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>> OPERATOR: hello and welcome. This is Jennifer
Mizrahi, founder and president of respectability, working
to enable people with disabilities to achieve the American
dream. I'm extremely delighted that we have a wonderful
guest speaker today for this Webinar that is about strategy
amidst uncertainty. Richard K rum is an academically
trained future wrist and chief executive of vision
foresights strategy, a foresight and strategic analyst firm
based in Honolulu, Hawaii. Richard has worked for a
variety of for profit, nonprofit, government agencies on
foresight development strategy and strategic thinking.
He's worked on foresight and strategy for organizations
including the European commission, the UK government, the
U.S. department of defense, and Pepsi co. He's helped
organize and apply foresights and to develop strategies
ranging from the restoration of ancient Hawaiian island
land management division to crowd sourcing foresight
development to helping educators in the United States
anticipate the longterm futures of learning. He's the
author of the new book four steps for the future, a quick
and clean guide to creating foresight.
     By the way, you can buy his books on Amazon. And I do
recommend them to you. I was really, really happy to hear
him speak at a major conference for workforce board and
leaders who were engaged in planning for the employment of

the future. And I really felt that his Ph.D. in political science and his future studies program work that he's done at the university of Hawaii where he's really worked on really interesting conceptual frames for designing future governing systems was instantly something that could be helpful to the work of all of us who care about employment for people with disabilities.

So I'm delighted that we have Richard Lum, who's a Ph.D. with us today. I'm turning it over to Richard so he can walk us through his PowerPoint and very visionary ideas.

Richard, thank you for being with us here today.

>> Well, thank you very much. Good morning, everybody. Or good afternoon as the case may be. And thank you for that introduction. As usual I always sound far more impressive than I think of myself as. So thank you very much for that. Good morning, everybody. I'm very pleased to be here. Thank you very much for taking the time to dial in and listen to this talk. As Jennifer was saying, I am excuse me. I am Richard Lum. I'm from Honolulu, Hawaii, and I am one of the world's relatively few academically trained future wrists and foresight and strategic analysis for nonprofits and for profits and government agencies.

What we want to do today is basically I just would like to introduce the idea of what we call future thinking, along with a couple of tools to do future thinking and health integrated with some of the strategic conversations you are probably having in your organization and help to develop strategy and strategic plan.

Broken into three pieces, one part of it is about seeing the bigger picture. Trying to see the whole picture as it were.

The second part is at more future oriented, is trying to look a little further down the road.

And the third part tries to bring that together in ways that make it sort of easier and more useful for you to develop plans amidst all of the uncertainty and turbulence a lot of us find ourselves in today.

And the presentation today is really addressing this issue of how can we better think about the future. You know, how do we better navigate uncertainty and prepare for the future.

And ultimately how can we better shape futures that we actually want to live in. So that's sort of the tools. That's why we want to talk about some of this stuff today.

Like I said, and as Jennifer was mentioning, I am one

of the world's relatively few academic trained futurists.

I come out of a little known and academic field called futures studies. At the moment there's three places in the United States where you can get an academic degree in it. The oldest is the university of Houston where I teach the advanced strategies course foresight program. These programs started in the '70s is the university at Honolulu where I graduated from. And the third is Regence university, which I believe is on the east coast. And as an academic field, future studies is essentially concerned with trying to understand and anticipate change in society.

You look back over the last 200, 250 years or so and in many cases we've seen a lot of social change, high rates of social change. A lot of it attributed to technological change. And of course we trace a lot of this back to sort of this big bang, if you want to call it that, of the first industrial revolution. We do see the spiking of social change. And so today many of us frequently recognize that tomorrow is not going to be like yesterday. Since today business leaders and organizational leaders are more than ever I think concerned with this issue of change and what does it mean and how does it happen, and this is why we have a job today.

If you want to understand the field, you can think of it as defining two halves, two parts. And the first half is the analytic half. It's using different series of sustainability and chain research and analyst and different types of forecasting. First to try and understand and anticipate change. Where could the future go, where could the world go, why would it change differently.

The second half of the scale is trying to take the insights from that, the foresight, if you will, and use it to help clients reframe both their expectations for what could happen and why it would happen, but also ultimately to help them reframe their preferences for the future.

