

Market Hunt S02 Ep12 - Creating Innovation Standards - Sorin Cohn Transcript

[Intro music]

Thierry Harris: Canada is in a race against time. It needs to embrace a more sustainable economy and way of living. The great challenge of our age is finding out how to live in harmony with nature, and with each other despite our differences. To achieve this monumental task, our leaders need to adopt an innovative culture. On this episode of Market Hunt, we learn about the fundamentals of innovation. Stay tuned.

[end intro music]

[Begin theme song music]

Nick Quain: Entrepreneurship is hard, you need to have support there.

Andrew Casey: We fundamentally have to learn how to live our lives differently. We can't keep going the way we have.

Handol Kim: It's not like Google can come and move in and take the entire market. Not yet, right?

Thierry Harris: It's a real balancing act which requires a bit of insanity frankly. But I mean some people are into that stuff I guess.

Handol Kim: You know the size of the market, that's really all you've got.

Thierry Harris: We're coming up with some pretty interesting ideas here.

Andrew Casey: We've solved everything,

Thierry Harris: [chuckles] We've solved it all.

[End theme song music]

[begin promo song]

Narration: And now a message from our sponsor, [IE-KnowledgeHub](#). IE-KnowledgeHub is a website dedicated to promoting learning and exchanges on international entrepreneurship. Watch Video Case Studies, listen to podcasts and much more!

If you are an education professional looking for course content, an academic researcher seeking research material, or someone interested in business innovation check out [le-KnowledgeHub](#).

le-KnowledgeHub focuses on innovation ecosystems and firms who

commercialize their technologies in international markets.

Let's listen in to a [Video Case Study](#) featuring [B-Con Engineering](#).

Brian Creber: We are not an engineering company that is in the business of thinking and writing a report. We are a hardware company, we build things, it doesn't matter how complex the problem is or how difficult it would seem. We will attempt to solve the problem for the customer.

Narration: That's B-Con Engineering founder and President [Brian Creber](#). B-con manufactures and distributes optical systems. The company has been around since the late 80s and specializes in computer numerical controlled diamond turning machines. There are less than 1000 of these machines in the world and B-Con has 8 of them. The company's can do attitude starts with Creber's approach to solving problems.

Brain Creber: I'm usually looking for a client that has a problem, that has looked around and tried various solutions. I'm not usually looking for someone who if they just looked into the Edmund scientific catalogue could find the right optic. I'm looking for somebody that has a need that the traditional or the catalogue optics suppliers can't supply.

Narration: The hunt to solve unique optical problems led B-Con to service many different industries, from defense, industrial, automotive and also the Space Industry.

Brain Creber: From the first day I started B-Con I realized that you had to have solutions for different industries. Because different industries have different economic cycles. And through the history of B-Con, some years we do a lot of R&D for the automotive industry and then you go 5 years and then you don't do anything for the automotive industry. Some years you might be doing a lot of one offs for, for academia, and then it will be a couple of years before you do any more.

Narration: Find out more at the end of the show about the different industries B-Con services. You can also [checkout the B-con Engineering video case study by visiting ie hyphen knowledgehub.ca](#). And now, back to the show.

[music transition]

Thierry Harris: Innovation. According to [Dr. Sorin Cohn](#), it's the engine of evolution and sustainability.

Dr. Cohn leads the [International Organization for Standardization](#) world team developing the [ISO 56008](#) standard on innovation operation measurements and metrics. He is Founder & CEO of [Competitive Innovation Management & Entrepreneurship \(c-IM&E\)](#) – a company providing innovation management tools and consulting services. Dr. Cohn was the Chair of the Board of [Startup Canada](#) and several other companies. He has led the research on innovation metrics and management for the Center for Business Innovation at the [Conference Board of Canada](#).

Dr. Cohn was awarded the [Queen's Diamond Jubilee Medal](#) for services to Canada.

He possesses 40+ years of international business & technology experience having been involved in most facets of “innovation management”: from idea, research and lab prototype, to product development, creating new business units, and then to market success on a global stage.

Dr. Cohn believes companies must continuously innovate, or else they will decline and die. Our conversation covers a broad range of innovation issues. You'll learn about the International Organization for Standardization and how the [ISO 56000 Innovation standard](#) is being developed. You'll also learn what Dr. Cohn thinks Canada and Canadian companies should be doing to improve their innovation capabilities. But first we'll learn about the fundamentals of innovation, principles of innovation management and statistics on how companies are innovating. Are you ready to learn more? Let's go.

[music interlude]

Sorin Cohn: Innovation is about doing something new. Doing something new is fraught with uncertainty because you have not done it before. Because of that, there are potentially great returns, great achievements and of course there are with any uncertainty great risk.

Organizations be they companies or governments organizations or whatever, if they do not innovate, they become less competitive or less relevant and sooner or later they are going to die or be replaced.

[music interlude]

Thierry Harris: We often confuse invention with innovation. What are some of the other misconceptions that we might have, regarding innovation?

