

GlobaFone CEO Lou Altman in conversation with Council on Foreign Relations Senior Fellow Dr. Stephen E. Flynn

The Straight Talk Series is designed to provide you with information you will only find here – we cut out the marketing fluff, the ‘spin’ and provide you with, just plain old Straight Talk. The series consists of articles and interviews that shift the paradigm of the Emergency Preparedness and Response world to help provide thought leadership to the industry. Maintaining the highest level of preparedness and response is everybody’s business, not just that of the emergency planning and business continuity community. We intend this series to be thought-provoking, maybe controversial and genuine, always with the intent of extending the practice of the professionals in this work space.

This phone interview was conducted August 31, 2009.

Lou:

Hello there! This is Lou Altman, CEO of GlobaFone. Welcome to another edition of the Straight Talk series. My special guest today is Dr. Stephen Flynn - a Senior Fellow at the Council on Foreign Relations. His expertise is in the areas of infrastructure and terrorism, and how to address these major issues that face the United States of America and the world as a whole. So, without further delay, Dr. Flynn – welcome to the Straight Talk Series. I’m glad that you were able to take the time to talk with me.

Stephen:

I’m glad I could be here with you Lou.

Lou:

I’m not sure if a lot of our listeners really know what the Council on Foreign Relations is, or what it does. Could you give us a short story on that?

Stephen:

The Council on Foreign Relations is a non-profit, non-governmental organization, which is a combination of a membership organization and a think tank. It is the country's largest international affairs and national security think tank. I often describe it as a graduate school without students. My work is primarily on the policy side, to try to shape our thinking and hopefully, have concrete recommendations about what we should be doing in terms of policies related to international relations, national security or homeland security area as well.

Lou:

So, to boil it all down for guys like me, it's a bunch of really, really smart people sitting around with their great ideas of what needs to be done and how we're going to address the major challenges in this world.

Stephen:

Well, we hope to get it right some of the time!

Lou:

I understand! Tell us a little about yourself and your background. Where did you start? What sort of path did you take to get where you are now?

Stephen:

I have an eccentric background for somebody who finds themselves at the center of a think-tank... I started off as a Coast Guard officer at age 17. I showed up at the Coast Guard Academy and the first part of my career was at sea. I commanded a couple of vessels and did the Coast Guard's business of Search and Rescue, law enforcement, and was also involved in the aids to navigation mission as well. From there, I ended up with a chance which the Coast Guard provided me, to go to graduate school – the Fletcher School of Law and Diplomacy and attend the International Affairs program at Tufts University. I did my Masters and PhD work there. That pulled me into the policy world in the 90s, and I had an opportunity to serve on the National Security Council in the late 90s. Also, my work before 9/11 involved the Hart-Rudman Commission in the U.S. Commission on National Security. It looked at these issues before they were fashionable.

Lou:

Sure! And then 9/11 brought it right into the spotlight as a very, very glaring issue... I've heard that you speak on topics that many people have opinions on, like emergency preparedness and business continuity. What would you say are some of the positive steps that have been taken in the past few years? We were chatting before I began to record, and we talked about how Katrina opened everybody's eyes to how ill-prepared we are. Generally speaking, what's happened since that point?

Stephen:

I think there are a couple of things that have been reasonable positive. One is a development that was starting before Katrina, with the growing recognition within the business community that preparedness and the notion of resilience was not only a necessary insurance for dealing with the bumps in the road that happen in our world – whether manmade, naturally driven, or just because stuff goes haywire from time to time. We've witnessed our financial markets too, over the course of the last year.

The investment in resilience not only gives you that insurance, but also puts you in a position of competitive advantage when things do go wrong, because when other people are down and you're up and running, when the dust clears, people want to invest with you and stay with you versus the alternative. And so, this is a good, sensible position to take if you're in the private sector.

On the government side, it's obviously been a more mixed picture in terms of our state of preparedness. On a positive note, the federal government has certainly got its act together more than it had before, to try to figure out how it can provide that kind of backstop support for local states and regions during nature disasters. There's certainly a lot of work that has been done there. On the flip side, for many states and localities the challenge has been limited means to actually accomplish preparedness, particularly in the economic downturn which started a couple of years ago. We're also trying to do this in a race against our ailing infrastructure. The fact that the infrastructure that our forebears built to deal with contingencies – whether it's flooding, tidal surges, or any other natural disasters depending on where you are in the country – that infrastructure's getting a bit old and frayed, and is in need of upgrading. That has not been happening.