And really in its heart of hearts, futures studies as a field is really about the second half. They really do want to get to helping folks rethink basically better futures and sort of see more possibilities and figure out how to get there, rather than taking the future as a give in and accepting the way other people shape it for you.

So what most organizations, particularly for profit, come to folks like me for is the first half. And they're really looking for the foresight part. And you can define foresight very simply as insight into how might a future be different from the present. And most organizations, businesses, they don't believe you can predict the future.

Deep down they're hoping you can. Often that's what
they're coming for. Tell them why the future could be
different.

        If you want to understand a little bit more concretely
what our work likes like or entails, you can think about it
as having a number of different elements and when we're
doing foresight projects for clients, we'll often start
with a historical analysis. We're often looking back
through their industry or community. People want to
understand how and why things have changed. That were the
patterns, the relationships, drivers. And that's just
understanding what how things haven't changed, but also
important why do things not change when they didn't change?
What kept things from changing? What enforced stability?
Try to understand that and use that in various ways to help
the future and forecast.

        On top of that we'll look at what we call images of
the future. As a field that looks forward, future studies
is somewhat unique in having emphasis on ideas of emphasis
of the future. Now, philosophically the future doesn't
exist. You can't measure it. You can't collect data on
it. It's not sitting there down the road around the
corner, and the way that human beings deal with this
fundamental problem, challenge with the thing called the
future is essentially through imagination. We have this
ability to visualize and imagine things that haven't
happened.

        And this is the primary way that human beings deal
with the future. Each of us can claim very easily
visualize what our living rooms will look like when we get
home tonight. We can very clearly visualize what our
bosses would say and do Monday morning if we didn't return
in a report due this Friday. We could absolutely visualize
what the future is going to look like for us if we choose
to go outside at night and not tend to our families at
night. We do it partly through imagination and creating
these images of the future. These images can come from
quality of thing. They can be visions about aspirational
futures, about better worlds we want to create. They can
be driven by anxieties and fierce and also by quantitative
stuff. When we're looking at economic forecasts, we also
are interpreting even that statistical forecasting in
imagery. It's creating futures in our mind about what the
future is going to be. While the future doesn't exist,
those images of the future that we carry around and create
for ourselves have a huge impact on the actions we take.

        On top of that stuff, as said, we'll use various

variabilities, trend research, data analysis to create a lot of content and insight. On top of that stuff we'll take all of it and use it in various ways to do forecasting, increasingly as a spring board for innovation and creativity exercises with organizations.

And we get really lucky, we get to build on all of that, not just to work with a client to reframe or rethink their goals of the organization, but to really fund mentally get in there and reach their vision for the future, really come up with a more compelling image of the future that they want to go after.

That's some of the elements of work that we often do in our fore sights project.

Now, stepping back, all of this stuff is in a sense what we call futures thinking, and what we're trying to do is help them with this thing we call futures thinking which sort of sits in the background. You can think of it just basically as it's critical thinking about the future. Both in terms of what could happen, but also in terms of what we want to see happen.

And so this is some of the stuff we want to talk about and interplay with today as we get into it.

Now, having doing all of this stuff, what does futures thinking produce for us? What are the benefits and whatnot? And there is a range of benefits we can derive, but some of the top things that really pop out for folks is often fundamentally about identifying critical blind spots, futures work and thinking is very much about identifying and critiquing assumptions on how the world works and how it's going to change. We are very much in the process we do, in various ways helping to reduce uncertainties about the future because we're identifying more of the uncertainties out there and putting them on the map because with the tools you are actually digging into sort of getting a better handle on what these emerging issues are meaning and where these trends are going.

You also through the projects not just try to be defensive and look for threats and challenges, but you're also very much using this as a spring board for innovation and creativity and try to use it to identify new spaces to go into, new things to create and fundamentally get inspired wall of the different things that folks around the world are working on and creating. Those all create opportunity for us. We're trying to help clients identify those things ahead of time.

Finally through the experience of going through these projects, the teams that get to go through them do come out

the other end with a shared understanding about the possibilities and changes that are the future for them. Those are some of the big gets that we get.

