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The Club's Young Leaders Committee held a breakfast featuring Ganesh Bell, president of Uptake, at the Uptake offices on Friday, December 14. Mr. Bell gave remarks and then answered questions during a Q&A moderated by Young Leaders Committee Chair Andy Crestodina.

Below are excerpts from the program.

On Uptake filling a void…

"If software accelerated the transformation of industries, AI just gave it a major, major, major turbo boost. We at Uptake saw this in the industrial world. That's where we started, in the industrial world, because we saw a decade of industrial productivity going down and unused data going up. Also the nature of work in all of these industrials is changing because we're deploying more robots, more drones, and humans with wearables, and generating more data. […] In all of these industries, when you connect all this data and learn from that data, you can actually augment human intelligence with artificial intelligence and do some simple things, like predict failures in machines. In just four years since the inception of the company, we built an industrial AI, an IoT platform, where we have been trained, our algorithms and engines have been trained, on more than a billion operating hours. We can now predict more than 55,000 failures across many different industries."

On what has changed in regards to how humans work…

"If you talk to leaders in leading some of the biggest companies in the world, they'll tell you they have dealt with lots of these things in the past, from leading change, big transformations in companies, an innovation dilemma, or the industry getting re-imagined. […] They will all tell you that while they've dealt with a lot of change in the past, this time it feels different. Why does it feel different this time? Because something's happened in the last decade. We've long held the belief that technology, or work itself, could be defined in two ways; routine tasks, and non-routine tasks. Routine tasks are things that could be automated, and non-routine tasks are things that cannot be automated because they have intuition, judgement, and creativity attached to it. But something happened in the last decade, especially in the last half decade where things that require creativity, intuition, and judgement can also be automated. […] The reason is all about the acceleration of technology. Humans don't have a reference point for something that's continuously accelerating."

On job disruption and an unemployment crisis…

"You'll see people divided on it, which is both job creation and job destruction. I generally fall in the camp of jobs will be dislocated and they'll be dislocated first in skills, they will be dislocated geographically, they will be dislocated in time, and this idea of crowd sourcing and the gig economy is actually real. […] I think it will be a curve where at least, for the next couple of decades, we are in the phase of human plus AI and robot; where human is augmented by a robot or an AI. I think there will be crossover in certain jobs over the next decade where it's robots plus humans, then eventually robots themselves. In many industries there is some autonomous future. In the industries that [Uptake is] in, we talked to our customers. Why not an autonomous power plant? It's quite possible. It actually feasible. It's just that human condition of acceptance hasn't arrived there yet. Just like autonomous cars today are technically possible, but human condition and acceptance hasn't happened. I think it will happen. In many industries it will happen over a much slower period than most predict. I believe that the nature of work will change from the 9 to 5, and that this idea of gig economy will definitely happen, which means how we regulate labor, how we think about pay, how we think about benefits – all of those things will actually go through change."

On how to lead in a world that's consistently "rewritten, reimagined and reworded in software and AI"

"First, all of you need to build a belief system. A belief system that the future of work is actually changing. A belief system that digital will reimagine all your industries. A belief system that in every industry, there are critical control points. Control points of applications, control points of data, control points of algorithms that you need to shape, you need to own, and you need to participate in. If you don't have that belief system, don't get started. Just don't do it. You'll only waste money."

"Another thing I would offer is this idea of new measures and metrics. While we're all used to measuring things like profitability, revenue, and margins, I would say companies that measure other things also progress more. […] Measure adoption, measure engagement, measure usage, and then it will lead to new ideas and you'll start meshing these statistics over time."

"The last thing I'll tell you, and people ask and are always surprised about this, is amplify innovation through diversity. […] Not only can we simply double our innovation capacity if there's more diversity of work, diversity in gender, diversity in thought, diversity in disciplines; but you also need this so you don't build a racist or a sexist AI, or even unfair, biased algorithms in the world. It's even more important."

On how to build a belief system…

"Build a belief system on the idea and not the company. Build a belief system that the technology will have a lasting impact. Maybe that iteration [of the] technology may actually fail, but the idea

of why the technology was created, the intent behind the technology and the use cases will actually live on. Right? That's probably a best way to go build a belief system.”

On distribution of AI across different industries….

“It's unevenly distributed and that's why we started in the industrial world, the world like manufacturing energy in rail and transportation logistics. It goes in all of these industries. These are the industries that are actually digitally the most backward in the world. They are the “digital laggers” and all of these industries are also the industries where the need for doing something disruptive exists because the entire industries' value chains are being re-imagined.”

On cybersecurity…

“There are nightmare scenarios that always float around with Internet of Things where everything gets connected, and when things get connected, they will get hacked. I would offer a story on the other side. […] Your cell phones, your iPads, and your tablets are safer than your laptops and your PCs. Why? Because it was actually designed for a connected world. Your PC wasn't. It was designed for an offline world and you run operating systems and patches that are several years older. We see this in the industrial world that we're in, which is devices that are actually not connected are actually not that safe, because they're running things that are five or 10 years old. It's not keeping up with the latest, greatest patches. So, I actually believe that being connected is probably safer in today's world.”

On the future of work…

“I'm fairly optimistic about the future. I think we live in probably the most fascinating time in the history of the world, and I think it would be true even into the future […] Something magical is happening right now […] When you talk about a lot of these industries that we're actually in, these are the industries that power our world, industries that build the world, industries that move the world, industries that cure the world. There's a company right here in the building called Tempus. It's applying machine learning and AI in precision medicine. That's about curing the world. There's something interesting that's happening where you're now able to attract really amazing technologists and really talented people in industries that are actually purposeful, that actually make an impact in the world, and that has never happened in the past. In the past, technologists only wanted to work in cool things. They want to work on the latest, greatest thing when it's hot. Today you can work on the latest greatest thing in the world, which is machine learning and AI, Internet of Things, robotics, and 3D printing, but actually do it in industries that are purposeful. That's actually pretty exciting.”