Lou:

I just wanted to touch on one thing you mentioned – business resilience. We at GlobaFone are in the final stages of editing a couple of eBooks we're putting out, and one of them talks about how to be prepared for hurricanes, because this is the season. One of the statistics is really startling: Of all businesses, small business in particular, that have suffered a natural disaster or a catastrophe of some

sort, only something of the order of 20% will be in business in two years because that resilience isn't necessarily there. I guess the point here is that no matter what size business you're in, you'd better have some kind of plan. I'd love to hear your opinion on this.

Stephen:

That's absolutely the case. We know that the longer the time that a community is knocked down – that is, if the power is out and people can't get back to work and so forth – small businesses are usually in last position to bounce back. They will have a very difficult time just raising the capital if they are knocked down. So, there are actually two key points here. One is that all businesses need to think very seriously about their continuity plans and how to be able to deal with and be prepared for disasters. But more importantly I would argue, we're all in this together. Businesses and business leaders would do very well if they made sure that they push their local communities with a helping hand and the mentality of 'if something bad happens, how we can all deal with this together'. When we are faced with tornado, a major storm or what we're vulnerable to depending on where we live, how we can work together to get the community back on its feet?

A good example of this is the Pascagoula shipyard down in Mississippi – even if the hurricane bounced over the shipyard and left it unaffected, what the folks down there figured out was that they wouldn't have any employees to show up to work. And so, there's much more of a forward look on not just 'how to protect my real estate' or 'how do I make sure that my suppliers are able to support me', but really 'how do I work with my community to make sure that if we get knocked down, we're all coming back together... maybe your workers can't get to work because the schools are knocked down and their kids are at home. All of that is connected. We need to think about community resilience as well as business resilience and I think it's that resilience that we're starting to see in movement in small pockets around the country. Hopefully, we can bottle it and get it moving more as a national movement. That's what I'm keen to see happen.

Lou:

What we're saying is that everybody needs to be involved. It's not just the government officials or FEMA who are going to come help me. Rather, it's more about 'what are you doing individually' and 'do you personally have an emergency preparedness kit in your home'.

Stephen:

And that poses an issue of just common sense. It turns out that 9 out of 10 Americans, if they stay put for 30 years, will have a natural disaster visit them. That's just where we live and how we live. We have

so much of our population living near the coast. On the East Coast, we've got exposure to hurricanes and on the West Coast we have a big crack that runs along it and so, earthquakes are a problem there. In the heartland, we have floods and tornados... and on it goes!

With climate change predictions, we're likely to see more storms and more intense storms. We've been living in a fairly benign period of time in the last 20 years of the 20th Century. So, we need to be prepared on that front... not just make sure our families are taken care of, but also as a matter of civic duty. There's a limited amount of emergency management capability available and those of us who can, certainly should make sure we are prepared, and also reach out to our neighbor who we know, may be having a more difficult time... maybe it's somebody who has a handicap or is old. We need to ask them what their plan is, and how we can help. The bottom line we know when we have a disaster is that the first preventers and the first responders are always going to be you and I. The cavalry comes in later. Those critical first mornings and moments in any crisis can make the difference between life and death. It's almost always going to be your neighbor, your friend, or your family member who's going to have to lend that hand, and we should be better prepared as a society.

Lou:

I'm glad you raised that point because one of the things I wanted to talk about was FEMA. There's a big misconception among the population that FEMA is the First Responder, and that FEMA is supposed to come in and help. I remember when I was talking with Michael Brown last year – and even with some of the people in DHS that we deal with – we talked about how FEMA doesn't have a lot of money and a lot of employees to do that kind of work. FEMA is, as you called it, the backstop. When lightning strikes, the local people are the ones who are supposed to pick up the ball, start to sift through the debris and figure out what's what, and that's when they ask for help from the Federal Government. That's what I've seen and heard. What's your take on how that works?

Stephen:

Maybe, this number helps out – we're roughly at about 330 million people in the United States and FEMA is the size of your average suburban high school with just under 3,000 people. So, it is not a very big outfit. Spread across all the different regions in the country, we have roughly 120 people per region, covering big chunks of area. The south-eastern region covers Florida, Georgia, Alabama, Mississippi, the Carolinas, plus Kentucky and Tennessee. They're covered by about 150 people!

