Navigating the VUCA World
An Interview with Bob Johansen

Bob Johansen with James Euchner

Bob Johansen has been forecasting the future for over 30 years at the Institute for the Future (IFTF), an independent, nonprofit research group whose mission is to advocate for the value of looking at the future. He has outlived three 10-year forecasts, a feat unusual in the field. Johansen has written eight books, the two most recent of which are *Get There Early* and *Leaders Make the Future*. He spoke with Jim Euchner about the VUCA world we live in, some of the most important trends that will shape the world of tomorrow, and new leadership traits that will be required to navigate the future.

**JAMES EUCHNER (JE):** In *Leaders Make the Future*, you say “If you’re not confused about current events you’re not paying attention.” Can you elaborate?

**BOB JOHANSEN (BJ):** I think what’s going on in the world now has been most aptly described as “the VUCA world.” It’s volatile, it’s unstructured, it’s complex, and it’s ambiguous. This is a term that, as best I can tell, was first coined at the Army War College, the graduate school for future generals; it’s the elite training environment for the Army. By definition, in a VUCA world, if you’re not confused, you’re not paying attention. Confusion is part of the game. And actually being frightened is part of the game, too.

But you cannot stay frightened, or you will freeze and lose the game. You’ve got to have readiness and that requires lots of practice. You have to figure out how to engage with that confusion, engage with that fear, and flip that into an opportunity. It’s the leadership skill I call “dilemma flipping.” The ultimate dilemma is to take the VUCA world and change it from a threatening thing, which it certainly is, into a world that is not only threatening but also laden with opportunity.

I first visited the Army War College the week before 9/11, and I’ve facilitated a number of exchanges among business leaders and military leaders and nonprofit leaders since then. And we’ve learned a few things by looking at the VUCA world through a 10-year forecaster’s lens. First, volatility can yield to vision; in a VUCA world, vision gets rewarded disproportionately. Similarly, uncertainty yields to understanding, whether it’s marketplace understanding, scientific understanding, or understanding of competition or consumers. Second, complexity yields to clarity. The ugly truth of the VUCA world is that clarity gets rewarded, even if it’s wrong, because there is such a need to cut through the confusion. A lot of people can’t live with the current level of confusion, so they find simplistic solutions attractive. And of course that can be very dangerous. What you need is to be clear and simple without being simplistic. And then finally, ambiguity yields to agility. In the VUCA world, you have to be an athlete to thrive.

I think things like physical fitness and mental fitness and nutrition and healthy lifestyles have always been important, but for leaders in today’s world, they are not optional.

**JE:** All of these factors have been increasing over time. Do you think we’re reaching a point where the quantitative difference in volatility and uncertainty and complexity is going to lead to a qualitatively different world?

**BJ:** I think it probably will be a different world because we’re going to have to live in different ways. I’m often asked whether it’s always been a VUCA world, and that’s certainly debatable. Certainly there have been historical times that have
been VUCA before. I was speaking last week for McKinsey’s partners in Berlin and walked down the line of the old Berlin Wall toward the Brandenburg Gate and visited the Holocaust Museum. Now certainly that was a VUCA period. So I’m not saying that there weren’t VUCA world periods before. What I am saying is that the scale, the intensity, and the speed is, as best I can tell as a 10-year forecaster, unprecedented.

To take an example, IFTF started looking at global climate disruption in 1977. I think we were one of the first groups to do that. If you look at it now, it’s pretty obvious from a science point of view that something’s happening around global climate change, warming, disruption, whatever you want to call it. The only debate is around the models and how long it takes before things get really bad and what the tradeoffs are. But there’s no question that we’re dealing with global climate disruption at a scale that we’ve never dealt with before. That’s one reason it’s a more VUCA world than it has been before.

Or take another example: terrorism. Things like bioterrorism, or terrorism in general, are amplified by today’s Internet and will be especially amplified by tomorrow’s cloud. You’re going to see connectivity unlike anything we’ve had before. And that can lead to cooperation and to an ability to do things together, or it can lead to extreme disruption. Think of bioterrorist networks, cyber warfare, and bioterrorism; all of those, I think, are VUCA on a scale that we’ve never experienced before.

