CIO ROUNDTABLE:

Taking the Riskiness Out of Risk in IT

An Enterprisers Project Virtual Roundtable | Spring 2015

In a recent observation, Dave Hitz, a founder of NetApp, noted, "A lot of times people look at risk and ask, 'What are the odds that I will succeed?' A different way to look at risk is to ask, 'What's the worst thing that would happen if I failed?'"

Risk-taking is clearly a necessity for companies to grow, but when should it be encouraged, and when should a risky experiment in technology or business innovation be called off?
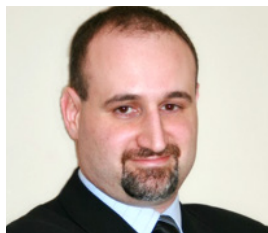
The Enterprisers Project brought together a group of IT executives to discuss this and other questions.

Panelist Profiles

BRIAN BEAMS
VP, IT Services
Pharmavite

PETER BUONORA
Enterprise Architect
BJ's Wholesale Club

JOHN MARCANTE
CIO and Managing Director of Vanguard's Information Technology Division
Vanguard

TOM SODERSTROM
IT Chief Technology and Innovation Officer
Jet Propulsion Laboratory

AARON STIBEL
Executive Vice President of Technology
Dun & Bradstreet Credibility Corp

Roundtable Highlights

THE ENTERPRISERS PROJECT (TEP): Risk-taking is clearly something that every company has to go through, but we wanted to have a conversation about when it should be encouraged and when it should be called off. What do you each of you see as the difference between risk-taking behavior and risky behavior? How do you differentiate one from the other?

Tom Soderstrom

TOM SODERSTROM: It's an intriguing question. Risk-taking, at least in my world, is very calculated. It's measured, and it'll move you forward. You'll learn from it, and it'll help you. It's kind of what startups do with their minimal viable product. You just try it and see what happens: if it works, you move forward; if not, you stop. It's all about prototyping. Risky behavior, on the other hand, will eventually hurt you. It'll hurt your organization and may even get you fired. Risk-taking is calculated; risky behavior is unanticipated.

JOHN MARCANTE: I second that comment. What's interesting to me is that the ability to take risks today is actually a lot greater because of where we are with technology. If you're a startup, minimal viable product works great if you're launching a new business or launching a business in a new country. But so many companies today have an installed base of customers. Years ago, we had very mono-

lithic technology, where if you wanted to make a change, you'd go out and make it and then get lots of feedback. We would do four months of market research to try to figure out what people wanted. Today, with continuous delivery, we're more nimble as an IT industry. The ability to do multivariate testing and get many, many tests out there that are exposed to small numbers of users that have different experiences is a huge opportunity. It allows for much more experimentation and measured risk-taking in an organization today than in the past. For me, the key is how you transition your teams and environments to enable these capabilities and give them the ability to take those risks.

TEP: As you were speaking, container technology came to mind. It's almost like you have the ability now to contain your risks in a much more relevant way, and you can fail fast if you need to.

John Marcante

JOHN MARCANTE: Exactly. It's almost like you're enabling people to take very calculated and small risks based on a just-do-it mentality. Go out and try it. Which treatment of this digital space is going to generate more buys, or generate fewer calls, or whatever your desired behavior is. You don't need a four-month research project to try to ask clients, "Hey, what would yield this particular behavior?" You can actually just do it.

AARON STIBEL: We always go with minimum viable product to fail fast, get things

out and iterate, so we're all about risk removal. We have a failure wall where we encourage people to write their failures on the wall. That's just in our DNA over here.

PETER BUONORA: I totally agree with that, and also with the ability to take calculated risks, versus just haphazardly taking risks. We definitely have much faster feedback loops into decisions these days, which includes being able to test in smaller increments and get things out there. But I would say there is also a certain stigma with failure that must be overcome in most organizations.

BRIAN BEAMS: The interesting thing I find is that it seems to be easier for individuals to take risks, but the real value in risk-taking is from a cross-functional standpoint. What we're seeing, at least in our company, is that getting people past the inertia of taking risks is very hard.

TOM SODERSTROM: One of the really encouraging things for me is that we're all from different businesses, but we're all violently agreeing here. We're actually trying to figure out how we promote risk-taking from a cross-functional group as well. And how do we reward that risk-taking behavior? Today it's almost like risky behavior to not engage in risk-taking.

How much certainty is enough?