Sorin Cohn: One of the biggest misconceptions is that innovation is about the science and the research and development. And the reality is

that innovation is a transformation of opportunities and ideas into market results. Unfortunately many organizations confuse innovation with research and such.

When I did a study in Canada, out of the [Conference Board](#), about 35% of Canadian companies, small and large did not have a system of innovation management and their performance was quite significantly lower than the ones of companies that did have.

Another misconception is that innovation is having ideas. And yes, innovation may start with ideas and opportunities, but innovation is hard structured work to reap benefits to create that value.

And you create the value, not in the lab. You create the value by taking your output from this innovation process and deploying it into the market or into the society, because that's where the value is being created.

You cannot manage something unless you measure it. And unfortunately, Canadian companies do not measure properly their innovation activities.

And because of that, there is a lot of wastage.

[music interlude]

Thierry Harris: So innovation and invention are two different things. Innovation isn't just pure research or science. The end result of an innovation actualizes itself in a market environment as a new product or service. But before reaching the market, how does this innovation process happen in organizations?

Sorin Cohn: There are three major phases to the innovation process. The first phase is research, the most important research is the research of user needs, and regulations and competitive requirements and such.

Yes, science and technology research is also very important. And also very important, is organizational business research, understanding management, understanding, process, it, understanding cultures.

So with all that research, you create knowledge, and with that knowledge you can identify opportunities, you can create some concepts for potential new products, new solutions for the market or the society.

You should validate and implement those concepts, you implement them into innovation solutions and innovation solutions could be, better strategies, better business models, better policies, better products, or new products, better programs or new programs. Then of course, better or improved corporate processes.

But once you have those solutions, you did not get the value because you got only the potential for value. To reap the benefits, you have to deploy those solutions in the market or in the society. And that requires understanding the market specifics, understanding your customers, your stakeholders.

Delivering in volume and supporting your customers and your stakeholders. Having the right value and the right brand.

And only there, through deployment commercialization, then you reap economic and social benefits. And competition never ends. And change, never ends in the environment. And therefore innovation cannot end because we need to continuously adapt and be better than before.

[music interlude]

Thierry Harris: These innovation processes would not exist without people able to channel the innovative energy from research idea to product or service in the market. To foster this innovative energy, companies need to build an innovative culture.

Sorin Cohn: You define culture as the learned behavior patterns, which are characteristic of the members of the society, but are not a result of biological inheritance.

Culture is a product of shared mission and values energizing leadership, an exciting environment, the collective experience. And of course the competitive metrics.

Innovation culture implies that there is open communication, debate and sharing of knowledge and trust because without trust, you don't have really any good culture.

The culture of innovation is one in which innovation is being rewarded, the collaboration among the people is also rewarded because they are doing it for common results.

Innovation culture means that the organization is investing in continuous learning and training, and the organization is capable of embracing risk and accepting failure on the trail to success.

But it all starts from innovative leadership because it is the leaders who nourish and develop a culture and they drive the culture in the direction of their behavior, not about what they say, but what they do.

[music interlude]

Thierry Harris: An organization must harvest an innovative culture from all levels. For Dr. Cohn, that means both executives and frontline employees can contribute to creating value for customers and stakeholders.

Sorin Cohn: Consultants are being brought in to help the organization move forward. But it's actually the people within the organization, they know best what's required, only that they're not being heard very well. I have not seen any organization or a company that declined and died because the workers were not good. They declined and die because executives make the wrong decisions.

[music interlude]

Thierry Harris: And is innovation is it for cities? Is it for startups? Is it for SMEs? Is it for ...

Sorin Cohn: It's for everybody. And it's, it's valid for the communities and cities and towns, and it's valid for business companies. It's valid for government departments.

When you create a new company, a startup, you have to innovate to show that you provide value to your potential customers.

A growing company has to continue to innovate in order to extend its, its market presence. And to solidify that market presence.

And from coming back to Canada for a second in general, the benefits do not go to countries who launch more startups. They go to countries who know how to scale and sustain those startups.

[music transition]

Thierry Harris: For the latest on Canadian startup creation and their impact on the economy, check out the episode show links. You'll see that according to the [fundsquire website, 42% of Canadian startups fail](#) because there is no market need for their products or services.

I asked Dr. Cohn to describe some fundamental innovation strategies to ensure companies are addressing their market needs..

Sorin Cohn: There are basically three fundamental innovation strategies, very nicely describing the [2011 paper by Booz & Company](#). And they described the one as being technology driven, where companies are interested in technology, to exploit technology, to make their products better, faster, cheaper, whatever.

There is user needs driven strategy, where companies are looking at the new ideas for addressing new customer needs and desires.

And there is a, they call it market reading, I call it territory driven strategies, where companies are looking in territorial expansions from their home markets to some other markets. You can think about technology driven strategy as being thinking inside the box. How better can I make my box faster, cheaper, more elegant? User needs, innovation strategies, it's like thinking outside the box, what other box can I make to satisfy my customers or new customers? And territory driven is thinking about the box, where else can I take my box that I can get some returns on that stuff. And most companies have a mixture of these strategies and what Booz Allen did by studying the top one thousand global companies, they found that the user needs driven companies do in general better, largely because their culture was more aligned with the strategy and business goals.

