Rob Henderson - Bridging the Biotech Talent Gap: Challenges and Innovations

Host: Maggie John

Overview:

Rob Henderson joins us to discuss human resources challenges in Canada's bio-technology sector. Henderson is President and CEO of BioTalent Canada, an in-demand partner, policy influencer, and project leader that brings together the country's largest national bio-economy network. His work focuses on connecting employers with skilled talent and addressing workforce shortages. Henderson explains that Canada's bio-tech sector is projected to face a shortfall of 65,000 workers by 2029. Part of the problem is that enrolment in STEM programs is down, and science graduates often lack the business skills to successfully launch their own ventures.

Highlights from our conversation include:

1. Work-Integrated Learning (WIL) is "a great way for students to learn the business of science hands-on." It's also an equally useful opportunity for employers to identify promising students and build talent pipelines.
2. AI adoption in Canada's bio-tech sector is lagging, partly because four in five organizations is an SME, many of whom lack the resources for training and experimentation.
   Likewise, SMEs often lag behind bigger companies when it comes to hiring, partly because they are more likely to hire through informal networks. The bio-tech sector lacks representation in various communities, including women, newcomers, Indigenous Canadians, and people with a disability.

MAGGIE:

We are live at Magnet Network Live. I'm your host, Maggie John.

I'm now joined by Rob Henderson. He leads BioTalent Canada, an organization dedicated to supporting human resources in the biotechnology sector.

His work focuses on connecting employers with skilled talent and addressing workforce shortages in the growing biotech industry.

Welcome, Rob.

ROB:

Thanks, Maggie. Glad to be here.

MAGGIE:

Yeah. So talk to me about what are some of the key challenges biotechnology companies are facing in attracting and retaining skilled talent.

ROB:

Sure.

Well, our labor market research has shown that like in biotechnology, we're predicting until by the year 2029, we're going to be 65,000 workers short. Yeah.

And these are in key areas like biomanufacturing, like these, remember, we just went through the pandemic.

So this is about vaccine manufacturing, not only exclusive to that area, but all over the place.

And also even some of those industry agnostic positions like, you know, marketing and finance and HR and stuff that the biotech industry competes with every industry for.

So all of these, this is a big issue because it means a bunch of the companies that are fostering the sense of Canadian innovation in biotechnology are either going to stall or they're going to fail in terms of going forward because they're not going to have the staff that they require.

MAGGIE:

Why are we going to face this shortage?

ROB:

A bunch of different reasons, Maggie. Number one is STEM enrollment is down across.

So our primary source of talented individuals has been our domestic educational system.

But STEM registration is down for a lot of reasons that people don't understand.

So that's the first thing.

Second of all, there's a bit of a gulf between what post-secondary institutions produce and what the companies need. While the institutions, universities, and colleges do a great job on the theory of science, they don't always have the capacity to teach the business of science.

Because all of these people forget this isn't just a lab. This is a functioning company, right? Right. They have investors.

They have marketing. They have revenues. They have expenses.

All of the things that a normal business has. So a lot of people who are coming out of a science degree or a science diploma doesn't necessarily understand the business of science. Right.

So that's another one. The other two are really, we're not capturing our fair share of immigrants that are coming into this country, nor are we attracting and retaining our fair share of the diverse population that Canada represents, particularly among groups like Indigenous Canadians.

Canadians with disabilities, as I mentioned, newcomers, even women.

While there's 60 or 65% of the graduates in STEM programs are women, only one in three employees in biotech right now are women.

So it's for some reason, either we're not, speaking to these groups or promoting our diversity or trying to enhance our diversity, or there's something that is a barrier to these groups wanting to join biotech.

And that's really frustrating because biotech is a fantastic sector to work in.

We pay 20 to 30% more for the same positions and other verticals.

That's a smart, savvy. I mean, you know, coming out of the pandemic, you'd think we'd have more heroes to talk about, right?

To inspire more people to get into biotechnology.

And I think we need to do that. We need to tout this industry a little bit better as an industry of choice that people should be excited to want to join.