To try and sort of visualize what we're doing a little bit, we can use a graphic like this. This is a my version of a cone of uncertainty. If you're in the path of a hurricane, you will recognize it. What you have is in the center line that dotted line that goes across the middle, that's what we call the reference scenario. That is all of our assumptions, all of the way things are working now, all of the directions are right now, all the constants. This straight line now nothing changes. In reality that basically never happens but we often act and make decisions as if that will. And through futures thinking and through the kinds of foresight projects that we do, what futures thinking is really trying to do with folks is take them outside of that band that you see thereof low change scenarios, what you're seeing is those are just different futures in which all of those core assumptions about how the world works and where things are going, everything is things might be a little cheaper or more expensive, faster, smaller, but all of what we're doing, now we're doing it, why we're doing it, all of those things are healthy. Business models, values, nothing changes in those low change scenarios. What we find nowadays is more often than not we're getting surprised by more high change scenarios where there is more systems change.

The futures thinking in a sense is really trying to help clients identify and get into those scenarios to really sort of explore the things that are both more threatening because more destructive but also that offer greater states of opportunity and innovation. This is one way to sort of visualize where we're trying to get people on the map with futures thinking.

To get to some of the points that we want to cover today.

The first one being seeing the whole picture. This is really the idea of trying to pull back and see the bigger picture. When we do futures thinking well you really have to pull back and see more of what's going on. What we're introducing here is just thinking. Distance thinking was born in the '60s and '70s, absorbed a lot of the enthusiasm around futures thinking. A lot of us get taught this stuff but many of you might be well familiar with systems thinking today. For those of you who aren't, this will be a nice easy introduction. Systems thinking really is trying to see the whole from the parts, right? It's not

just looking at individuals and not trying to understand the system by looking at individual parts, but really trying to see the relationships and how things flow between them. So really it's trying to see not just the whole but the patterns, the bigger outcomes that all of those pieces as they're interacting produce. So you're trying to see sort of a whole picture. We can sort of understand systems thinking in a few simple sort of points. Again, the system is greater than the sum of its part. You cannot understand the whole by focusing on individual parts. So it's like an engine. So if you take an engine block and you take it apart and take all those pieces and dump it in a big bucket, that's not an engine. That's a bucket of engine parts. When you put them back together in the right way, everything flows and it becomes a bigger thing, it becomes an engine that can drive your car down the road.

    A lot of times what you're looking at is the relationships. You're looking for the relationships and the flows. That's more important than the others. Archetypes that are great sort of generic models of the system, also great starting points.

    Just to give you another way of thinking about it, why it's helpful for us is, for example, it's not looking at the focusing on the individual on the factory floor; it's seeing the is I assembly line. Maybe it's not the entire line, it's the factory. Maybe it's not the factory; it's the factory connected to all the up stream and downstream supply chains. But maybe even that's not enough. You pull back further and you see all of those production chains embedded in costing environments and habitats and human communities and things like that.

    So the thing is trying to pull back and see the whole.
    And see the slightly more concrete example. We had a client who didn't we were intro introducing this concept. We asked them what are some of the personal components of your business. How do you think and talk about the system of your business? They very easily and quickly said things like facilities and peoples and practices. It's all about the relationships, all about trying to understand how they are connected to each other.

    Once we have this, now we can start to really sort of pull back and build a mass sort of the landscape of the ecosystem. So we can start to access where other things are connected to this and impact them. Now we have an even more complete map of the landscape.

    Now somebody like me can come in and start to do our futures research and look at trends and emerging issues and

we have a map on which to paint even more of the things that might be emerging down the road. Once we've gotten to this point we could probably look at this and call it a map of the emerging landscape.

Very quickly, some of the ones we as Jennifer mentioned we're doing a similar presentation at the national association workforce board last month.

And most of you can probably relate to these. We introduced for them again sort of systems thinking and the idea of first looking at their local ecosystem. Their task is helping build these local workforce ecosystems and try to start this assumption of what that looks like. Reminding them they can pull back and see that even broader environment. Only when we start to do this do we have a sort of complete enough picture we can start to do some futures thinking because we now have a map that we can use to do research and look at emerging issues and have a much more concrete picture, where should we be looking and where aren't we and things likes that.

This part is sort of trying to see the bigger picture. The second part is of course seeing ahead and down the road. We use these types of systems map as a spring board to get to that second piece.

Here we're using more explicit futures methods, forecasting methods and things like that to help clients look a little bit further down the road.

And.

