day ends, it is sent them back to the US to resume the effort. This around-the-clock schedule has raised expectations as to how quickly things can get done.

We are also personally more connected than ever. The proliferation of cellular telephones, wireless-connected laptops and BlackBerry's has made every individual accessible at any time, just about anywhere around the globe. We've become dependent on this new reality. Any interruption in these vital communication links can have a traumatic effect on even the most stalwart individual.

I am sure that many of you remember all too well that period of isolation last April when the BlackBerry system went down overnight cutting off eight million people from their e-mail. One executive told *The New York Times*, "I quit smoking 28 years ago and that was easier than being without my BlackBerry."

Any of the three risks on our agenda: climate change, pandemic, or terrorism; could seriously disrupt the flow of commerce facilitated by global connectivity. We have to look well beyond our own borders to fully comprehend the forces that influence our day-to-day activities.

For example: how would a shortage of strategic materials in China caused by a severe weather event impact the supply chain of a contractor in South Carolina?

Imported building materials from China have increased exponentially and conditions in that nation have a profound effect on how your business operates. Everything you can think of, from insulation to water meters, is supplied by Chinese manufacturers. Between 2005 and 2006, monthly cement imports jumped from about 300,000 to almost 1,200,000 metric tons.

In 1995, Chinese steel production equaled that of the US, and slightly lagged behind Japan. By 2005, China was producing 3.7 times more steel than the US and just over three times that of Japan. Since 2001, growth has averaged a dynamic 22% annually.

If there is a problem such as a pandemic in China, who will produce the materials that you need? Even if you don't get your materials, such as concrete, from China, your supplier may be providing it to European companies who were and when you need it for a project, it won't be available.

What would be the impact of another terrorist attack that crippled a major transportation infrastructure? Around the world, this vulnerability has been demonstrated at various times by commodity shortages, or an incapacitated labor force.

According the Bureau of Labor Statistics, the construction industry will need one million new workers in the next six years and 2.4 million by 2014. In the coming years, construction will rank among the economy's top 10 largest sources of employment growth.

It's no secret that the construction industry is now heavily dependent on immigrants for labor. In the April 2, 2007 issue, ENR noted that, "stalled efforts in Congress for immigration reform are a major concern to general contractors."

What would be the impact of another 9/11 followed by a call for strict controls on our borders, curtailing current levels of immigration and limiting the availability of skilled and affordable labor for construction projects?

The second imperative we all face is the competitive need for **uncompromising efficiency.** Ever-increasing business performance expectations are the result of new processes, such as “just-in-time” inventory and “lean manufacturing.” Even the construction industry now has a new, speedier, delivery model, “lean construction.” While these strategies have made business more cost effective, they’ve made them susceptible to disruptions in supply chains. Around the world, this exposure has been demonstrated at various times by commodity shortages, or an incapacitated labor force. The lesson learned: a shortage of inventories underscores the vulnerabilities of an economy that can be immobilized by even the most modest supply shortfall or temporary disruption.

The third imperative is **the relentless pressure for short-term performance**. In a highly competitive global economy, short-term results have become the barometer by which many businesses are measured. In the construction industry, where we value safety above all, short-term performance is not an issue of doing the job faster and cheaper, but rather it is about completing the work in a more deliberate, well-thought out process, so that rework and waste are eliminated.

An essential element in this process is greater coordination between the various professions and trades that are part of the construction process. Building information modeling, or BIM, is the next element of the partnering concept. I am sure everyone here has had some exposure to BIM. BIM creates a virtual information model to be handed from Design Team (Architects, Surveyors, Civil Engineers, Structural Engineers, Mechanical Engineers, Electrical Engineers) to Contractors and Subcontractors and then to Owners, each adding their own specific knowledge and tracking of changes to the same model. The result is expected to reduce the information deficit that occurs when a new team takes "ownership" of the project as well as in delivering extensive information to owners of complex strucutures.

With increased media and shareholder scrutiny, quarterly operating results fuel headlines and are immediately reflected in dramatic fluctuations of stock prices. Even privately held companies are susceptible to the pressure if their publicly held clients demand specific performance metrics from contractors. The challenge for business leaders is balancing this focus on short-term pressures with an eye toward long-term growth – not only to benefit shareholders, but to protect key constituent groups, including employees, dedicated subcontractors, and those communities where they reside.

This requires an objective approach that enables short-term demands to coexist with the realities of long-term risk. Short-term pressure isn't going to disappear. What's needed is a "counterweight"—or, a more strategic view of risk that helps leaders balance short-term demands with long-term risk implications.

Today, because there is a heightened awareness of risk, it's being addressed not only by risk managers, but increasingly by CEOs and CFOs. And we shouldn't be surprised by that shift. The sheer complexity of risk requires corporate leaders to take a proactive stance on protecting their businesses. But more importantly, as I mentioned at the outset, opportunity is inherent in risk.

