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Lowe's exec Kyle Nel on innovating in a time of exponential change

Is your organization thinking and acting linearly, at a time when the business or technological landscape is changing exponentially?

Kyle Nel, Executive Director of Lowe's Innovation Labs, laid out his company's response to that challenge at the recent Front End of Innovation Conference in Boston.

> On metrics: "…If you are buying into the exponential curve, the conventional retail metrics will kill anything that looks remotely different from what is currently out there."

> On hiring: "I look for people that are known as difficult to manage. Not because they are not good at their job — because they are *too good* at their job. They're the ones that make their boss look bad…"

> On using science fiction scenarios and comic books to shape strategy: "…It starts to dawn on [executives] that if we don't do this, and if someone else does, we're in deep trouble."

You can hear audio from the session at the bottom of the page at Innovation Leader, and also read an edited transcript below. We previously interviewed Nel in July 2014. Headquartered in Mooresville, North Carolina, home improvement retailer Lowe's had $53 billion in 2014 revenue.

We're all taught that you should work on this linear path.

The idea is that you're working really hard, and you're improving your product or your service little by little.

The problem is, we don't live in a linear world, but we work on a linear path. We actually live in an exponential world, and what happens in an exponential curve is that exponentiality begins to compound on itself.

In the 1920s, the average time [companies stayed] in the S&P 500 was 67 years, and now, it's only 15. There's all of these cautionary tales like Blockbuster. They're now gone, because they were working on a linear path.

These weren't Enron — these weren't bad people doing bad things. These were good, smart people working on a linear path.

If you live in an exponential world, what do you do? We have to partner with exponential thinking people, and you need to empower a few people on the outside, to be able to work and build on this exponential line. If you're not building stuff on this exponential curve, you will get wiped out. Maybe not today, maybe not tomorrow, but soon. It's going to happen.

DECEPTIVE DISAPPOINTMENT

The other part is the dip, as you can see here at the bottom of my chart. [See graphic above.] Anything that's truly new, truly different, truly disruptive, usually there's big hype when it comes out, and then when people actually get to try it, there's usually massive disappointment.

We call that the "deceptive disappointment" part of the curve. What happens is, if you have something that's new and different and the hype doesn't match up with the expectation, people make fun of it, and then it seems to fall off the face of the earth. But it really doesn't. There's still that core group of people working on it.

Then all of a sudden, almost overnight, it feels like it's a success. Virtual reality is a good example of that. Virtual reality has been around since the '80s and '90s, and people just forgot about it until Oculus Rift came out. And then all of a sudden, if you had been working on virtual reality and augmented reality, your skills are in really high demand, and you could do quite well.

Ask the founders of Oculus how they are doing. [It was acquired in 2014 by Facebook, for $2 billion.] If you're ready and preparing during the deceptive part of the curve, you can really maximize the benefit on the disruptive opportunity that happens at the end. What we do with our partners at Singularity University is we try to identify what the future is. We work into that, and we work through the deceptive, disappointing part of the curve.

I am very open that often, stuff we are working on should be deceptively disappointing, initially. It should come out, and we should be embarrassed of the things that we just came out with six months ago, because things have advanced so much. But if you're not working on that part, you won't survive.

WHAT FORCE IS ACTING ON YOUR ORGANIZATION?

Then, there are two problems. There's this huge opportunity overkill problem. If anything can disrupt you, like anything in the world, then you can literally do anything to disrupt yourself. That's a daunting task — [facing] the paradox of choice. That's scary.

Anybody know what Newton's first law is? [Every object will remain at rest or in motion in a straight line, unless compelled to change its state by an external force.] All organizations take on a personality. They have biases, they have habits. It's all irrational, but in different ways.

It acts like a person, and in order to push and pull and cajole, you do need someone like me to push and pull that organization one way or the other. If you don't have that, you could have all the best ideas, all the best tech, all the best things in the world, and that won't happen.

[Have you seen things that are good, that] the organization should have done in the past, and didn't do for one silly reason or another? None of you have ever had that happen in your career? It has definitely happened in mine. [At Lowe's], we approached innovation in a different way.

SCI-FI PROTOTYPING

We use a process that we called science fiction prototyping. We give science fiction writers all of our marketing research and trend data. I actually have on staff a head of storytelling.

We work with those professional science fiction story writers, and we write possible stories of where these tech trends might converge in a possible future scenario.

If you can predict that traffic jams are going to occur when people don't even have cars [yet], you can do a lot to set up your infrastructure to really maximize that disruptive opportunity.