There are of course a wide variety of approaches we can take for doing foresight work. The two I want to introduce are the basic and common building blocks, trends and emerging issues. It's important to point out the difference between these two.

On the left, trends are historical changes over time. Trends describe history, something that we decided is important for our issue that we've been collecting data points on.

A trend doesn't talk about the future. Trend may imply something about the future but trends all break or bend at some point. Humans being who we are, we're very good pattern recognizers and completers. When we look at that trend graph, we cannot help but put in that fourth bar and extrapolate the trend line. But that's a guess. So we often act about trend but we're actually talking about the past. When you want to talk about the future you're talking about a trend forecast. That's actually something separate. The trend line itself is talking about history. When we go forward and we want to talk about what could

become important in the future, so a trend is something we decided has been important in shaping change. Emerging issues is also looking forward trying to guess not guess that, but look at some of the things that could become important. They might become trends in their own rights or they might just become very important things that will shape the futures of our issues. And here we are looking for things that are future potential emerging technologies, potential public policy issue nobody's talking about now but might be critical in the future. They're new ideas or concepts that's fringe thinking now but again in the future might be main stream and of course all of society should sort of change its values.

There are two different components. Watching the time.

To do the emerging issues part, most folks are familiar with doing a trend research and even trend extrapolation. Emerging issues is slightly different, unique to what we do. The way we get to doing emerging issues and identifying them is through something we called environmental scanning and emerging issues analysis. We'll use a framework like this. S curve is very common in life. When we're looking at the development of a technology, how a technology diffuses across society or becomes main stream or an idea, often tracks along this curve. This helps us both identify and look for things earlier or later in their life cycle, but it also helps us plot things in terms of the signals of change that we are finding and trying to figure out where things are.

To give you one example, Mark was teaching since the late 70's an example of emerge issue going up this curve. The rights of robots. I'm sure all of his students it's a good chuckle because it sounds silly. Anytime an issue is just emerging down on the bottom left it's potentially fringe thinking. It should sound silly. The rights of robots will sound silly. However, today if you go online you will find serious articles putting forward ideas and making arguments of things such as the ethical treatment of robots, attorneys talking about how we really have to start to overhall the legal system and a lot of our regulations to account for a semi autonomous and autonomous machine. And what is the most folks arguing to the fact that robots should be allowed to say no. It's not a main stream idea yet, that last circle on the top right, but probably somewhere below that third circle. This is us tracking issues that become important over time.

Again, we get all of our data through stuff called

environmental scanning. Scanning is basically Hoovering up lots and loots of signals of change, lots of articles and media and videos and you're just going over as much stuff. I'm not going to go through a the although of these things. Some of you are probably very familiar with some of these. These are just articles that I came across. They're in my database just in the last two weeks. Did a very quick search tells me these are the useful for conversations with folks interested in anything in the disability realm. Just a quick example.

Basically we're Hoovering up all of the different signals of change to process and analyze them and see if we can identify true emerging issues.

These ones right back here, these are we'll get lots and lots of these. When we do a scan project we've got databases full of these particles, but we will convert that stuff and we'll come out of the emerging issues as having identified particular issues that might be important in the future. Again, these are things that might become trends down the road or they might simply be really important issues that we have to address or are going to shape issues that we're concerned with.

I'm going to sort of skip through some of these. If anybody would love to talk about these things offline I'm happy to do that. We have lots of stuff like this that we can talk about. This is the kind of stuff that the in trends and emerging issues research we are trying to kick up to inform your sense of what is possible and what's coming down the road when you're doing when you're engaged in futures thinking. One of the simple tools we can use to help clients sort and consist this stuff are things such as very simple documents put together that will again using the example of the workforce folks, they have two maps, one map which is the local system, which is embedded in the broader environment. So for them tracking, what are the trends that are driving change in the local workforce system. But essentially what are the trends that have been driving change in the broader environment. Then of course we're going to start to plot in our emerging issues. And again being futurists we're always going to create these time frames moving out. What are the emerging issues not just in the next year or two but really the emerging issues three to five years out, more than that. Partly because it's important to look farther out but also because increasingly today emerging issues talk faster than they used to say 20, 25 years ago. So that S curve, you don't want to sort of get blindsided. Folks will often talk

about exponential trends where things accelerate much faster.