In our Federalist form of government, we always expected that disaster management would happen at the local or state level and that was because of a time-space issue. Going back into the 18th and 19th Centuries, Washington was a long way away. So, if you were going to have a disaster, chances are that

you were going to have to pull yourself up by your own bootstraps. Now, we know today that some of the disasters we're dealing with are such potentially catastrophic risks and they can be so disruptive to a state or locality, we have to be thinking about providing a backstop support and obviously, more nimbly than what Americans saw in Katrina. But, it's not an evil war. We're all in this together, and this notion that we as a nation need to become more resilient –at the individual family level, at the community level, in the private sector, and also ultimately within our government, is something that President Obama has started talking about. Most recently, he just spoke about it on the anniversary of Katrina. That's going to be attracting a sense of shared responsibility to deal with this; not that the government's always going to come in to take care of you.

Lou:

Last year, with the flooding in Des Moines, Iowa, I was really impressed with the way the people of Des Moines handled it. You saw residents of Des Moines filling the sandbags and building the protective walls to keep the floodwater out... whether it's the school, the police station or the really important buildings. You can't really save every single home, so let's save all the important infrastructure pieces like the Mayor's Office, the police station and the hospital. It was very impressive to see the community doing that, and not the National Guard being the only people filling the sandbags around there. It seems to me that that was a stark difference from what we saw in New Orleans where, although it was a different magnitude disaster, it seemed to be that at the time, there was more dependence on the government. So, it seems that there's been some learning.

Stephen:

Well, we know how to do this. We used to know how to do it quite well in the 19th Century and the early part of the 20th Century. We basically know what sensible engineering moves you need to take to protect the community during contingencies. We also know what we all need to do in terms of behavior. Actually, one of the most compelling stories is the story of Grand Forks in North Dakota which had record flooding of the Red River this past spring. It was record flooding – the river was 10 feet above historically high crest levels. They had had the same experience in 1997 with a record flood which caused \$2 billion in damage, and this is a relatively small city of 50,000 people. This last year, when the floods rose even higher than that, because of the preparations that had been taken, the city never missed its daily beat. They had roughly \$500,000 in costs, compared to \$2 billion in damage. Not only that, the good folks from Grand Forks were also able to help the other folks downriver because they were taken care of. So, that preparedness makes sense, particularly if you keep getting hit by disasters. You probably should learn something from that!

Lou:

I think it also speaks to the fact that a small investment in preparedness pays off big dividends in not spending money on having to fix stuff.

Stephen:

Absolutely! And we know that some very small investments even at the individual and family level, can give you a big investment in peace of mind. You know that you have the stuff you need should the lights go out. Essentially, you need to be able to treat your home like you were on a camping trip. If you can't camp out in your house for three days, you've got to look around and see how you can accomplish that. Whether it's a natural disaster or even the lights going out for a prolonged period of time, we should be more self-reliant. Now, that's a little more complicated if you're living in a large skyscraper, or an apartment co-operative, where you're dependant on the infrastructure there, or if you are handicapped or have limited means. And this is where, as citizens, we need to look out for each other and figure out how we can safeguard one another. But, there's a lot that so many Americans could do, to be a lot more self-reliant. Unfortunately, we have a lot of data which says that:

1. Americans overwhelmingly recognize that bad stuff can happen from time to time and preparedness is a good thing.
2. They're not prepared.

There's a cultural thing that's going on here, and what I try to push people towards is to think about it as one common civic responsibility. If you are able, you should take care of yourself, so that you're not putting demand on the few emergency services available for the many who are likely to be in need.

Lou:

I think that's a remarkably important point. If you're capable, you need to be able to say, "Officer, go to the next house. I'm fine." I think that's a really brilliant thing.

Stephen:

Hopefully, that is something that gets people out of their chair. It's not an act of paranoia or an act of thinking doom and gloom. The other thing we know is that people who are prepared and have thought through some of the more serious scenarios and have figured out how to deal with them are emotionally always in much better shape in the time of crisis and they are able to provide support to their loved ones. People feel more empowered when they are prepared and that's an important thing.

Lou:

You mentioned camping out in your house for three days, which of course, immediately reminded me of the ice storm we had in December last year all throughout the north-east. In some places, we had a power out literally for weeks. It was almost as if sheets of ice just fell out of the sky and knocked down trees and power lines. People couldn't go anywhere. Even in my house, we didn't have power for three days. We burned wood in the fireplace and ate canned goods. The first morning, we went out to International House of Pancakes because it was fun and they had power. But by the third day, it's getting a little boring to be in 40 degrees in the house because we don't have any heat. I believe that many people have lived first-hand, to some extent, what we're talking about. All that said, I think the question becomes 'Are we really alerted and better prepared for disasters than we were, say 5-10 years ago?'