TEP: If you're a forward-thinking executive, risk-taking makes you comfortable and whets your appetite for trying something new. But the idea of uncertainty still makes a lot of people uncomfortable, because they don't know what the possible outcomes are going to be. How much certainty do you need before proceeding?

TOM SODERSTROM: How much certainty

we need depends on what we are building. For example, if we are going to put a new spacecraft on Mars, we need a lot of certainty. It's difficult to fix something that's 150 million miles away, so we need a lot of certainty that it will work. Therefore, we need to figure out the components of each risk and then prototype each of them. We won't launch to Mars with major risks remaining. On the other hand, if we are building a new, user-facing IT capability, the key risk is user acceptance. We can accept very little certainty and a lot of risk by involving selected end users directly as we prototype our way to user acceptance.

Peter Buonora

PETER BUONORA: I think you try to derive from the conditions so you know whether it's worth taking a particular risk in a particular situation. This information will never be complete—it's 30-40 percent of the total, maybe more—but it will help you incrementally figure out whether those leaps are correct and allow you to course-adjust along the way. It also depends on the area you are trying to change. If it is a "run the business" type of capability versus a transformational capability, you will look at that very differently in terms of risk and reward.

JOHN MARCANTE: I took some risk when I headed the high-net-worth business at Vanguard. We fundamentally changed that business in how we serve clients, and it was our highest loyalty business as well. That was a huge risk, and it paid off handsomely.

Yet as soon as you start to think differently, people are already challenging you with, "Well, why would you ever want to change that? Don't fix what's not broken."

So you may be coming from a culture or position of extreme risk aversion, but today there are so many compelling reasons for change. There are unconventional competitors, much lower barriers of en-

> *Risk-taking is calculated; risky behavior is unanticipated.*

try for businesses given cloud computing, and massive abilities for smart people to analyze and use structured and unstructured data. When you take a risk with these ingredients, you have to decide the outcome by which you can measure success. The way you go about that is not to try to change everything at once. You have to try to figure out how to wall off and do small experiments, and then pivot as you learn. You start what we would call a sandbox and see if what you're doing affects the outcomes that define success. That's a measured, calculated way to iterate your way to a different solution, and that's how we approach it.

Brian Beams

BRIAN BEAMS: I would absolutely amplify that. What we've done is actually take

people out of their business function and put them into a cross-functional team and told them, "You will be the curators of innovation. You're not going to come up with all the innovation, but your day job and primary focus is going to be to get in a room, to collate ideas, to sift through them, to look outside, to look at adjacent categories, to look at our current products, to look at what we should be doing from a strategy standpoint, and just take all that in." It was hard, too. Some of these people are the most important people for running the business. But if you're really, truly going to innovate, it may take some risks. Everyone on the executive team locked arms and said, "Yes, this person needs to go over here; yes, this person from R&D needs to go over here; and this one from operations, this one from manufacturing, this one from marketing." And it took them out of their day jobs. That is a hard thing to do when you've got a business to run.

How do you mentor (and incentivize) risk-takers?

TEP: Let's move on to mentorship in risk-taking and how you incentivize it. Some of the classic incentives for risk-taking are personal, such as in the form of a promotion; at the product level, if you create a successful product; or the overall company mission level. How do you all determine what the right incentives are, and how do you mentor your direct reports and even other executives to take healthy risks?

TOM SODERSTROM: I think we're all trying to figure that out. At JPL, we mentor them by saying, "Go ahead and take risks. Partner with a passionate end user, and create a prototype. If it works, then the credit belongs to the end user, but if it

fails, it's my fault. If we do that a few times, then the credit is dual; you both get credit." Now it's very difficult, especially for young IT people, to hand over that credit to the business or end user. But by giving away credit to the business, letting them tell the story, and getting peer recognition, you create a pull for more IT services. We call this Return on Attention from the end users. The Return on Attention creates the new opportunities and funding for IT personnel to grow in numbers and skills. So, Return on Attention creates investments that enable Return on Investment.

Aaron Stibel

AARON STIBEL: At Dun & Bradstreet Credibility, we actually put our money where our mouths are. When we do our annual reviews, there are three main sections. One is a section of quantitative information, and the other two sections are titled successes and failures. You are judged on these three criteria — failures being one-third of your score. It's a really tricky thing to fill out because most people shy away from failure, but by putting it in the annual review, we've communicated to the employee that this isn't just "talk," this is real. We really want you to try, and we really want you to feel okay failing, so much so that we are actually putting failure into your annual review.