Bringing all of these things together. So the first part was really how do we step back and start to see a bigger picture. Second part was trying to see further down the road.

Now, how do we bring that stuff together and integrate them?

What we're doing of course is most folks are engaged in the organization and doing strategic planning, having strategic conversation. We of course would always be in there by any sort of longer term Sue view of the goals and objectives that your organization is trying to pursue. It's not just the same strategic issues that you have to address and take care of this year in 2016. Of course it's the next five years out. What are the things that you want to accomplish, what are the goals that you're really trying to obtain in that five years.

But then at the same time, not moving up the longer term of the organization and the better futures that the organization is really actually wants to bring. At the same time getting to sort of talk about what are the things like 20 this 30, 15 years out that they want to have achieved by that point. How do you want to see your clients' lives change 15 years out. What do we want to have accomplished in the world 15 years out? And this is not about setting in stone goals that you're just going to talk forward with regardless of change. This is much more about keeping very explicit in your strategic conversations the longer term success that you're really trying to create in the world.

Of course you're doing goal setting and things like that and then you're taking you will of this that you've been doing, looking at the bigger picture and further down the road, just start to ask how are those things we're looking at in the emerging landscape, how well they impact our goals over the next one spot in 15 years. What are the new opportunities and what are the new threats that these present? What are the new uncertainties in fact?

And one of the things that we've developed to help folks do some of the strategic planning is you've gone through the futures thinking, you often created all kinds of forecasts and different scenarios will about how the future can turn out. In the process again you not only explored sort of your key institutes in greater detail but often identified even a broader array of uncertainties out there that you weren't aware of before. So you have this

challenge of how do we commit to actions in the present that help us actually navigate uncertainty. Without making us or asking us to place all of our bets in one direction or place all of our eggs in one basket. We do it through this sort of strategic portfolio approach we've come up with. And essentially on the left side you have we're going to use beach metaphors because I live in Hawaii and so, again, going back to the workforce where they are looking at two views. Looking at their building their local workforce system but also having to sort of pay attention and be in sync with the larger environments. So that first column in the left commit is really about diving into the water, either because the urgency is so great or you and the organization are so convinced or certain something has to go in a direction you have to dive in. You're going to create the initiative, sell off those, hire those people. Just diving in and committing to it.

Now, maybe sometimes you're pretty sure something's going to be done, head in a certain direction but you're not ready to dive in. Little bit of afraid of cracking your head on a rock when you dive in. That's when you're at the beach and get in and wade in. You're committing but in a careful, reasoned way. This is a the domain of pilot projects and experiments. You're committing to action but not going fully. Sometimes you're not even ready to commit to wading into the water. That's when you get to the edge of the water and just want to try things out. That's just toe in the water. This is the realm of this looks important, it looks like it might be really impactful for you see, let's get somebody on it, do some research, collect some data.

Sometimes maybe the issues you're talking about too I am mature, too fringe thinking. Intriguing, compelling, maybe just not there yet, or maybe for your industry they haven't developed to a point where they really could impact you. Again there's that thought it might actually play a role in shaping a landscape in the future. This is where you are monitoring.

All of these things are actions you're taking in the present. Whether it's a big change initiative on the left or having somebody monitor and keep track of something on the right you are about committing to action or resources or attention spans. Those are all scarce resources in the organization.

Again, it's a portfolio approach. It's about balancing the portfolio you.

If you want to think about it this way, the stuff on

the left, the commit to action stuff, think about it as you are initiating change. You're committing to affecting change in some way, either in the organization or in the broader environment.

The next two columns are helping the organization learn and make sense out of the changes in the lens that are going on around you.

And the last one really is just saying for us this is too early but we do think it might be important so we're not going to throw it off the table yet.

Stepping back and to try to bring some of this to a close, trying to see all of these pieces brought together. So conceptually really what we're trying to do is first again often trying to help clients sort of see the bigger picture, what are the systems creating that initial map of the landscape, which of course is a platform for us to go ahead and start to do our futures research and really engage in some futures thinking and in a sense again develop a map of the emerging landscape.

All of that is wonderful stuff to help us inform thinking about the longer term and goals we're going after, which of course then we can lead into actually crafting strategies and also creating a sort of portfolio of actions to help deal with the uncertainty that he with face and whatnot.