Stephen:

Well, the data is mixed. On an individual level, we are generally less prepared. And this is the summit stand because we continue to migrate into urbanized areas. We are more dependant on the infrastructure that's available. We have less space. If you're in a small apartment in New York City, the kitchen is the size of people's average closet and there's not a whole lot of space to put a lot of extra stores. So, that becomes the challenge.

But, you also have the problem of people living with the 'just in time lifestyle'. We have been seduced into having being dependent on technology. If you've only got \$3 left in your wallet, there's an ATM machine around the corner. Or, there's always a 24-hour gas service station, so we get down to the last quarter tank of gas. Some of the little bit of resilience that we used to have built up about 20-30 years ago because of reasons like, bankers' hours, or filling stations not always being there just around the corner, has largely been wrung out of us by our lifestyles. At the same time, people are just not talking about the need to be trained and understand what they need to do to prepare as seriously as they should.

On the other side, the government at some levels has become more capable of dealing with these problems. As I often say to the professional 'worriers' – who are people who wake up every morning and deal with issues like public safety, emergency management, firefighting, EMT and so forth – the tension is the tendency of treating the public like they are amateurs and will get in the way. And so, we have this duality – this deference to the professionals, and professionals who start viewing all the public as if they were victims instead of assets. And that gets us into a death spiral.

So, what we really need is to figure out what we all can bring towards being better prepared for disaster. The other problem which I highlight, and which we spoke about a little while ago, is the fact

that the infrastructure that we often build to tame Mother Nature so that we can live where we live, has been ageing... and not gracefully. So many years ago, we built this infrastructure so that they could carve out some safe and prosperous way of life for themselves and hopefully for the upcoming generation. We though, are a bit like a generation which has inherited our grandfather's mansion and has decided to not have anything to do about the upkeep. And so now, people driving by think it's a nice house, but the wiring's gone to hack and the plumbing's shot.

Lou:

So, we have to gut it down to bare walls and rebuild it.

Stephen:

This is not very economically smart. When we talk about some infrastructure like dams, when they break, people die when the water bursts through. So, this is not a smart way to go. We have to remind ourselves sometimes that while we are lucky and fortunate enough to live in the most advanced and prosperous country in the world, it relies on foundations that are physical foundations in many cases. The power grid, roadways and bridges are life-safety issues; we need to maintain them adequately and upgrade them as we put more demand on them which is dangerous.

This neglect of infrastructure is dangerous, as we saw down with the levy system in the case of New Orleans. New Orleans should have survived Katrina unscathed because as we now know, the storm didn't hit it with its full brunt. It was a Category 3 storm, which the Flood Control System was supposed to be designed to withstand. But the hurricane was actually skirted to the east at the last minute, and the winds were just barely Category 1. The water that was moving up and ultimately overwhelmed the flood control system came even before the storm center reach its closest point to New Orleans. So, the system failed because it was neglected and that's why we paid this huge price with the loss of a major, beautiful city and the enormous expense in trying to gain some recovery. Four years later, it's still work in progress.

Lou:

Generally speaking, the current infrastructure was built after World War II, wasn't it?

Stephen:

There were two periods: During the Great Depression when we had massive public works projects in the 1930s and then again, in the post World War II boom of infrastructure. Of course, we had our roadways then. Our highways were built 50 years ago... primarily, in the 1950s and 1960s.

Lou:

So, my thought is: Was it the Cold War that demanded that all this infrastructure building development was put in place, notwithstanding the developments during the Great Depression? Did the Cold War give us somewhat of a better preparedness mentality with all the bombs falling and everyone having a fallout shelter in their home? Was it this edge of paranoia that everybody lived in, knowing that with the push of a button, we could all be exterminated that made us more resilient? Did it make us more prepared and more self-accountable knowing that? ATMs and cell phones didn't exist. So, I had to have a full tank of gas and spare food, and all of that. Did the Cold War help to drive a lot of that?

Stephen:

I think the emphasis on civil defense, which was a part of the early parts of the Cold War, was important. There was certainly a recognition that unlike what we heard for so much of our history, having these big oceans was not our great safety blanket from the threats that lay beyond our shores.