Their conclusion was that aligning the culture with business goals and innovation strategy is more important than additional R and D. Because indeed even for a startup, it's more important to get that reference customer than to get some additional money.

[music interlude]

Sorin Cohn: I did a similar study in Canada, looking at all industries and indeed the Canadian companies followed the same split. About 70% where, user needs even primarily. 20% were technology driven primarily and about 10% were territorially driven, export driven primarily.

But unlike the study of the thousand global companies where the user needs driven innovation strategies, primary strategies were winning in terms of returns on the investments, in Canada, the better performance companies where the territory driven companies largely because the Canadian market, which geographically is large, but in terms of population is quite small. It's not sufficient to reap all the benefits from your investments in new technologies or new customer needs.

[music interlude]

You need to expand into bigger markets. So the American markets or the European, or the Asian markets. The problem that the Canadian companies face is that even, even exporting in the States, you may have been to San Francisco or Dallas or New York, but the selling in those areas is different than just visiting with them. So one needs to collaborate with local partners in order to do much better in terms of deployment in terms of commercialization of your products.

[music interlude]

Thierry Harris: Canada's proximity to the United States, it's universities and educated workforce should make it a prime location for innovation to occur. On top of this it possesses vast quantities of natural resources which can be exploited sustainably to provide a competitive advantage. But Canada has not placed enough emphasis on managing its innovation assets and is squandering a critical opportunity. In fact, countries with smaller populations such as [Singapore, Switzerland and Sweden regularly outperform Canada in innovation rankings.](#)

Sorin Cohn: Canada has much, much more natural resources than those countries that you mentioned. And there are even smaller ones that are very successful. The brain resources, the knowledge of innovation management and the knowledge and the spirit of commercialization, which we do not have as strong as they do. It's a cultural aspect and we'll have to do much better in the future.

[music interlude]

Thierry Harris: From discussions that I've had with entrepreneurial firms there is this feeling that we are being innovative. But there always seems to be some sort of complex with regards to how much more innovative companies are with our neighbors down South or what the Europeans are doing or what they're doing in Japan and South Korea. And to a certain extent, China as well.

Sorin Cohn: It's not that people in those companies have better ideas than we do. They manage those ideas better to reap the value added methods in the market. We have lots of great ideas, but you do not finalize them in the market.

[music interlude]

Thierry Harris: Dr. Cohn classifies companies in three categories: Built to sell; companies focusing on possessing a robust intellectual property portfolio and or a unique customer base. Built to endure; companies where you strive to attain acceptable revenues to pay yourself and employees for as long as you can manage it. And the third category are what Cohn calls Built to Lead companies. These companies strive to become market leaders in their segments, constantly innovating to stay ahead of their competitors.

Sorin Cohn: There's the theory that unless you are one of the top two, maybe top three competitors in the market, you don't have any chance of long-term survival. In order to be a leader you need to innovate on all dimensions of competitiveness in terms of your product portfolio, in terms of your market understanding and the quickness of responding to market changes in terms of your developments for new solutions. And of course, in terms of your financial strengths.

One of the best ways to get into leadership in your market segments is to, provide business model innovation especially if you have multiple business models that reinforce each other as Google has done as well as Amazon has done as Apple has done.

Apple has not become a great company because it invented new technology but because it provided not only the products, the Macintosh, the nano, the iPad, the iPhones, and such, but also because you've provided the content, the iTunes the access to music, to content and so on. And those are two business models that reinforce each other.

The sensing is Google that started by providing what's called a brokerage service with the research engine, but afterwards created the Android software that led to a whole slew of services, the applications that are taking advantage of the brokerage and the software intangibles that the company creates. And then they got into many, many other businesses, all for expanding their customer base and becoming leaders in their field.

Another way to become a leader in the field is to come up with disruptive innovation. In each case, you create new markets with new customers.

[music interlude]

Thierry Harris: I asked Dr. Cohn about the importance of innovation for startups as well as well established companies.

Sorin Cohn: Innovation is very, very important for the startup because they have to do it in a short time and create that unique IP portfolio on the customer base. It's very, very important for the large companies that wants to stay as leaders of their market segments. And it's quite important for the built to endure company, because unless they somehow innovate and adapt themselves, they're going to be taken over by their competitors and not endure for very long.

You better invest part of your revenues in order to prepare yourself for tomorrow. For large companies, that ratio usually is 70, 20, 10. 70% of your revenues go to the routine operations. 20% goes to extensions of what you do today. And 10% goes to the disruptive things for the future.

Thierry Harris: Companies can have an innovative culture, and processes to foster this culture. But they need an innovation management system to measure their success. Dr. Cohn gives us more details about these management systems.