Finally, we have information intensification and a degree of connectivity we’ve never had before. Our ability to bring information and data to bear on problems—the big data phenomenon—has grown dramatically. And yet our ability to process that data has grown much more slowly.

So we’re in this VUCA world where everything gets amplified, and it’s volatile, it’s uncertain, it’s complex, it’s ambiguous in a way we’ve never experienced before. I would argue it’s unprecedented, and our forecasts suggest that the next 10 years will be the most turbulent in any of our lifetimes.

But that doesn’t mean that there aren’t great opportunities to win. I have periodic debates with historians and amateur historians who believe that it was more VUCA in the past. Maybe. But the point is not so much whether today is more VUCA than ever, but is today VUCA, and how is that threatening? And more importantly, what opportunities does that create? I think that the threats are bigger. This is the most frightening 10-year forecast I’ve ever been involved with in more than 30 years as a forecaster. And yet it’s also the most hopeful 10-year forecast I’ve ever been involved with.

The stakes are high, and the beginning of figuring out how to win in that world is to assume that it is an extreme VUCA environment. It’s going to get worse, and that’s going to require us to think and act differently.

JE: There have been a lot of major changes in the management of R&D over the past 10 years, including the globalization of R&D, disruption due to the Internet, the growth of open innovation, and the continuing march of technology. And yet, at the same time, the management of R&D has had a lot of continuity. What skills do you think will be required for R&D and innovation management in the future?

BJ: A key managerial skill will be clarity. Getting that clarity right is not easy; it’s not just about having a mission statement or something like that. It’s about clarity that is compelling, clarity that is biting. It has traction. It pulls people in; it motivates them.

I’ll give you an example from my experience. I worked for many years with P&G. At one point after A.G. Lafley became the CEO, he said that something like half of the new ideas P&G pursues should come from the outside. He said he would measure this and publicly announce when P&G reached the goal and publish in the Harvard Business Review how they did it. Now that was an example of the leadership skill I call clarity. In a VUCA world, you need to be very clear about where you’re going, but very flexible about how you get there. A.G. set the vision, and then, of course, a number of IRI members, like Nabil Sakkab and Gil Cloyd and Larry Huston, actually created the Connect-i-Develop strategy that P&G has become famous for.

That was a disruption in how R&D is managed. It was also an example of the leadership skill that I call “smart mob organizing”—Howard Rheingold first coined this term—which is pulling together networks of people to amplify their efforts for a particular purpose. It was also part of the most important leadership skill in my book, which is “commons creating”—the creation of a shared asset that benefits more than you.

Bob Johansen is a master 10-year forecaster who has outlived his forecasts three times. He believes that the VUCA world will require new leadership skills.

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JE: Can you say more about how you get alignment behind the clarity?

BJ: Let me use the military as an example. Military leaders' term for clarity is "commander's intent." I don't recommend using that language in business, but it's interesting. When I go to the Army War College, that's what they understand. The commander's intent does not say how to do something, but it says what with great clarity. Here's how it works in the Army. The Army itself is unbelievably decentralized. People think it's hierarchical, but they are thinking of the old-fashioned Army. The new-fashioned Army has great clarity of direction—commander's intent—but within that umbrella of intent there's great flexibility in means. They're so good at preparing people to perform in this VUCA world that they bring in young people who have relatively weak educational backgrounds and make them very high performing soldiers. These young people have a lot of authority in today's military; you've got twenty-somethings controlling nuclear weapons, and they're completely prepared for that.

The way they get prepared for their roles is through the leadership skill I call "immersive learning ability," which is basically gaming. Go to the Army's website and you see a state-of-the-art video game. If you play it and you get a high score, you get a call from a recruiter. If you join, you play games your entire career, and that's how the Army makes recruits into such high-performing people. Gaming becomes the medium of choice for the VUCA world because of its immersive learning ability.

JE: You touched in that example on immersive learning and new ways of knowing. We have a tradition in R&D of the scientific method and rigorous analysis and proof. Gaming and immersion, on the other hand, really build intuition, which is an entirely different way of knowing. Do you expect a creative synthesis of these two ways of knowing?