MAGGIE:

Rob, you have so many questions. I'm just like, popped in my head with you saying this.

Okay, let's talk about the, you said the business of science, correct?

Talk to me about why universities, post-secondary, why they're not teaching this, and what the conversation has been like with post-secondary about bridging that gap so that, you know, graduates are fully, knowledgeable when it comes to the business.

ROB:

Sure.

A lot of times in universities, you've got to understand in STEM fields, and particularly in biosciences, in universities, a lot of professors are paid to publish.

They're not incentivized to get kids jobs. Yeah.

That's largely to their own design or left to another department in the university, like the co-op and career education centers, to foster.

So sometimes they're a little at odds. Colleges are a little bit more aligned from top to bottom.

So that has to do with the university funding model for number one.

It's also the resources.

We have to understand enough of the science to be innovative.

It's the old catchphrase. You have to learn the rules before you start breaking them.

So unfortunately, to be innovative, it takes a master's degree or a PhD to be truly innovative within the science sector.

It's very difficult if you're asking a student to invest in eight years of post-secondary education.

Then layer on another MBA on top of that. Right.

In order to get the kind of business skills that you require to go into biosciences as a company.

That's a long time and a lot of debt to lay on students.

So one of the big solutions that we found over the last years that has been really effective is the concept of work integrated learning.

And that is where students who are even in the undergrads or in colleges get internships or co-op placements within companies.

So they learn the business of science hands on. And it's a great opportunity for these companies to onboard and to recruit, right?

Because they can groom some of these students before they're even available to the market.

So they've got an inroad in there. They've got a leg up on most of the other companies.

So, for example, the Student Work Placement Program that is federally, it's placed over 200,000 students.

BioTalent in Canada just finished. We just placed our 15,000th student.

Wow. I know. That's amazing. It's fantastic. And it's really covering a huge need within biosciences of trying to fill that talent gap.

Because not only does it give him the actual person, the warm-blooded person, to get into the company, but the co-op and the work-integrated learning placement is...

Inculcates the kinds of skills, the practical skills that the colleges and universities simply do not have the capacity to foster.

MAGGIE:

Talk to me about the shortage of immigrants. You were talking about just honing in on immigrants, Indigenous people as well.

What are some of the barriers? And I'm curious, are there some countries that are doing that better than us?

ROB:

For sure. There's no question there are.

I don't know the statistics, but I know, for example, I'm familiar with both Australia and New Zealand where their tech and specifically their Indigenous community, uh, there is lots more going on to be able to make those industries attractive to those, to those individuals.

The issue here is a lot of people find, you know, in biotech, a lot of people think about the larger pharmaceutical companies, et cetera, the thousands, the multinationals.

Biotech is SMEs. Uh, 80% of the biotech companies in Canada are less than 50 employees.

So the problem here is you've got somebody who's not dedicated to HR. You've got a scientist doing your recruiting and your retaining.

So what are they going to do? We all have skills. Right on.

But what are you going to do when they're looking for the low-hanging fruit?

So they're going to talk to their buddies and they're going to talk to their friends.

And they're not necessarily looking to the immigrant serving agencies, to the Indigenous communities.

They don't have, in their mind, the expertise or the time or the resources to do that kind of reaching out. That takes time. I mean, it's not going to be overnight that we're going to have a healthy indigenous population of employees within the biotech sector.

That is going to take time. It takes building inroads.

It takes understanding the culture.

And again, a lot of the people who are running these bioscience companies don't feel that is their core competence. Right.

So it's a bit of these two isolated or polarized communities that just haven't built a bridge between each other.

And that's a shame because, as we know, diverse teams are more innovative.

Everything that we know out there screams that. Oh, absolutely.

And it's going to be a key strategy to the bioscience companies to fill that gap of 65,000 that I mentioned.

Yeah. Because if we don't reach out to the readily available labor markets that are there, that we've educated and that we've fostered as a wonderful multicultural country like Canada, we're really doing not only the industry, but our country a real disservice.