[We turn those] stories into comic books. I don't know who's ever gotten a strategic document in comic book form. Has anyone ever?
What happens is [executives are] reading it, and then, it starts to dawn on them that if we don't do this, and if someone else does, we're in deep trouble. It suspends disbelief a little bit, and it gets them out of their usual space and thought process in order for them to get it. The first time I did this, I thought I was either going to get fired or promoted. I'm still at Lowe's; it worked out. If you're thinking of Lowe's as this Google-like [place] where people are [riding] drones like they're dragons, that's not how it is at Lowe's.

Lowe's is an amazing company, a lot of smart people, but tech innovation has not been our thing, and this helps us get there.

INTRODUCING THE
HOLOROOM

[The first story,] we turned into the Holoroom. It's the first virtual reality and augmented reality in stores. This seems really obvious now, but when we wrote this story and came out with it internally, this was before Oculus Rift came out. No one was talking about VR and AR. Right now, it seems so obvious, but three years ago, no one would have thought to do this, especially at Lowe's.

It allowed us this space to start creating things, knowing that the technology we were creating was going to be an intermediary technical solution. We did it just to learn, just so we could build through the deceptive disappointment phase. Then, we wanted it to be a beacon or a bat signal for others who have all the cool tech to come to us, and that's exactly what's happened.

We're working on stuff that no one's seen yet, and that hasn't been announced. That's the beauty about living and working on the exponential curve.

INTRODUCING
OSHBOT

Has anyone heard about autonomous navigation robots? The robots are fully automated robots we built from scratch, with a startup called Fellow Robots. It was the first time that we had truly partnered 100 percent, completely opened up to everything that we were wanting to solve. We built it from scratch.

Basically, what it does is you talk to it [and] it talks to you. It will talk back to you in Spanish or English, and it will take you to whatever end of the store you want to go. You can say, "Hey, I'm looking for hammers." It will show you different types of hammers, it will show you where hammers are in the store, and it will navigate you there.

It also does real-time inventory tracking, which is a big deal for retail. It also collects all kinds of cool information like what people are asking it for. In retail, we have no idea what people want when they come in the store, no idea.

Once again, first autonomous robots, first augmented reality store, you probably wouldn't have thought Lowe's would be the people to do that. But because we are working on an exponential curve with amazing partners at Singularity University, we're going to make that happen.

This is one of the other things [the robot] does: it has a 3D camera at the top. When you go in a hardware store and say, "I just have this thing. I don't know what it's called, I don't really care, I just know I need exactly 10 of this thing." It recognizes that, and uses the Holoroom technology that we developed to be able to match it, and tells you if we have it in the store.

INTRODUCING
3D PRINTING & SCANNING
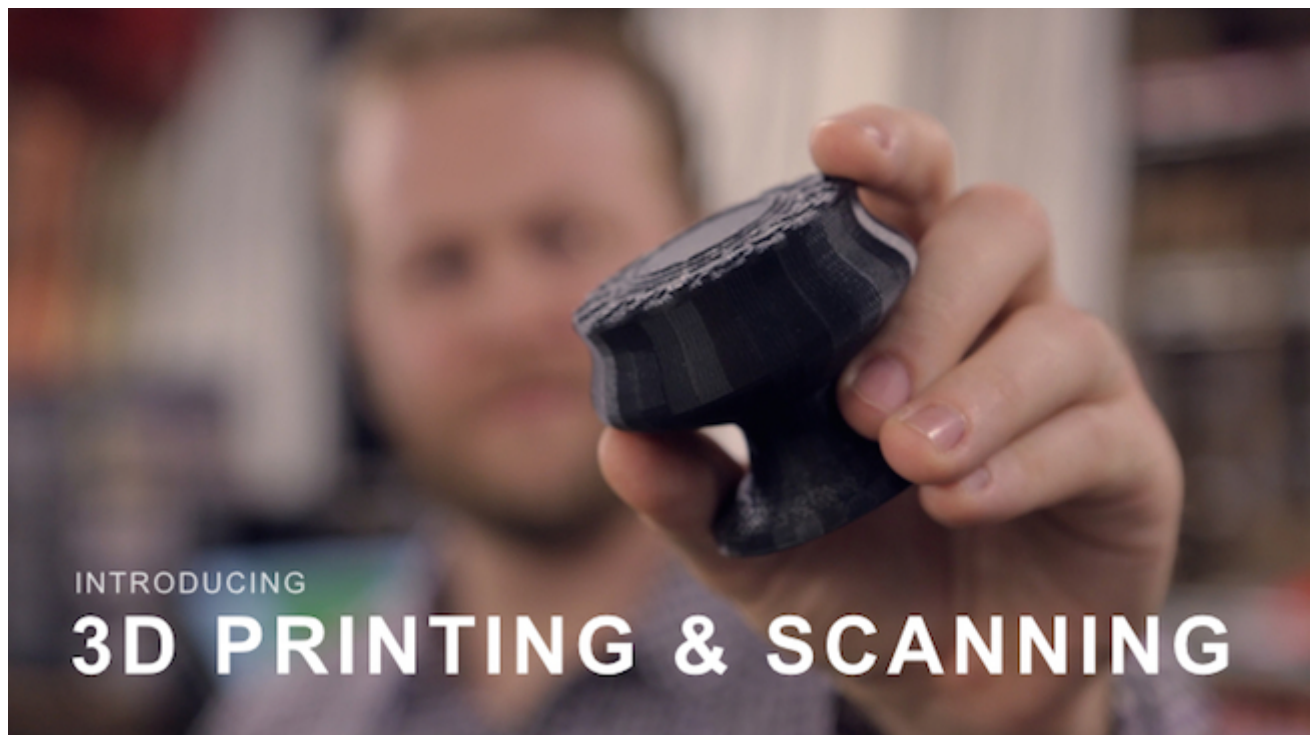
A couple weeks ago, we announced 3D printing and scanning. The big difference here is you can bring something in, and you can have it scanned. You can bring something that is broken, and we'll digitally piece it back together for you. You can print it in any material — any kind of metal, gold, silver, whatever, if you have the money, you can do it.