JOHN MARCANTE: Can I reword this question on mentoring to be more about how you infuse an entrepreneurial spirit into the organization?

TEP: Go for it.

JOHN MARCANTE: When you think about my last example of running a business — carving off a group of people, "sandboxing" them, giving them real clients, allowing for test and learn — it provides fertile ground for innovation and creates engagement. The last phase is allowing those individuals to spread the word and carry that sandbox into the rest of the business. Allowing them to play a leadership part of the transformation. If you want to get people excited about leading an organization, give them an opportunity to do something like that.

Within IT, we run an annual ideation session. Business and IT get together, you're allowed to connect with anyone you want, you're allowed to put together a team or do it individually, you throw your ideas out there, they get voted up or down, and the top ten ideas get presented out to the executive team. Finally, the top ideas get the funding. So again, maybe the motivation isn't necessarily promotional and money-based. I think recognition is really important. We haven't gone as far as putting failing fast and learning in the year-end expectations, but it's an interesting idea.

> *Entrepreneurship is exactly what failure is. It's actually a more elegant way of saying it.*

PETER BUONORA: I love that idea, and actually I've been socializing the same thing. There has to be some ownership for that sort of risk-taking to make that happen. You really have to drive that, be leading from the front, and be an active proponent of it. Because human nature is to do something successful and say, "Well,

that's successful, we're going to keep doing that," then hunker down. Soon that very same thing you were relying on starts to become very stale and these days that success doesn't typically last as long as it used to before it is somehow disrupted.

AARON STIBEL: Entrepreneurship is exactly what failure is. It's actually a more elegant way of saying it. However, if you do think about putting failure into your annual reviews, be cautious when people do self-reviews, because they typically talk about how they prevented failure, instead of how they took risk and experienced failure.

Personal risk-taking, professional rewards

TEP: Let's turn the conversation a bit more toward the personal. What are some of the best risks you've taken during your career? Even if the first thing you did after taking that risk was to sit down and say, "My God, what was I thinking?"

TOM SODERSTROM: We've probably all had good things and bad things. At JPL, about three years ago, we decided we were going to land on Mars. And I said, "Well, we could use cloud computing for that, and we could save lots and lots of money," and everybody said, "That's kind of crazy. Are you sure?" And, bright-eyed and bushy-tailed, I said, "Absolutely. It will work." But it had never been done before.

Then as we were getting closer to it — and this was our Olympics, our Super Bowl — everybody's eyes were on JPL for a few hours. And I was in the middle of that thinking, "If it doesn't work, that's my career right there. It's gone. What on earth? Why did I do that?" In the end, it worked out really well, and AWS was very helpful. It was

at least 100 times more cost-effective than before the cloud, and the worldwide public saw the pictures at the same time we did. We had used cloud computing, but not at that scale. I think we all grow taller (and older) by stretching like that. Now we use cloud computing for just about everything. Though next time I would probably do it a little smaller-scale to start.

PETER BUONORA: In 2009, at another retail company, we chose a cloud-computing platform that was very innovative, but not well adopted at that point. And we deployed it to 55,000 users globally. Luckily it all worked out. We knew what the risks and rewards were in making that move, but there definitely were some times when I thought, "Wow, are we really doing this?"

AARON STIBEL: For us, it was the starting-over project, which was throwing away an entire stack and starting from scratch. That took a lot of convincing. In the end, it was the right thing to do instead of trying to enhance a broken bridge. So that was a massive risk that ended up working out very well.

TEP: And did you have any sleepless nights?

> " *You can't do an ROI assessment on a risk management function.* "

AARON STIBEL: Are you kidding me? I aged ten years in one year. But ever since going to AWS, I no longer have the servers going down, or the nervous sweats at night. For us, the nervousness has shifted from system risk to how best can we use our time to get product out. That's a much nicer and happier risk to have, I think.

TOM SODERSTROM: When you take risks and they work out, they lead to new capabilities you never saw before. So we ended up moving much, much faster in so many fronts than we ever did before, because everything is now in the cloud. We didn't anticipate it, but it's been a tremendous journey.

AARON STIBEL: I agree. We're able to move so fast, not just because of how easy it is to deploy in AWS, but also because we're no longer infrastructure, co-lo people anymore, which used to take lot of resources and time. We're really product-oriented engineers now.