BJ: I think there will be a lot of really interesting creative blendedings of these different approaches. Here's where neuroscience will play a role in creating the future. What the neuroscientists are teaching us is that whenever we know we know something, we should beware, because the portion of our brain that tells us that we know something is the same portion of our brain that governs love and anger. We think it's rational, but it's not.

The best work on this I've seen is that of the neuroscientist Robert Burton, who wrote a book called On Being Certain. The subtitle of the book is fascinating: it's Believing You Are Right Even if You're Not. What he's been studying in controlled laboratory situations is how people can develop this feeling that they know they know something, and retain that belief even when they're shown that what they know they know is incorrect.

The challenge here for leadership is improving our ability to understand how we know what we know. We have to develop our clarity but moderate our certainty. Because certainty is brittle; certainty cracks in the VUCA world. Often if you know you know something, that's just the moment you get in trouble.

JE: Is seeking disconfirming information one of the skills you expect to be increasingly important? What sorts of things might we be looking for in future leaders?

BJ: In the futures world, that's the role of scenario planning. At IFTF, we have adapted an approach developed at the University of Hawaii. We take all of our forecasts and run them up against four archetypal scenarios: a growth scenario, a discipline scenario, a collapse scenario, and a transformational scenario. That's essentially how forecasters deal with that kind of uncertainty and seek disconfirming information.

This is a kind of gaming. It's basically taking your tentative belief set and then testing it in different environments and trying out different leadership approaches or different ways of engaging with that particular content. The scientific method to some extent has always practiced this. That's a lot of what happens in science when you're trying different hypotheses and testing them and challenging your logic. So in a sense, it's not all that new. But in the VUCA world context, with all the new connectivity and the ability to visualize and create scenarios, we've got much better tools to be able to explore scenarios.

As I discussed in Leaders Make the Future, a major trend is the emergence of digital natives, who are growing up with these tools. The definition of a digital native is someone who is 16 or younger in 2012. The definition of a generation now is only about six years. What we're interested in as forecasters is those who are 16 years old or younger now. The argument is that whatever media ecology you have around you when you become an adult, which is usually between the ages of 13 and 15, depending on the kid and depending on the culture, that will influence you for the rest of your life. This is the first generation of kids who have come of age with early-stage social media and early-stage supercomputing, where there is effectively a virtual overlay on the physical world. It's the first generation in history to experience that. We're really interested in the really little kids who are growing up with the iPad and advanced gaming systems; they're the ones whose brains will literally work differently. We don't know yet what the effects will be. I'm really optimistic about them, but others are very pessimistic about them.

JE: With these generational changes happening as fast as they are, it may take three of those six-year generations for...
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BJ: It's too late to catch up. You can't keep up. But it's a great time to leapfrog. So what you need to do is figure out a way to get out of the catch-up mentality and to get into the leapfrog mentality. Over the next decade, the innovation opportunities are going to come from the digital natives, and particularly from digital natives in emerging economies. In 10 years everybody on the planet 25 or younger will be a digital native. And although the wealthier kids will have better apps and better equipment than the poorer kids, no matter how poor you are, even if you're hungry or hopeless, it's likely that you'll have access to a cell phone for SMS.

That's part of the reason I'm frightened about this 10-year forecast. Because unless the rich/poor gap gets better, there will be a lot of kids around the world who are very frustrated because they've had pretty good education but can't get jobs; they can see the very rich, often in high def, and they're very connected. So this is Arab Spring on steroids.

That's the downside. But the upside is the amazing resource this generation will be for innovation. If there's a way you can tap into all that creativity—some of the best entrepreneurs are those working in slums, because they have to innovate to survive—all that connectivity can be used to amplify the innovation.

The question is, how do we engage? How can companies work with this new generation? I think that we need a new humility about how we approach young people as they enter the workforce. The first wave of digital natives will start to hit R&D organizations in about 10 years, after college, after graduate school. But even before that, you're going to see a lot of citizen science innovation from this group that may or may not be credentialed.