As we developed and improved nuclear weapons and when it came to being able to launch missiles, Americans felt vulnerable. Instead of just saying, "Don't be scared", the government encouraged them to be prepared. And that focus was quite important. There was the sense of the nation almost being on a war footing which created some of the willingness in people to work together and do the preparedness. Curiously, it started to fade in the 1960s as the threat got more real, clear and present, because the sense was that preparedness was going to be less helpful. When we're talking about the sheer number of weapons, their precision and destructive power, civil defense started to lose its faith because to some people, it started to seem a little silly. Emotionally, if you were near Ground Zero of a nuclear strike, it was.

Lou:

What's the point if everything is absolutely wiped out?

Stephen:

Exactly! Right now, we know that virtually all the threats – even the most sovereign ones like the prospect of a terrorist or a rogue state having access to a nuclear weapon – is that these are going to be localized disasters at most, of a scale where preparedness would make a very big difference. And therefore, that makes a lot of sense. Rather than disparage civil defense as people thought to do as the Cold War got more lethal, we're really at a time where civil defense would make a lot of sense.

Another key element of strain in that period was what Eisenhower did in building the Interstate Highway System, which was actually built as a part of the Interstate Highway and Defense Act. But it was built around the notion of preparedness, which is why I think it's a model we should be emulating today. If the Cold War got hot, we needed to mobilize quickly and we needed to evacuate cities quickly. The idea was that an interstate highway system would help with that. Eisenhower was thinking very much of the economics of putting an Interstate Highway System in place, allowing us to develop the infrastructure between the heartland of the country and so forth, but he also included that recognition that there was a defense national security value.

I would argue that the same thing holds today – the more brittle we are as a society, the more tempting it is for our adversaries to target the infrastructure and us, thinking that we'll over-react and they'll get a big bang for their buck. It should follow therefore, that the more resilient we are, the better prepared we are, the more likely a terrorist attack is to be a fizzle and the less incentive our adversaries have to do it. So, there's a security benefit for us engaging in building a more resilient society at the individual level and at the community level, and it's something that I think we should be willing to invest some of our resources in.

As we heard time and again after 9/11, it turns out that the only defense was offense. We take the battle to the enemy. I would argue that the best defense may actually turn out to be a pretty good defense. We want to be prepared and resilient as a society and it's not either/or. When we have the intelligence and the means to do so, we want to deal with the threat as far away as we can. We no longer live in a world where it's either/or. We can take care of problems beyond our shores and just go about our life unaffected here. We're all in this together – we're all tied together; that's the nature of these threats which are trans-national in their scope. They're not international, national or purely domestic; they are a mix of all of that. We've got to figure out how we manage these as an ongoing concern.

Lou:

I've got a two part question, and I may put you in a little bit of a spot because one of them is fairly loaded. Part A: How many more bridges in Minneapolis, for example, have to fall down before the

government will really do something? Part B: Investing trillions of dollars in our infrastructure is a much better investment instead of giving it to banks. As I said, it's not to put you on the spot!

Stephen:

I won't get into the world of high finance but your first question really highlights the fact that we seem to be a nation which only mobilizes in times of crisis and disaster. Something we can admire about ourselves is that no matter what we face, we always seem to pull together and overcome it. It also can start to look pretty foolish when you're doing this very routinely, and when the infrastructure is breaking around you, and all you're doing is patching that one bridge instead of looking back and saying, "Maybe we have a bigger problem here!"

Lou:

We respond to things pretty well. We're very reactive, and we're good at it.

Stephen:

That's a useful skill-set, but obviously, it's not sufficient one, given the stakes that are involved here and the sophistication of our own society. I don't know how we got into a mindset that infrastructure was a cost that we couldn't afford. Even maintenance was a cost that we couldn't afford. This mindset started happening over the past 2-3 decades. This is like saying that you can't afford the change the oil in your own car. There may be some extraordinary circumstances where you're down to your last penny, but then, you probably don't have a car. If you're using the service which provides mobility, I would hope that you are going to find the resources to change the oil when it needs to be changed. Otherwise, you're going to pay a very big price for doing so.