[music interlude]

Sorin Cohn: An innovation management system is a set of interrelated and interacting elements aimed for the realization of value. Now, as an innovator, you think about innovation as a, you generate some ideas, you implement those ideas, and then you exploit those ideas in the market or, or whatever. But as an entrepreneur, as a CEO of a company organization, you have to think about your company in the context of its entire market.

Effective firm innovation management, the system that you need to put in place, should address how well you know yourself and your company, what works and what does not work?

How well you know your market and your competition? Those together determine the context of the organization, the, the market, if you want to call it in the business terms market, and otherwise you call it the context. Both internal and external context. You need to determine what are the right things to do you can't do all them all. So you have to be selective. You need to do them the right way. And then of course, you

need to learn to improve and you continue because, competition never ends. Innovation cannot end either.

[music interlude]

Sorin Cohn: The principles for innovation management, specifically innovation management systems are that you have to focus on realization of value. You have to have future focused leaders. You need to have a strategic direction. You should know what you want to do. You need to have the right culture to achieve it. Innovation is more a matter of culture than technology. Let me repeat it. Innovation is more a matter of culture than technology. You need to exploit your insights. You need to manage uncertainty, manage risks. You need to be adaptable and you need to have a systems approach.

So the benefits of having an innovation management system is that we have a much higher ability to manage uncertainty. Because innovation is fraught with uncertainty and risk. You increase value by the economic or social and your competitiveness or relevance. You can lower your costs and, and waste thanks to increased resource efficiency. You improve your sustainability and resilience.

Having a good innovation management system. You can get a higher customer and stakeholders satisfaction. You sustain the renewal of your portfolio of solutions. You'll get the, your people more engaged them to empower them to deliver better and better in the future. You have a better ability to attract partners and investments. And you get a higher reputation and valuation for the organization. And then as well, you can get better compliance with regulations and relevant requirements. All of those benefits are resulted from having a good innovation management system.

[music interlude]

Thierry Harris: Another critical aspect of innovation is how we measure it.

Sorin Cohn: At what level do you measure innovation? Do you measure it at the state, or country or province level, or do you measure the enterprise level?

At the state country, provincial level a lot has been driven by what statistics Canada was measuring. The focus has been largely on things that Statistics Canada could measure like inputs, education, machinery investments, and such.

Partnerships are largely technology oriented and the outputs are largely measured in the academic papers and patents. And the finally from government perspective, the GDP and the employment. And for whatever reasons economies are mesmerized by measurements of productivity, which is the ratio of outputs versus the inputs.

[music interlude]

And the enterprise level, very much measuring the results of past innovation activities and such. But the measuring the results is not sufficient because it's a measurement of the past.

You do not know how well you are going to do in the future. And besides that, about 40% of Canadian companies did not have any metric of innovation at the corporate level. And, less than 7% had a decent set of corporate innovation metrics. And those that did their performance was at least 50% better than the companies with no innovation metric.

[music interlude]

Most of the traditional enterprise measurements were on a return on innovation, investment, customer satisfaction and productivity. And actually at the enterprise level, productivity is a very bad measure of innovation because it tells you about the results, but it doesn't tell you what has happened in the process of innovation within the company. It doesn't tell you if the design of your product was crummy. If the people that bought the materials about the wrong materials, if the workers in the, and the assembly line was deficient. If the marketing was not very good, or if the sales people are spending their time drinking coffee, rather than selling the product, you do not know what happened. So you need to have measurements inside the process and just getting a productivity measurement, doesn't help you to measure progress.

[music interlude]

Thierry Harris: There is still some work to do on measuring & managing innovation. One of the reasons for this is that different companies and countries seem to measure innovation differently. If innovation is an essential component for the survival of companies, and we cannot agree on how to measure it, we're in big trouble. Fortunately, some people including Dr. Cohn are working this issue. He is head of a group of innovation experts volunteering their time to develop an International Standard on Innovation Management.

Standards are a point of reference which all stakeholders agree to. They are usually set by an authoritative body, government or certifying organization. Different countries have different standards, for example Canada uses the metric system whereas the United States uses the imperial system. Standards are essential to the effectiveness of pretty much everything in our modern era. In business there are management standards and technology standards.

Sorin Cohn: Technology standards are really critical for creating ways for companies to share platforms of knowledge in order to serve the global markets in a much better way.

We could not have the wireless, the cellular services unless companies and governments and organizations go together to create the

standards for wireless communication. Otherwise every manufacturer would have their own implementation. And the phone that you got from Samsung would not work in Canada, or would not work with the phone that somebody else gets from Apple.

So technology standards are very important, but so are management standards. Why? Because management standards embody the best practices for managing things in the world.

[music interlude]

Thierry Harris: The [International Organization for Standardization](#) is the international body developing these standards. Think of it like a conductor, with the orchestra being composed of independent experts nominated by its members. Based in Geneva, ISO encompasses 165 national standard organizations. Members get to vote on whether to adopt a standard or send it back for further review. The most famous ISO standard is the ISO 9000 family on quality management. Over a million companies and organizations use this standard to demonstrate the quality of their products and services.