If you're smart enough to figure out how to engage with them, you can see the impact of these young people earlier. If I were managing an R&D organization now, I would be all over the challenge of learning from the digital natives, finding new ways to do that. It may be through things that are already common, like sponsoring science fairs and robotics competitions. But I'm thinking of these events with a different mindset, where you're not only mentoring kids but also learning from them. You're consciously trying to figure out what that 13-year-old who you're teaching how to build a robot can teach you about how to create new products.

I'm not saying that older people have nothing to offer. I think there is a wisdom to age, still, and there are a lot of things we can offer. But I'm starting from the assumption that if you're a digital native, your brain thinks differently. We have to learn from this generation in addition to mentoring them.

JE: What advice do you have for people trying to communicate something that may run counter to the received wisdom in the corporation, whether that is about the importance of a technology or personnel practices for digital natives? How do you make sure the message is not dismissed?

BJ: It's not easy. This will be one of the real challenges in the future, both for leaders and for people trying to communicate with them. I think that VUCA world concept is very helpful because it creates expectations and helps leaders realize what kind of environment they're operating in.

The challenge that we have with many of today's top leaders is that when they went to business schools or good universities in the past, they were taught to control, and they were taught to problem solve; they were taught to think in more linear ways. But the VUCA world makes it clear that this is not enough. The concept of the VUCA world creates a language of uncertainty that opens up the right kinds of conversations. And then you introduce principles like clarity. We know that we've got to have clarity in the VUCA world because clarity counters confusion and enables action; we know what wins is great clarity of intent, with great flexibility about how we get there.

Then, try to think of ways to enable immersive learning and use scenario planning. You can create scenarios that immerse the leaders in potential worlds and enable them to try out different approaches. Before you go in with a proposal that requires a yes or no answer, you can plan a scenario exercise to engage executives in the VUCA world and the resulting product opportunities in a way that doesn't require an immediate yes/no decision.

Another leadership skill I talk a lot about is dilemma fluffing. In the VUCA world, there will be many more dilemmas—problems you can't solve, problems that don't go away, but situations where you have to find a way to win anyway. The top leaders will deal pretty much only with dilemmas in their work. When you're dealing with dilemmas, you have to be really good at the art of not judging too soon, which is the classic mistake of the problem solver, and of not deciding too late, which is the classic mistake of the academic. What the R&D leader needs to do is to widen that space between knowing that we've got to have clarity in the VUCA world and the resulting product opportunities in a way that doesn't require an immediate yes/no decision.

I think this is so basic that it means that R&D managers have to change their mindsets. I'll give you another example. A few years back I was invited to do the keynote talk for P&G's industrial cleaning products group. The president there, Norb Mayrhofer, invited me. And he said, "Why don't you come down early and we'll have a dinner the night before?"

I was expecting a nice dinner to set up the meeting. But when I arrived in Orlando to meet for dinner, a van picked us up. But it's a great time to leapfrog.
Playing not to lose is a losing strategy in the VUCA world.

up and took us to a fast food place, which was a place where those industrial cleaning products were actually used. The first thing we did was to get a tour of the kitchen and see how the cleaning products were used, and then a bathroom check to see how the products were used in the bathrooms. And then we had a fast food dinner. Next, they took us to a $45-a-night hotel that also used their cleaning products. And we were brought into the room and trained at how to clean a hotel room. A dirty hotel room. A dirty hotel room. Norb had rented dirty hotel rooms—authentically dirty hotel rooms.

We were each given a cleaning cart and told we had 20 minutes a room—me and all the top leadership, including Norb. We spent the rest of the evening cleaning hotel rooms. And it changed my life, you know? It was just a whole different view of life. It was a kind of a game, but it was real life. It was an immersive learning experience.

What that did was change my whole way of looking at the products. What it did for the leaders was give them a sense of who was using their products—to confront the fact that they’re often using a second language or a third; the fact that the instructions really aren’t that clear; the fact that you’re only given 20 minutes to clean a hotel room, which is basically impossible to do in a sanitary way. We had to imagine what workarounds would they be forced to use and what the issues were for creating great industrial cleaning products for that kind of environment.