In the same way, we need to be doing this with the infrastructure – the bridges, the electric grid, the hydroelectric dams, the refineries and all these things that we need that make our modern society modern; we need to make sure we maintain them and also upgrade them when there is demand. We can also do it in a greener way now because we're smarter than we were before. We're not going to do all the same stuff over again because there are parts of the country don't need the infrastructure we built where the economy has moved on. But we clearly can also get a security value for this, but here's the key term: this is an investment. That's how our forebears looked at building infrastructure. It is an investment in the present and the future. And now we've started viewing infrastructure as a cost that we can't maintain instead of as an investment that makes our economy work better and more reliably. People literally spend billions of hours stuck in traffic every day because our roadways are so congested. Don't tell me that's good economics, never mind the quality of life!

Building of infrastructure means more jobs and it makes the economy work better and makes us more dependable going down the road. We're in a fiscal climate right now that makes all this look prohibitive, but what we know is that there's a portion of the President's spending around infrastructure investment stimulus, and what I've argued is that that should be primarily invested in the infrastructure that is essential for the safety and well-being of the community... not bridges that lead to nowhere and shovel-ready stuff! We need to prioritize it around what its contribution can be for protecting a community, like a flood-control system, and make those prudent investments there. And then, we get the economic benefits of these things working, we get the disaster protection and the insurance side of things and we get the jobs which are produced by making these repairs. This is something that I think we really should be focusing on as a national imperative, not as a nice-to-have.

Lou:

I do have to share that I'm quite outraged. Up here in New Hampshire where we are, there's a specific roadway that I happen to drive on back and forth a lot, because my children live at the other end of it. This road was repaved about 2-3 years ago, and that was the first thing done when the TARP money was released. We didn't need to repave that road. I see money being wasted. Shovel-ready doesn't really mean that just because it's shovel-ready, we have to do it.

Stephen:

Fortunately or unfortunately, the challenge here is the fluctuations in the economy. And so, they took the bird in the hand that they thought they had – which were these projects. But we still have time, and I think it's important. Americans were willing to build these foundations and this infrastructure we have because they sensed that:

- 1) We could do it and do it well.
- 2) It would really improve our lives and the quality of our lives.
- 3) We wouldn't do it in a wasteful way.

I think in all three areas, America's been losing faith. I'm not sure whether or not the investment is going to the real things we need, whether we can do it competently or not, and whether it's a real value. So, we need to restore faith in this process and the way I've advocated doing this is to make sure you draw on the expertise that's within our society, and often not in our government.

There's an organization called National Academy of Sciences which is made up of academics from engineering schools and so forth, around the country who basically pro-bono and volunteer to give expert advice. Let's have every governor give us their must-do list. They can put together what they

think are the most critical projects and run it by a group of very distinguished players who can help to prioritize and then send it to the Congress and try to embarrass them into doing the things that are really important. There are ways to do this in a way in which you can restore confidence, make sure you are investing in the right things, do the things that need to be done and do it well.

Lou:

You mentioned that if terrorists were smart, our infrastructure is where they would hit us. As we look to upgrade our infrastructure, replace it, or do whatever that needs to be done to it, is it cost-prohibitive to make things a little more hardened, and make them a little more resistant to attack? Or does it just cost so much money that the likelihood that someone's going to blow up a particular bridge doesn't make it worth it? Is there a line there where you look at what's the likelihood versus how much it's going to cost?

Stephen:

There certainly should be, and we really need to broaden our thinking about how we make these investments. For instance, one way in which you can achieve the same result of protecting infrastructure is just an element of redundancy, or having an extra spare. This works in the area of electrical transformer units for instance, which take the power that comes out of a power plant and makes it useable for our buildings and homes. If you have no spares and the ones that you have are made in Asia, need to be shipped over and will take a couple of years to get here, that's a pretty attractive target for somebody to hit because the lights will be out for a long time.

Lou:

And the funny thing is that it doesn't even need to be a terrorist; squirrels can do that!

Stephen:

Absolutely! Again, it can be a natural accident. It makes sense to have a few spares around the country and to ideally make them modular so that you can move them very readily and be able to plug-and-play them wherever they are sent. Then, it's no longer an attractive thing for anybody to attack because when the lights go out, the visuals literally aren't very good. Ultimately, you won't have had much impact if somebody can get that station fixed in a couple of days, or three days and so forth.

So, another area in which you can protect something like a pipeline is just having the means to respond quickly if somebody were to go after a piece of it. Again, a pipeline can sprawl in wilderness and if visuals

aren't very good, it would be tempting to blow up the Alaskan pipeline if you couldn't fix it in a hurry. Therefore, you would shut off a key artery to our national energy circulation system.