The development of standards are done through a multi-stakeholder process by [Technical Committees](#). They are composed of more than just industry experts, but also consumer associations, academia, NGO and government representatives. The members of the Committee negotiate all aspects of the standard including scope, key definitions and content. International standards usually take about three years from proposal to adoption. These standards are constantly being tweaked to take into consideration new technological and environmental realities.

One of the key principles [to developing standards](#) are that they must respond to a need in the market. These can be for anything from standardizing the shape of [screw threads](#) to creating international standards for [the circular economy](#). Usually industry groups or consumer organizations are the ones proposing the standards. Consensus is another core principle where comments from all stakeholders are considered when approving a new standard.

Dr. Cohn is part of [Technical Committee 279](#) focusing on developing international standards for innovation management. For more details on their committee projects checkout our [episode show links](#).

[music interlude]

Sorin Cohn: These management standards are based on empirically proven principles. They are associated with methods and tools. And they lead to replicable results that's why they are so important.

So the first standards is [ISO 56,002](#), and they define the operations as consisting largely of five processes. There is an identification of opportunities, process. There is a process of defining concepts. There is a process of validating the concepts for innovation, and then there is a process of implementing, developing that innovation solutions. And

finally, there is a process for deployment of those solutions. So this standard was published in 2019. But various drafts are being made available, such that people could start developing the methods and tool standards. And the first one was the [ISO 56,003](#) on innovation partnership management.

And it looks at the how companies, organizations, not only companies, organizations, because that's very important to mention. The [ISO 56,000](#) standards addressed both business innovation, as well as social and environmental innovation. Most organizations that are business oriented as well, organizations that are social oriented. So we do not use the word market or do not use the word company or firm use the word organization as the unit of management.

So innovation partnership management, it's about entering into partnerships. About selecting the partnerships, about alignment of the partnership and about interaction between partners and such. And it has a number of appendices with how to do that better.

Then came the innovation [IP management, intellectual property management standard](#) which is the one that got a lot of interest from China.

And China was one of the leaders of developing that standard, which of course got a lot of interest from the United States and the United States being one of the major participants in the whole standard development process and this IP management, besides having a framework for how IP should be managed, looks at what is the IP strategy. How to manage IP in innovation processes, and then provides appendices on invention record and disclosure, on IP generation acquisition and maintenance, on IP search, on IP rights evaluation, on IP risk management and on IP exploitation.

Because it's not enough to invent something, you need to protect it, and the protection could be formally or informally, and you need to maintain that protection.

[music interlude]

The next standard or quasi standard was done by working group four on [innovation management assessment](#). I say quasi standard because it did not end up providing a standard, but providing a technical report, which is, an analysis of what is being done worldwide in terms of innovation management assessment. I was part of that group and one of the contributors to that group.

In parallel there were developments started on a strategic intelligence management.

[music interlude]

Thierry Harris: For those of you counting, that's [ISO 56,006](#).

[music interlude]

Sorin Cohn: Looking at the fundamentals of strategic intelligence, the strategic intelligence cycle and the intelligence dissemination, which is very critical. It's not enough to get intelligence. What are going to do with that and how you are disseminating within your organization to its partners.

About two years ago, U.K. proposed [a standard on idea management tools and methods, standards](#), and idea management, which addresses the first three innovation processes, the opportunity identification, the concept creation and the validation of concepts.

And we expect the standard to be made available in about two years. It will address idea management approaches. How to organize for managing ideas. And how to look at the opportunities and how to validate what are the processes involved. And what kind of measurements in order to prioritize the ideas of greatest value and importance.

And about a year and a half ago, I proposed, a new standard on innovation operation measurements. [ISO 56,008](#), which is going to look at the fundamentals of innovation measurements. And then it will look at the measurements in setting up innovation initiatives that would be clause five. Clause six is going to be on measurements of innovation processes, clause seven there will be measurements of innovation portfolios. Clause eight would be measure assessment and improvement of measurements.

And this notice identifies three sets of applications for innovation measurements. Measurements about how you set up your innovation activities. About your leadership and strategy, making sure that your innovation activities are aligned with your business strategy and objectives. Making sure that you have assigned the right roles and responsibilities, making sure that you have the right support required for doing the measurements. Making sure that you plan them properly and design the measurements accordingly.

The second set of obligations is doing measurements within your innovation initiatives because each innovation project requires to have its own set of measurements in order to ensure the progress of your innovation activities. As well as the third set of application is a measurement of the innovation portfolio, because like people, companies invest in portfolios trying to balance their risks and opportunities, and you measure the portfolio in a different way that you measure each project individually. So you need to have different kinds of metrics in order to measure that portfolio.

And of course, things change and you have to assess the goodness of your measurements. And from time to time, you have to adjust those measurements, change them and provide more suitable measurements for your organization.

[music interlude]

Sorin Cohn: In the same time, there was the standard ISO 56,000 vocabulary, which was delivered also in 2019. And last December the technical committee voted for the creation of a requirements compliance standard. It's going to be [ISO 56,001](#) on the basis of which certification can be provided to organizations to meet that standard requirements.