That’s what I think you have to do as a leader in the VUCA world—create those immersive learning experiences that put people in the future that’s already here. We often quote the novelist William Gibson, who said “The future is already here—it’s just unevenly distributed.” As an R&D leader, what you have to do is find to that unevenly distributed future and then take your bosses and immerse them in it. And then work together through different gaming or simulation or scenario efforts to figure out what the best approach to innovation might be.

JE: Does that supplant the use of more analytic portfolio analysis and gate systems and NPV analyses? How do they coexist?

BJ: No, it doesn’t supplant them. I think those kinds of things have their place, but they are focused on incremental innovation. What I’m talking about is the context for disruptive innovation. The approach I’m suggesting is much better at anticipating disruptive innovation.

JE: Just one more question, and it’s about risk management. In this VUCA world, it’s both more difficult to assess risk, because there are more variables and they’re changing faster, and it’s more important to act. Generally, the tendency in the face of risk is to study an issue more. What advice do you have for leaders on how to act in the face of this VUCA world?

BJ: It’s a real challenge. The first thing I’d say is to set your expectations appropriately. Frame the context as a VUCA world, one where you expect dilemmas. If you’re lucky enough to have more predictability or problems you can solve instead of dilemmas you can’t solve, you’ll just move ahead more easily. But if you set expectations that you’re going to solve problems when what you are confronting is a dilemma, then you’re in big trouble. Setting expectations is really important for the leader and also for the people working with the leader.

Second, readiness. Prepare yourself for this world. I think senior leaders have to be physically fit and mentally fit. With more stress, you need more exercise. You have to figure out what’s right for you to create a healthy lifestyle. Healthy lifestyles are not just a nice thing to do; they are a necessity.

And third, play to win. Playing not to lose is a losing strategy in the VUCA world. The real challenge is to act, to keep moving, because if you stop, you’re dead. And, as we’ve discussed, to do this you need clarity. Unless you have clarity, you don’t know where you’re going, and that can be just as bad as moving in a sort of dull, routine way.

I think that business in the VUCA world is a different game than it has been. It is much more demanding to be a top leader now. I don’t know any top leaders who are working less. So the challenge is how to work smarter and how to build in time for sleep and rest and recreation.

JE: Do you have any final advice for managers of research, technology, and innovation?

BJ: You know, I think this shift from officially trained science to citizen science will be one of the most challenging aspects of R&D productivity and R&D development over the next decade. This new wave of citizen science is driven by the leadership skill I call the “maker instinct”—the kind of inner urge to create and to make things. So we have much greater resources for innovation, and I think that’s wonderful.

The downside is that there’s a lot of noise. Here at the Institute, we like to try out the things that we’re studying, and we’ve done quite a bit of crowdsourcing as input to our forecasts. We do global outreach through games and contests to get new ideas about the future. A small proportion of those new ideas are really cool and really interesting, but a large proportion of them are junk. The signal-to-noise ratio sometimes isn’t that good. One of the big challenges in this world of citizen science will be navigating the tension between the citizen science breakthroughs and the citizen science junk.
JE: We’re entering a very strange world where junk filtering will be part of the intuition you develop, but your intuition may not age well. The intuition of many of today’s leaders was built in a different world, so they need to find new ways of filtering—either by relying on other people’s intuition, which is a double indirection, or somehow updating their own intuition. That’s an interesting challenge.

BJ: It gets back to the question of how we know things. I think here again the gaming world can help us because what that does is give us low-risk ways to develop new ways of knowing. The interfaces in today’s video games are many times better than anything we have in business. We have to be careful not to write off video games because so many of them are too sexual or too violent. The medium of gaming is powerful. Think of it as an interface with the future.

JE: This has been very interesting. Thank you for your time.

One of my colleagues here at the Institute, Jason Tester, is a designer. He argues that what we’re doing as forecasters, and indeed what R&D managers are doing, is creating the human/future interface. What we need to do to accomplish this is to create artifacts and games from the future that help people engage with and seek out the opportunities and respond to the threats in constructive ways.

In a way, speaking of risk management is framing the problem negatively, or framing the dilemma negatively. Certainly there is an element of risk, but I like the term “readiness” better than I do “risk.” Readiness includes clarity of direction, not just response. And it also includes the ability to flip a threat into an opportunity.

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