This is one way we can look at bringing stuff together, look at a bigger picture and developing some good futures thinking and leading that into how that influences and impacts both the goals we want to achieve but also the actions that we can start to take now in the present create the future that we want to create.

And that's the end of my presentation. The only other thing I would say is if anybody is terribly interested in this stuff as it happens, this month business magazine has what turned out to be actually a wonderful article talking about futures studies and particularly talking about the whole program at university of Hawaii. It does happen to have me in it. There are other grad students in there, but it is actually a wellwritten article. It's very nice. It's a good introduction that has futures study and thinking in general if you'd like to learn a little bit more quickly. And it's available online now.

That concludes the presentation part of this Webinar. So thank you.

>> Well, we are so delighted, professor Richard Lum, and we are going to now take questions. So there is in the chat of the Webinar the ability for you to type in your

questions, and additionally Virginia, can you tell them how they can dial in with a question if they want to do it by phone instead?

>> OPERATOR: participants who are listening to audio over the phone can indicate they would like to speak or ask a question by pressing 7# on their telephone keypad. That's 7 followed by the pound, or hash sign, on your telephone keypad and we will unmute your line so you can ask your question.

Everyone can submit questions using the chat box. Type your message in the input field and press enter to send it.

>> So I thought this was a fabulous presentation and I want to thank you for it on behalf of respect ability and I also want to thank GP Morgan chase because they enabled us to do these Webinars that enable people to think through the big issues and the best practices in terms of employment for people with disabilities. So I want to thank our speaker and I want to thank J.P. Morgan for that.

But I have a first question that I want to start off with. I'm just delighted hearing all these great charts of how we can plan for the black swans and for the wild cards compared to the low change. But it's not like we're ever dealing with just one phenomena at a time. The people out working in vocational rehabilitation or disability advocates or workforce boards, they have a whole number of factors that are happening at the same time. I'd like to give you three different factors that I think about when I think about the future and ask you to help us chart out and plan for three things that could happen concurrently. So the first thing is that something that we know in your low change, you know, your we have no surprise that every year 300,000 young Americans with disabilities age out of school and into what should be the workforce. So that's issue No. 1, is the 300,000 young Americans with disabilities that every year age into what should be the workforce and only 34 percent of Americans with disabilities are currently working.

The second phenomena is that people are living longer and that people are having difficulty saving and so people are having to work until they're older. So you have more people who as they are still trying to stay in the workforce as an older American, they are trying to do so while they have an age acquired disability because physically they couldn't do the kind of job they might have done earlier. And then the third piece of course is the aging baby boom, which means that some larger numbers of

people are aging out of the workforce and there was an
increasing labor demand for people who need to provide
healthcare and elder services to those people as they get
older and older. So as you heard, that's multiple things
happening at the same time. How do we chart and plan for
those sort of things, plus other multi various issues that
could come along?
     >> Absolutely. No, and to the basic point that, you
know, o.s today are facing not just one emerging issue, not
just one type of change but multiple, absolutely. That's
part of what creates such sort of deep uncertainty for
folks and deep anxiety. Essentially you have so much
change going on at the time. It's turbulent. You sort of
interpret it as turbulence and you really don't have sort
of a handle. It can be very overwhelming. To go to your
three points, all if we have an organization that's let's
say looking at all three of those at the same time, and not
just as a matter of interest but because it relates to
their mission and strategy and operation, all hands again
if we reference some of the stuff we were talking about in
the presentation if everybody can still see the slide, let
me back up.
     So to go back to the idea of sort of systems and sort
of mapping the flow of things and how they're related, one
very quick initial thought, just listening to these three
particular issues, one of which is dealing with the youth
and as they age out of school and into the workforce, but
at the same time looking at it, older generations and their
issues with disabilities and also them aging out of the
workforce and not just what that does to the economy but
what that means in terms of what the company needs to
provide in types of new some types of services, you know,
if an organization is doing all of these, again from if
you want to you enjoy seeing the bigger picture approach,
I would say invest time in mapping this flow out, right,
and you see some educational clients who deal with not just
elementary, they'll deal with elementary, high school, and
maybe sometimes college. They start to have these maps,
flows about how people progress through systems in
different stages to different areas. I think in a similar
fashion, different but similar, it might pay to from a more
systems view map you move through some of these
institutions and some of these phases, again, to get a
picture of how these things are related to each other, how
things flow in a track and to start to map the other
elements that impact them. Once you do that as a first
step you have a much better sort of spring board for them