For example: In just about every industry, the fundamentals are being altered as new technologies championed by innovative companies are changing the rules of the game.

Companies in every business sector have been adopting technology to improve performance, customer satisfaction and profitability. Think about what technology has meant to you as a business leader and as an individual. It allows you to develop strategies and pursue options that were not available just a decade ago and venture further out on the risk curve.

These are not the type of bold business moves one usually expects from a risk management function. Yet, it is what one expects of a company's C-Suite. A C-Suite that incorporates the full spectrum of risk into their overall strategic planning.

The question is…are you prepared to do the same?

Recognizing that our ability to confront risks depends more on the choices we make before a catastrophic disruption rather than during a crisis, we need a systematic planning approach to risk.

To understand our total risk exposure and help us prioritize effectively, we need to look at risk within the context of global risk—not just the immediate challenges you have to surmount on a daily basis.

Risk identification and assessment begin when you step back and evaluate all of your processes, including supply chain, distribution networks, fixed assets, and your labor force to understand every potential point of failure. Insurable risks, while complex, are the easiest to plan for. Uninsurable risks or those difficult to insure – the impact on costs and schedule of climate change, pandemics or terrorism, for example – require even more foresight and creative solutions.

Think of the vulnerabilities you confront in your business, relying on the timely delivery of curtain wall from China, concrete from Brazil, or a specialty lumber from Malaysia.

The unintended consequence of progress is that we have at once made the global economy incredibly efficient, yet perilously interdependent and vulnerable.

Consider an electric utility that relies on coal for 50% of its generating capacity, which in turn means it is dependent upon intercontinental rail transport. Disruptions in the rail system present major risks for that utility. Or, a global shipping company that relies on one narrow shipping lane for a major portion of its revenue stream—disruption of this channel would have a devastating impact.

A comprehensive understanding of your value chain, including seemingly far-removed points of stress and friction, can help you assess, prioritize, and mitigate risk.

We can't plan for every unique threat or event, and we can't get caught up chasing the "risk de jour".

Because we can't plan for every event, we need to do some triage. Think about it: what parts of your business are most vulnerable and which risks would cause the most disruption to your operations, constituents and vital economic interests?

Managing these varied trade-offs is the essence of good strategy, underscoring why risk management must be elevated to the highest levels of the organization. It is a pervasive subject that is intertwined with every facet of strategy, brand reputation, capital allocation, and operations.

Once you have the full picture of your risks and priorities, then you can turn to risk treatment – transferring risk to the capital markets or retaining it on your own balance sheet), preventing risks before they occur, or mitigating the impact of a risk that can't be completely eliminated.

Frequently, people want to jump right to this stage – "I've got known insurable risks, and I want to transfer that risk". What we like to say is that before you appropriately treat risks, you've got to understand them.

Beyond the risk treatment approaches that are most familiar to all of us – namely the transferring of risk to the insurance markets – I'd like to highlight one other area for your consideration, and that is collaboration with your various stakeholders...because, *you're not alone*.

Any risk that affects your company is bound to have an impact on one or more of your stakeholders – suppliers, distributors, customers, public utilities, regulators, underwriters, investors, etc. You can work with them as a mutual support network to plan for and overcome risks.

To ensure they are insulated from the impact of prevailing risks, companies need to examine who they rely on and who relies on them in times of crisis, particularly when government assistance and resources may be strained and delayed.

It's a systematic, diagnostic approach that enforces essential discipline and rigor in risk identification and prioritization. It's about seeing risks others don't. And that's where opportunity lies for you as leaders to create a distinct competitive advantage.

Every business faces risks due to demand and supply fluctuations. In today's global economy, volatility is escalating, thus increasing the risks companies face. Disruptions due to natural disasters, work stoppages and the threat of terrorism only add to the challenge.

In addition to insurable and uninsurable risks there are those on the edge between the two. The key is to identify these items and figure out how to handle them by examining their levels of volatility. These may, or may not, be insurable risks. If you don't examine them at the highest levels of the company, then those individuals at the project level will never think about them—it has to be a company-wide mindset. The executive team needs to be thinking about volatility and the macro-risk landscape.

The ability to manage risk today requires a shift in mindset. Rather than being something to fear, risk should be embraced as a core element of strategy. It can and should be turned from a potential negative into a vital competitive advantage.

As senior managers for global E&C and EPC firms, you need to consider how these global risks, and the imperatives that drive them, impact your business locally and globally. As we do that, we remember risk, at the most fundamental level, is an essential precursor for reward. Ideally, every decision we make puts each of us at risk in a vital and enterprising way, which can create value and rewards for ourselves. Once we start thinking about risk as a natural context for any endeavor, we invariably will start to manage it more effectively.