But let me tell you that some countries have already started certification based on the guidance on ISO 56,002, because they can see that to be so important for maintaining their global position, their competitiveness worldwide, that they decided to start certification processes even before the requirements standards is going to be finalized and published.

[music interlude]

Thierry Harris: Wow well thank you for that overview. Interesting is not even beginning to say enough emphasis on how important this is going to be for the very survival of companies in a global competitive market. How do you see this 56,000 being implemented? You said that some countries are already doing it. Some companies are already doing it. How do you see this being implemented in tangible form within the Canadian context?

Sorin Cohn: A company can purchase the, the standard, the [ISO 9001](#) and standard and read it and try to understand it, and then put in place a process. The QMS quality management system, by which they can achieve good quality and eventual certification, but to get their certification, there are what's called registrars, registration companies that do audits, formal audits to determine if a company needs or does not meet the requirements of the standard.

You get a QMS audit, quality management audit that tells you where you are doing fine. That tells you where you're not doing so fine. It tells you where you are doing badly. And if you don't do badly, you get a certification. Plus some advice on where you can improve. And then you can get another audit internally or externally from time to time.

And the same thing is going to happen with ISO 56,000 and based on ISO 56,001. You can get the consultants, or you can read yourself the standard and try to understand what you are supposed to implement and how to manage the innovation in your company properly.

And eventually there'll be auditors' from outside that are going to make sure that indeed you manage that process properly and they'll get a certification.

[music interlude]

Thierry Harris: Let's talk about the implementation environment in Canada right now, in terms of implementing successful innovation management system strategies. Partnerships do occur in Canada, between universities, SMEs, government, you have the superclusters.

And then you have multinational corporations that aid towards the acceleration of the industrialization. If you're talking about a semiconductor chip, or if you're talking about access to markets, you know, the drug development. And we've seen multiple examples of Canadian companies collaborating in an international supply chain context to deliver some of these some of these. We can take the vaccine, [the BioNtech Pfizer vaccine as a great example](#). There are many more.

So what is needed in your opinion to improve on the fact that we're losing Canadian innovative firms to foreign owned firms, and defacto losing our innovative inputs. And the outputs are being taken by foreign firms who are buying these intellectual property, or they're buying firms up to be able to scale them in international markets. First of all, do you think that this is the case and why do you think that it's important to address that issue?

Sorin Cohn: It is important but it's not a hundred percent the case because there are a lot of Canadian companies that are globally in nature and that are acquiring many other companies themselves. So it's a mutual process.

The issue is, do we get some more of the small companies being gobbled by foreign firms? Or vice-a-versa?

And we had this issue about investment in startup companies versus investments in large companies. And, the thinking was that Canadian companies, there is not enough investment in Canada. And, we realized that actually there is more Canadian money going to the States, then there is money coming from other parts of the world to Canada. So, came to the conclusion that a lack of funding is not the principal issue in Canada.

The principal issue is innovation management and the leadership that needs to nourish and develop a culture of innovation and needs to manage innovation, competitively, comprehensively, and methodically with the right metrics to ensure value.

[music interlude]

You mentioned partnerships, universities, SMEs, government grants, and such, but let's understand that innovation happens in companies. And, sometimes yes, they do collaborate with other entities. They get grants from the government, they do collaborate with other companies. But it's wrong to assume that innovation happens only because of partnerships, especially with the government.

What we think we need this to train people about innovation management. People is senior managers in government, as well as senior management in industry. We need to nurture a culture of entrepreneurship from young age to college and university levels. We need to make investments conditional on proven innovation management capabilities.

I believe we need to have some grand national challenges with universal appeal, such that our companies addressing those national challenges can then be propelled on a global stage, thanks to the solutions that they've proven first in Canada. We need smart long-term investments in innovation proven sustainable companies.

And we need much better patent management. Because if you have the patents and we learn how to exploit them, then we can do much better on a global scale.

And unfortunately, the situation in Canada from an intellectual property perspective is quite dire. About 59% of SMEs do not have patents.

And the Canadian patent creation situation has been going down in the past few years, comparative to other countries.

I suppose that most of your audience knows that by now, [China has more IPs, patents per year than does United States](#). And [China makes every year more engineers and scientists than there are in total in the United States](#) and the quality is getting better and better, and we need to do the same.

[music interlude]

Thierry Harris: Is there even a single organization that's able to tackle this? Is there, anything in the ecosystem? Believing that SMEs need a bridge to talk to multinational corporations. Where do we start with this in terms of actually setting up a plan to make this happen for Canada here, let's talk in terms of active verbs that we can use to start this process. If it's not being started already?

Sorin Cohn: There have been so many attempts at changing the way we do. Personally I think that we need an industrial strategy, we need an economic strategy. We don't manage to have one, and that's what I call about raising the investment horizon.