I was in the store a couple weeks ago, and there was this guy with an old French bicycle. He had a bike from the '40s, and part of [it had broken.]

Before, he would have had to go to a machinist, or try to figure out something to do. He brought it in, we pieced it back together, and he is having it printed right now so it can fit back onto his bicycle. [We're] providing solutions where there were none before.

KEYS TO SUCCESS

There was a recognition in the top levels of the company that we needed to innovate or die.

The other piece was that I was tired of trying to convince important people to do stuff, and I just started building it myself. I had gotten to the point where I just didn't care if I was going to get fired — I just wanted to do stuff.

[I've benefitted from the] combination of not caring and just going for it, and then at the same time, [having a] really great, incredible executive team that understood what I was trying to do, and supported me, and gave me money in order to do these kinds of things.

WHO SHOULD BE ON YOUR INNOVATION TEAM?

I look for people that are known as difficult to manage. Not because they are not good at their job — because they are *too good* at their job. They're the ones that make their boss look bad, and their boss' boss look bad. They don't stop. They see a problem, and it's like a compulsion.

Writers can't not write. If you ever meet someone who says, "Oh, I really want to write one day," no, no. You either are a writer, or you are not a writer, and I feel like innovators are the same way. Whatever your background is, you can't help but fix stuff, or make it better, or realize what's in your head.

Hand-in-hand with your compulsion comes, "I don't care what the consequences are." That's the paradox of this stuff. When you don't care about your job, and you really only care about getting the work done, somehow, you get promoted and things go well. The corporate innovators that I've seen in my career that are lifers, that are happy where they're at, they aren't that way, and that's not what I look for.

METRICS

I fought against [key performance indicators] because once again, if you are buying into the exponential curve, the conventional retail metrics will kill anything that looks remotely different from what is currently out there.

If the whole point of this exercise is to build the next thing, you shouldn't apply today's metrics on something that's in it's nascent form. Everybody remembers Lenny from Of Mice and Men. You don't want to hand the rabbit over before it's ready.

These things are so little, and so fragile. You have to incubate them, and protect them, and keep them from either growing in the wrong way or leaving too early.

CULTURAL CHALLENGES AND ATTRACTING NEW TALENT

If you're a middle manager, VP, director, whatever, and I come to you talking about five years from now, or 10 years from now, that's not your goal. You're not incentivized. It might be nice, but clearly, I am a distraction.

That's why having sponsorship at the top is critical, because it immediately aligns the goal. The other thing is, it's about continuing to share the story. The legal parts of all these things are extremely cumbersome and difficult. 3D printing and scanning — anyone can walk in off the street and scan something — that's a pretty gnarly legal problem. We were going through this for months and months. I just got this idea that they weren't understanding what we were trying to build.

I sent parts of the comic book to our key lawyer, and he's like, "Oh, I totally get it now." After that, he understood. Instead of just pitching to my executive team, I needed to pitch to all of the different key stakeholders, so they could get it, and then they could help us.

The other thing that has been really surprising is how the stuff that we're doing on the fringe has affected talent. I got an email a couple of months ago from someone who joined the accounting team at Lowe's. One of the reasons why they joined Lowe's over other places is because they saw this as an example of where the company is going, and the comfort to try new things. Will that person ever work on my team? Probably not, but it's just a larger halo.

INNOVATING INSIDE A LARGE ORGANIZATION

I think one of the things that I learned early on is you can be right, but still be wrong. "I know exactly what the answer is, and I can do this" — that's the wrong way to go about it, because is not going to effect change. [Innovating successfully is] a combination of a compulsion to create, and then, the attempt to try to understand the organizational mind and make it happen.