saying, okay, where should web looking, what are the places
we haven't but are part of this system and then let me talk
to once you have that kind of picture, if I go to this is
a just the top of my head, looking at some of the issues
that you've got here with the employment in the job market
and only 34 percent, you've got folks at age disabilities.
Again this is off the cuff but you can already sort of see
things that might be might pose opportunities for us. So
you're looking at trends behind these things that are like
about automation and Artificial Intelligence and some
impressive developments in robotics across the board,
right? And you're looking at things down at the bottom
where your coworkers could be robots. The automation side,
one of the emerging issues we're playing with thousand
N.O.W. is really looking at how organizations, companies
and organizations in the future really might be started
from the ground up, increasingly with very, very lean human
elements and an increasing array of autonomous elements,
AI, machines and other things. The ability of a small
group of folks or let's say individuals with and I don't
mean to be with folks who may not have a typical array of
abilities, really seeing individuals being augmented by
machines broadly speaking to do physically and mentally
processwide a great many things. People looking and acting
with a much bigger organization in the past. If anybody's
watched mad men, fascinating case study in looking at the
legion of women they had in those office typing away. You
could do that with five people today. In terms of
individuals who have disabilities creating and running
companies and focus age disabilities, all of the stuff to
both mentally augmenting but also physically augmenting
their capability through adaptive learning, automation and
robots and stuff like that.
        I'll stop.
        >> So that's really interesting and I'll say that
Alexander has a question which I'm going to get to next.
Folks can keep in typing in questions, but I'm really
interested in this you plan for what you plan for but
there's this black swan or wild card that comes along.
I'll give you two wild cards that I think about. One is
there's a huge amount of conversation about the
quote/unquote mass incarceration. We have 2.2 million
Americans that are either in prison or jail today. We know
32 percent of people in prison and 40 percent of people in
jail are people with disabilities. If they start to
release large numbers of nonviolent offenders, we could see
literally hundreds of thousands of individuals become

returning citizens culling out of prisons and jails who have disabilities and whose disabilities were never addressed. So that's not something that people have budgeted for or have job coaches standing by. Another thing I think about is disasters, whether it's a 9/11 or terrorist attack or a flood like we just saw in Houston or what we had in Hurricane Sandy and others. How do you budget and plan for these very expensive events should they take place because you don't want to at the end of the year not spend your whole budget because obviously if you don't spend it all and you're the government, next time you don't get that amount of money. How do you think through something like that?

>> Absolutely. It's that problem of you do not and cannot spend your whole budget on essentially contingency planning.

I think typically the way you approach doing that stuff, you're in the process of looking at the environment to understand how and why things are going to change and you're ideally identifying things like black swans and potential wild cards and things like that.

You can do it in a number of things. On the one hand something like a wild card is really something that you can think of, but so low probability most people discount it completely. The problem of course is that if it happens, it's going to be entirely destructive and screw whatever you are working on. That's classic idea of a wild card. I'm sorry, of a black swan.

A wild card is something that comes out of left field. The way we tend to use these or help folks try and cut through the uncertainty, as a wild card we talk about it something within your field. Something like maybe mass incarceration of folks with disabilities. A wild card in contrast is something that is entirely outside of your realm, not something that you can plan for.

People talk about asteroids hitting the earth, but again those are events so you don't plan for that stuff. But when you're talking about how do we deal with and plan for what if all of these individuals with disabilities who have never been treated for them are suddenly released back into society. How do we prepare for that stuff and prepare for things that are more black swanish, like extreme weather events and things like that. You are going to delve into each issue individually. You're really going to delve into them to try and better understand what really is the probability of each one. So with something like mass incarceration or the release of all these individuals in a