Challenge Canada to grand national projects that are appropriate for our geography, for our history, for our economic capacities, let's take, for example, climate change. We can do much better in terms of energy, in terms of water management. We have great agriculture over here, great immigration and very energetic people.

It's all about creating that entrepreneurial culture in the whole of Canada and supporting it and giving it a direction. You need that vision. For any company to be somebody, something they need a vision and the mission and the strategy to go and implement it.

Canada needs that vision as well. I'm not sure that we have made such a vision very available and understood and embraced by the population.

[music interlude]

Sorin Cohn: Once you do that, we can do the innovation management training and put the conditions on certification or making investments only in organizations, companies that can prove that they have the good innovation management, not waste investment resources.

One of the studies I did was looking at the investment in innovation, not by R&D dollars because R&D dollars represent only a small part of innovation investments. But by the time spent by an organization on innovation.

What I realized that while 60% of Canadian organizations said they invest a lot in innovation, more than 7% of the collective time, they did not do better than companies that did not invest so much time in innovation.

And when I looked at the reasons, it was very clear that the companies that manage those innovation investments do excellent. The companies that do not manage those great investments in innovation do actually worse than the companies that did not invest. Why? Because they are wasting those investments into things that are not leading to the expected results that they were invested for because they didn't manage them.

Thierry Harris: Hmmm. Just trying to tackle this, this problem, which seems astronomical in terms of its size and breaking it down to the company per company, is it the most efficient way to go one company after the next? Or should the government, when it is giving them their grants should require companies to do things like the ISO certifications in order to certify the fact that they are innovative companies that are essentially, that means they're focusing on the right problems to solve, and they're doing it in a way that's efficient enough to designate that they do have some sort of guidance or certification that validates that they're, that they're doing so.

Sorin Cohn: Yes, absolutely. Yes! If they don't want to waste the investments, that's what they should be doing. And investing in companies that really know how to innovate in and do something out of those investments. Otherwise there's going to be more waste and for us to spend a lot of money on pure science and science research that that's necessary, but it's not sufficient to lead the country forward because, output of science research is, is, papers and maybe patents here and there. But those are being made public to the entire world. The issue is what are we doing for our Canadian industry, for our Canadian companies, for our Canadian agriculture and such. You need to focus not only on the research, but also on the commercialization globally.

[music interlude]

Thierry Harris: Maybe it's time to take the spotlight off of Canada and take a look at other regulatory districts. How can we inspire ourselves from what other countries have done in terms of really commercializing our inventive products and, and turning them into commercial products

not only just in terms of making money, but of solving the big problems that need to be solved.

Sorin Cohn: South Korea was a very, very poor country, at the end of the second world war and they liberated from Japan, and then the whole Korean war, it was a poor country. And look where it is right now. They are at top of the scanning methods of innovation and global participation.

Because they, they gave themselves some significant industrial challenges, focused, not on everything, but on what they saw that they could do best. And they started by commercializing initial products that may not have been the best in the world, but they provided the right customer support and the right prices to begin with. And then they evolved from there.

And so did Japan at the end of the second world war. With all the electronics and such.

Bell labs invented the transistor, [but it was Sony](#) who took advantage of the transistor and came with all the electronics afterwards.

[music transition]

We have to have a civil service that enables people to learn about each other, learn how to partner, learn, how to deliver on whatever they need to do. So we don't need more studies in innovation management and such. We need the, we need to apply what we already have learned and what has been captured into the standard and thousands of papers and already.

So for Canada, let's enhance our commercialization capabilities of Canadian companies. Let's train for more effective partnerships into global markets. Let's learn how to manage a cross cultural chasm of private public partnerships. Canada has started the number of public private partnerships, and they're are going to be more evident in the future, not only in Canada, but in the States, in Japan, everywhere else. Do we know how to manage those because there is a cultural chasm between the private and the public.

And those are very interesting aspects that we should do much better. Let's look at how other jurisdictions have managed to create self-sustaining industrial classes. We haven't done that yet. We had that great telecommunication cluster in Ottawa, thanks to the communication research labs. And [NRC](#) and [Nortel](#) on the other side, and [Mitel](#) happened and [Newbridge](#) happened and then lots of other small companies happened. And unfortunately it went away.

So we need to teach entrepreneurs the language of investors so that our entrepreneurs can really get the right funding from the smart investors who can really help them, not only with money now, but also with the right partnerships for them to go commercially globally. And we have to teach the institutional investors the language of entrepreneurs,

such that they understand what entrepreneurs would like to do and can support them in the proper way. That's what we need to do.

[music interlude]

Thierry Harris: I'm hearing you, hopefully our audience will hear you and hopefully some, some solutions will be proposed, some people will be inspired, sort of identifying where we were at. And we're certainly all about that,, with the knowledge Hub and with Mark and Hunter, when we're studying the ecosystem and the innovation ecosystems there in terms of appreciating what we have. But again, it seems like there's, if there's anything missing, it's just something that states here are the big problems that should be tackled and diagnose what Canada has in terms of capacity to address these problems.