JOHN MARCANTE: I think these are great examples of how as IT professionals we often have to take a risk, change things, and lead. There are lots of different solutions out there from appliances to visualization tools to tools like Hadoop. The reality of it, in our cases, is that you could hear the business struggle to do the things they needed to do, which is why we took these risks to enable them. As a result, though, we've gained tremendous traction in the business. Often when the business is developing a new product or application, it's very similar—they're out front and know what they want to do. They're trying; you're an enabler. But there are times when IT has to lead, especially when it comes to new and emerging technologies. Here IT is out front, and we have to lead.

TOM SODERSTROM: Absolutely. We bet on big data and cloud computing, which made it easier and cheaper to experiment. We saw the value coming and are building a culture of self-service big data analytics where people can analyze data quickly and experiment quickly with new tech-

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nologies in our Analytics Cloud. This adds no risk to the missions as it's in a separate environment. As a result, we are now innovating much faster than before. In several cases, we have been able to infuse technology into space missions in weeks instead of the years it used to take.

When do you pull the plug?

TEP: The last topic is how you do the math on a calculated risk? How do you know when to pull the plug? In that vein, it's interesting that although you think of Richard Branson as someone who's taken a risk with every new business he's started, he also has said, "We have an unusually high tolerance for risk aversion, but our actions always spring from another principle. Always protect the downside."

TOM SODERSTROM: I love that quote from Branson because, for us, it's about looking at the calculated risk. There's a great concept from Pip Coburn in his book The Change Function. It's called Total Perceived Pain of Adoption of a change. Simply put, the benefit has to be larger than the perceived pain of adoption, so we need to understand both sides of that equation. We look at the use cases, and we look at Return on Attention. For example, for Smartglasses, we experimented with use cases by using Google Glass and writing applications for them. We now understand the potential benefit as well as the perceived pain of adoption for many different use cases. JPL is now working with Microsoft HoloLens and will be able to use those lessons learned right away. While Space missions

are handled very differently, we learn from each one, and understanding the downside, as Branson says, is key. I'd also say that, initially, return on investment is the wrong metric for these risk-taking ventures. What do you think about this?

PETER BUONORA: I totally agree. I am driving toward more of a lean canvas approach for ideas that are potentially transformational. Really mapping out aspects of what we try and developing and testing out each assumption of an idea as opposed to requiring obvious return on investment where there are significant unknowns. If ROI is that obvious and certain, the idea probably isn't that risky (or transformational) in the first place. You pull the plug when your idea is not getting the kind of traction you expected and pivoting on the idea is not a viable option.

JOHN MARCANTE: I think your question is the right one, Tom. I loved your idea of the seed fund, and I think we tend to categorize investments. There are certain investments that you can do an ROI on, and the CFO and team are going to want to do those things. But you can't do an ROI assessment on risk. You can't do an ROI assessment on a risk management function. We tend not to prioritize every category of investment the same, so there is going to be some amount of money for innovation and experimentation; there is going to be some amount of money for real business, ROI-type projects; and there is going to be some amount of money for things that cannot compete with that, like risk. It would be unfair to ask them to compete, because they would always lose. And the reality is you can't think that way. You have to have a well-balanced portfolio. And I'm agreeing with you. When it comes to risk-taking, I think there are other categories of success you've got to get everyone thinking about.

TEP: Great discussion everyone. Thank you.

10 Ways to Encourage the Right Kind of Risk-Taking

1. Enable your colleagues to take smaller, calculated risks based on a just-do-it mentality.

2. Look to a minimum viable product model to release, fail fast, and iterate your projects.

3. Encourage risk-taking from a cross-functional perspective by assembling innovation teams.

4. Realize that you'll never have all the information to take a risk. You may only have 30-40 percent of the total, but rely on it to determine whether your leaps of faith are the right ones and then prove your assumptions out.

5. Make a certain percentage of failure part of your annual review process to communicate to employees that you really want them to feel that failure is acceptable.

6. Be prepared for resistance. As soon as you start to think and act differently, expect people to challenge you.

7. Celebrate successful risk-takers with leadership of their projects, especially if they become new products.

8. Run ideation sessions to generate ideas, vote them up or down, and fund your favorites.

9. Find new ways to measure the success of risk, such as return on attention.

10. Remember, another way to say failure is entrepreneurship. Entrepreneurs are used to failing. It's just part of getting to success.

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