very short period of time, again to me as an outsider immediately I would say that sounds like something that would be a big policy shift, a big push. So typically we would expect to see signals of that stuff a while before they happen. It's rare that that stuff just pops. So delving in so we can probably start to address, well, what's driving that, what are we looking at, what do we need to monitor, how do we assess how likely that is. That research will influence how much you want to say rebalance your portfolio. Use the example we were using earlier. So the disaster stuff, you often I think look at it in terms of critical dependencies or assumptions. So companies will you have a disaster that will take out your headquarters, right. So that's typically unacceptable because if that happens it moves all of your data and operations and couldn't work so people invest in backups. But they won't necessarily invest in backups or an offsite duplication of things that are not again sort of mission critical. So part of the way I think you start to unpack or peel it apart is to delve into the issue. So first you're trying to identify all of these potential issues and then going to you're assessing them in different ways to figure out either how close they are to you, how likely they are, or simply how critical they are. Again, like a black Swan event, you simply cannot afford to have that happen. You have to invest something in it.

>> Right. So Alexander asked, what are some best practices or approaches that you'd recommend for when you get skepticism that a new idea won't work within a current modality? On one hand, if you want to take the feedback, but on the other hand future forward ideas are intended to move beyond current systems?

>> The best practices for approaches when you get skepticism of a new idea. If you are if we're talking more generally in terms of somebody in the organization has a new idea for they're looking at the environment, they feel like they're detecting important signals of change that are come and saying hey we need to do something different and maybe it's a new program or a new business or model that maybe we should start to play with. I think in those cases from the futures practice, what you often will do is you'll create contrast for your decision makers to engage them in the idea that change not only is possible but it happens. We get caught by surprise. I'll give you the general example. I think maybe you have more of an operational, clinical idea in mind. But say the department of defense. Folks within the department of defense, they

are very future oriented. Yet if you think back to that cone of uncertainty, much of what they are forecasting end up being in that very narrow band. The and argument that we'll make with them and the picture we'll paint is, look, go back the last seven years of the defense department's history, 1945 and walk your way forward. Any time somebody at any point had been talking about a 25year future, what they would have been talking about would have been very, very off, very wrong for the environment that the defense department found itself in 25 years later. That as we laid it out in 25 year increments to demonstrate not only did this change happen but it often the change that we experienced is overturns a lot of assumptions. Would make them rethink how they're doing it and how they're going to organize all that stuff. So that we use to engage them in opening up that space for, hey, the scenarios we should be talking about now need to be challenging. When we show you these forecasts, you should feel uncomfortable. If you don't, we're not doing our thing. History shows us that. Now, I think you might be speaking more in terms of the clinical things.

      That one I would probably defer a little bit more to how do we go about validating new clinical practices or new programs, healthcare programs in which we do tend to have a in terms of data and outcomes and things like that. But from a future side even for the clinical part, I would say we often try to go into history to try and show our leaders and clients how often change has happened, how destructive it has been at different points and show you the history to show we often get it wrong. So we need to actually experiment and sort of look at these things. Our assumptions are often proven wrong as we move into the future.

      >> This is very help. I just moved it to slide 23 because I think that Alexander's question is one that is a complicated nuanced question and I think that any time you question status quo, whether you're evidence based or not, it can be met with skepticism or defensiveness and so I think that putting things on paper in way, like a chart you have provided for us can be very helpful.

      Operator, do we have any questions on the phone? I just want to remind folks that are online that they can type in questions. We have just a few more moments.

      >> OPERATOR: no one on hold waiting to speak.

      >> Okay.

      So I don't see at this point any other questions that are in the queue, but I do want to say that this was for me

a fascinating conversation and that I'm really grateful to JP Morgan for enabling us to have these types of Webinars. The next Webinar that we're organizing is really also going to be very interesting. It's about nonprofit organizations and how they can be ADA successful. But because we do see that a huge number of nonprofit in other organizations are not using even the minimal standards to meet the ADA. And I'm very proud that because of the support that we have that we're able to have captions, for example, on our Webinar that we just did with professor Lum because it's accessible for hearing impaired individuals. But I do know that even with our in our disability community that many people are offering Webinars that are not offering the captions. So I want to thank ConferTel and thank JP Morgan for funding it.

This did give us I think some very interesting capabilities. So if I can go back to his book, which was right at the beginning, I just want to commend it to you again, four steps to the future. You can get it on Amazon. You have right there where you can reach Richard. It's Richard at vision foresight strategy.com. He will email you back. Thank you very much for being with us today, Richard, and thanks for all who listened in from around the country.

Thank you and this concludes our Webinar.