And then here are some opportunities for companies to meet these challenges because these challenges are essentially markets that are in waiting.

[begin end music]

If you can have a student that's studying either innovation in the company or in a government organization or in a cluster itself, what kind of questions do you think that people should be asking themselves when they're studying innovation at the very heart of it so that they can pursue that in a way that's going to be applicable for the future economy?

Sorin Cohn: They should start, by looking at the vision that has to be at the foundation of any innovation activities. And then they have to start looking at how does the company determine its context? Determine the changes that are expected, such that to, to adapt itself to those changes before they come and clobber the, the company or the organization.

So there is a lot of work to be done there. There is a lot of work to be done in how to measure, manage by metrics, the process of innovation, such that, you fail as soon as possible. And you learn from the failure and you move forward from that you build on the past failures, but only if you learn. So the process of learning, deciding on things and measuring that.

And moving forward, and very, very important for us is to study the commercialization aspects. How do you deploy innovations? How do you prepare yourself? What time do you start the deployment and preparation for the deployment versus when you start the creation of the product or the technology or whatever you are creating?

Because the problem is that if you do that serially, you are going to die in that death valley. Where most companies die because they put all the

investment in making the products without realizing that it takes more investments, especially in the high-tech to sell that product.

Thierry Harris: Yeah.

Sorin Cohn: And unless you think about that from the beginning and put in place the right processes you are going to fail, and I don't like to see companies failing.

I'm not going to apologize for the passion because that's how I feel about if I am totally dedicated to do something better for the country. That was so great for me. I love Canada. I love Canadians.

Thierry Harris: Sorin's passion for innovation jumped out at me from our very first conversation together. And his idea of a grand Canadian program to lay out the massive challenges of our day is a great one. Who will answer his call?

Unless Canadians embrace and reward an innovative culture, the opportunity to improve our economy and society will pass us by. And make no mistake this culture doesn't just apply to business. All aspects of our society can benefit from adapting to new realities in our environment. Market acceptance is a harsh truth but it remains a tangible measurable reality check. It takes courage to bring ideas to the market. Some will fail, but others will be adopted. And failure isn't a bad thing. It's just another opportunity to innovate our products and services to find a better market fit.

Innovation metrics promise to provide standards which we can follow to measure our innovative journey. Let's hope these will become widely adopted by all organizations. But as we've learned, for innovation to have a real impact, it must go beyond the market and reach all levels of society. That means bettering how we live not just for profit schemes, but for sustainability to hand over the planet in better shape than when we arrived. The next generation of leaders are in a race against time, and we've got no room for error.

[End outro music]

[Begin promo music]

Narration: And now a final word from our sponsor, the IE-KnowledgeHub. IE-Knowledge Hub is a website dedicated to promoting learning and exchanges on international entrepreneurship.

If you are an education professional looking for course content, an academic researcher seeking research material, or someone interested in business innovation check out IE-Knowledge Hub.

Let's pickup where we left off for B-Con Engineering, an optics manufacturer based in Ottawa, Canada.

Brian Creber: *The variety of industries that we work with, we sort of look at sort of the top as the space industry. We've built optics that went to the space station, we built optics that went on the space shuttles. but our first planetary mission was actually the phoenix lander.*

Narration: *That's Brian Creber, President of B-con engineering. Creber explains the collaborations B-Con made to be able to produce an optical component that became part of the Phoenix Mars Lander mission.*

Brian Creber: *Our partner in the Phoenix project was MDA. MDA was coordinating putting the canadian part of the instrument together, the actual mission was under nasa. we had to design a telescope and our weight budget for our telescope was a hundred and thirty two grams. so that's what half the weight of a pop can that kind of thing.*

Narration: *In addition to working on space programs, B-Con also works collaboratively with universities to further their R&D programs, as well as recruit future potential employees.*

Brian Creber: *A few years ago b-con started to setup relationships with some of the local colleges and universities. The initial reason for doing that was actually to gain access to potential employees, because if the students are working on a project you get to evaluate how they are making out and you know, would they have the potential skills to be a good employee? And what I find most interesting and useful is just to go down and listen to them tell you about their project. It's always a good feeling that you get when you listen to some of these students telling you what they've learned.*

Narration: *You've been listening to segments of the B-con Engineering video case study. Watch [their full case available for free at IE hyphen knowledge hub dot ca](http://theirfullcaseavailableforfreeatIEhyphenknowledgehubdotca).*

[End promo music]

[Begin credits music]

Thierry Harris: Market Hunt is produced by [Cartouche Media](#) in collaboration with [Seratone Studios](#) in Montreal and [Pop Up Podcasting](#) in Ottawa. Market Hunt is part of the IE Knowledge Hub network. Funding for this program comes from the [Social Sciences and Humanities Resource Council of Canada](#). Executive producers [Hamid Etemad](#), McGill University, Desautels Faculty of Management and [Hamed Motaghi](#), Université du Québec en Outaouais. Associate producer Jose Orlando Montes, Université du Québec à Montréal.

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[End Credits Music]