MAGGIE:

Well, and I don't want to get down this rabbit trail, Rob, but I'm just thinking, you know, having diverse thought in the world of biotech also generates a different product, right?

When you have diversity of background experience, you're going to have technology that responds to a person like me, a Black woman like me. You know what I mean?

You're having perspective that comes from a diverse lens, which is our country of Canada.

ROB:

Absolutely. And not only does it do, you hit the nail right on the head.

Not only is it shown that the diverse points of view, like science is based on looking at something and going, huh, I wonder why that happens. Right.

I wonder how that works or I wonder why that is. Yeah.

And a different cultural perspective can give you because it's not just science that dictates it. Sometimes it's a cultural norm. Yes.

Right. That dictates why something is a certain way.

So being able to look at from a diverse point of view, not only and from a business perspective, I think we all understand it's a global market. Right.

So the bottom line is diverse points of view open up new markets and give you the opportunity to present your new widget or your new miracle cure in a way that may be more marketable outside the core market where you are in the country.

I mean, in bioscience, Canada is not the market that they're targeting.

I guarantee you that. It's too small a market.

We're targeting Europe. We're targeting North America, South America, and certainly Asia.

The more diverse perspectives we have around developing these products and bringing these products to market, the more successful these companies are going to be.

MAGGIE:

Talk to me about how businesses in biotech sector better prepare their workforce for the rapid advancements in technology and automation.

ROB:

A lot of times it's very interesting. As much as they embrace new science and new technologies, it's often limited to bioscience.

In other words, it's limited to their understanding of their little niche of the world.

One of the slow adoptions that have happened right now in bioscience, and everybody's talking about it, is artificial intelligence.

In fact, it's being adopted at a slower rate in biotechnology than most people expected, or than even in other countries.

Yeah. I think that goes to a couple of things that we're talking about before.

Number one is, again, the nature of the small and medium-sized enterprise. Right.

Scientists who have a lot of training within bioscience know a great deal about a very small corner of the world.

That's comfortable for them. They like it. They understand that they have to understand the wider area of business.

But right now, the world is trying to adopt…where do we get training to understand artificial intelligence?

And specifically to biotechnology, the realm of intellectual property where medical devices are concerned or pharmaceuticals or nutraceuticals, that is sort of the wild, wild west out there with artificial intelligence.

Nobody knows, even the law firms have not, do not know exactly where this is going to go.

That if you throw a molecule into an AI system or algorithm and something gets attached to it, who owns that new intellectual property? Is it the foundational creator of that molecule?

Is it the AI platform itself who had the wherewithal to attach the molecule?

Or is it the person that programmed the algorithm?

So in order to, like, this is all very, very new.

And it is fraught with, certainly in the bioscience company's minds, fraught with risk.

But the problem is, is that, sure, that's going to work itself out.

But you can't sit there. Imagine where we would be 25 years ago if companies would just say, well, we don't know how this whole world wide web thing is going to work out.

So we're just going to sit on the sidelines and wait, you know, seven or eight years. See how it works out. Yeah. Yeah. See what happens and then see what everybody does.

I mean, you're going to go bankrupt, right? I mean, you've lost an opportunity to adopt new technology that can enhance what you're doing. Not only that....

I think we're losing an opportunity or we're not capitalizing on an opportunity to increase our team's critical thinking skills on how to use, like figure it out.

How do you use AI to solve our problems or to solve the simple problems so that we can spend more time on the tougher problems?

And I think that's where there's a lot of fear around it. There's a lot of let's wait for the dust to settle and see where everybody's going.

And I think we're losing a massive opportunity, not only in technology, but also an opportunity to upscale our teams and to increase their critical thinking and resiliency.

MAGGIE:

So good. Rob, I could talk to you forever, but I'm being told that.

ROB:

As you can see, so could I.

MAGGIE:

Being told that we need to end this conversation. Rob, thank you.

ROB:

Thanks, Maggie. I appreciate it.

MAGGIE:

That was Rob Henderson. He is the president and CEO of BioTalent Canada.