On the other hand, if I have a pre-positioned pipe and a rapid response team available, should there be a disruption in the pipe, I can fix it very quickly. And then, it no longer makes sense to go after that target. There is some infrastructure which you only have one of, and it's critical that you do things like hardening it to make sure that it's not attractive. But there are other ways to think about protecting infrastructure, which may be more about how you respond and recover quickly versus trying to prevent every possible contingency that can have the same result. Ultimately, an adversary is interested in targeting infrastructure to do one of two things:

- 1) Cause mass casualties
- 2) Disrupt a critical service like transportation. For example, if there's only one bridge that can get you into one city.

If you protect that service or recover it quickly, and if you can do some smart things to reduce the risk that some infrastructure would pose to a lot of lives should it be targeted, then you can achieve the result with not overwhelmingly costly ways. What's fascinating about some of the particularly good work that some of the companies have done in the area of trying to build their own enterprise resilience is as they do it, they invariably find stuff that they should have been doing, that had nothing to do with emergency, but which they should have been fixing anyway.

Lou:

So, ultimately they find, "Oh, wait a minute! This could help us. Isn't it good we went down this path?"

Stephen:

Yes, because what you start doing is looking at the things you often take for granted or haven't paid much attention to. You look at them critically, as a system, and you figure out what it is that makes the system work better under contingencies. And you almost always find things that can make it work better with what you've got. So, the exercise of focusing on and doing these assessments almost always has an upside. There is an economic advantage to doing it, and it makes good sense to do it. And it's something that we, as a nation, used to do pretty darn well because that's how we came to this continent.

I think Americans today sometimes lose sight of the very basic fact that the first settlers who arrived on this continent – whether it was in the Virginia Caves, or Plymouth Rock - didn't do it because they thought this was going to be a cakewalk. They arrived in this wilderness and they confronted adversity...

and a lot of it. With the next generations who marched across the frontier and ultimately moved all the way across the Pacific Ocean, every one of them confronted some form of adversity. A big element of our confidence as a nation, our sense of optimism isn't because we are in the most benign part of the world; it's almost the opposite. It's because every generation confronted adversity, overcame it and bestowed to their children and grandchildren a sense of confidence that we can take these things on. We need to grasp that sense of confidence. We're all in this together and let's figure out how we can act like the great nation we are, and tackle the real problems and challenges we have. We will be better for it.

Lou:

One final question on a more philosophical point: Is the biggest threat to the U.S. the people who wish to harm us, or is it the mentality that we're maintaining at this particular point in time?

Stephen:

I would argue that it's more of the latter. The biggest danger that we face through the terrorism risk is not what the terrorists can do to us, but is what we do to ourselves and other people when we're spooked in terms of how we overreact when we're not prepared. The danger to us in the event of natural disasters isn't that Mother Nature can shake things up in the North American continent, and will do from time to time, but it's that we aren't prepared for dealing with that inevitability and therefore, we suffer unnecessary loss of life.

So yes, it's really a case where we should be looking much more introspectively at who we are, how we're living and what we can do to make ourselves more prepared and make ourselves more resilient instead of looking for external threats that we can somehow hunt and destroy all the time. We're going to have those threats and we're going to have tools that can help us eliminate some of those threats. But the real challenge and the challenge that 9/11 should have woken amongst us, is that there are vulnerabilities in our home. There's a need for preparedness in our home that we should be focusing on. Even as our brave men and women in uniform take on and make the ultimate sacrifice trying to protect us with their activities beyond our shores, we should be doing something here at home as well to make their sacrifice appropriate, and share the burden with them.

Lou:

It's certainly a lot for people to contemplate, think about and plan. I certainly support you on what you're saying and the notions that you put forth here, in terms of taking more responsibility and taking a look at our infrastructure and how it becomes an asset as an investment of ours, in the United States. I

agree with you that things are going to happen – hurricanes are going to happen; unfortunately, people are going to try to hurt us all the time; tornados happen; ice storms happen. I think the distinction here is that we should be able to respond and not just react. And if we can do that, we are all better off in the long run. Dr. Stephen Flynn, thank you very much for taking the time to talk with me on the Straight Talk series. I know we will be keeping in touch! I look forward to seeing updates in your work.

Stephen:

Thank you for the good work you're doing to raise the profile of these issues and awareness amongst your listeners.

Lou:

Absolutely! Thank you very much.