

Paul: Regardless of industry, the concept of innovation as an organized corporate endeavor is ever present in companies big and small. And while there's no shortage of great ideas, why does it sometimes seem that relatively few are well deployed? How can organizations [00:00:30] experience a better return on investment and execute a clear path to market for their emerging ideas? The answer lies in developing strategic innovation plans.

Hello, I'm your host Paul Tiss and on this episode of If Win, we discussed the topic of strategic innovation and what differentiates it from research and development with Dr. Gina O'Connor, Professor of Innovation Management and Fisher family, Chaired Professor at Babson College. And Heather Wishart-Smith, senior [00:01:00] vice president Technology and Innovation at Jacobs.

Well, Gina and Heather, thank you so much for joining me today. I'm really looking forward to talking with both of you about strategic innovation. We've subtitled this going beyond research and development, and I think it's going to be a fascinating conversation. I think sometimes people conflate R&D with innovation and knowing kind of the writings that you both have produced, what you've [00:01:30] talked about in innovation before. There's a lot more to innovation than just pure R&D so, kind of jump right into it here. Gina, let me start with you. How would you characterize what strategic innovation is and how is it different from research and development?

Gina: Yeah, thank you, Paul. So I wanted to just start off with the research and development part. There's so much great scientific research that's going [00:02:00] on, where we're sort of discovering new principles, laws of nature, if you will. And I think about science research is kind of the science of discovering things in nature or in our physical world. And engineering is more the development where we're inventing, which is the application of science and technology to really solving a problem.

So R&D is kind of all of that part, where how are we [00:02:30] taking what we know from the worlds of science and applying it in useful ways to problems. But if you stop there, things don't get to the market. There's so much work to be done to formulate an opportunity space and to begin to understand what a value proposition might be. If it really is something that's big, some sort of a moonshot, if you will, you're going to need partners to develop complimentary technologies. You have to figure [00:03:00] out where you're going to sit in the value chain and how you create that sort of a business model. All the work on manufacturing, process engineering, your operating model, even the form factor of the product, if it's a product or offering and then the whole go to market strategy, all the way through to launch.

So all of that work that's more around the commercialization processes has to be done. And that's typical in any new permanent scenario. Now, so the [00:03:30] distinction between a new product development and a strategic innovation is that for most companies we know our current... Our market. We know our customers and we're developing new products one after the other to stay ahead of the competition and keep our customers delighted beyond satisfied.

Paul: Mm-hmm (affirmative).

Gina: The strategic innovation part starts to come when you want to think about renewing your organization. How do you rejuvenate your organization to go beyond your current businesses [00:04:00] of today and to create what we'll call the new streams to compliment your current mainstream businesses? And the reason we call it strategic... We used to call it breakthrough innovation, horizon three, there's all kinds of lingo for this.

Paul: Mm-hmm (affirmative).

Gina: But the strategic... The reason that I really like the strategic innovation idea is because there's uncertainty at many points in this process and on many dimensions. There's technology uncertainty and market [00:04:30] uncertainty, but also a lot of organizational and strategy uncertainty. So we have to make strategic choices as we're creating these new streams of growth for ourselves. So they become more strategic innovations and we determine that we're going to start to invest in creating this new stream for ourselves, and everything's not going to be rosy, because it is risky and uncertain. So that's why we go with the term strategic innovation.

Paul: So let me ask you this and I think that's an excellent point about how strategic [00:05:00] innovation is much more... There's much more to it than just experimentation for experimentation sake and that you have to have that path to market. Do you think larger organizations tend to bock at taking concrete steps to implement strategic innovation programs? And if so, why do you think that is?

Gina: Well, I think there's times in each of their life cycles where they bock. And what we see as we study... Examine how companies... Mature [00:05:30] companies go at this is kind of they're all in.

Paul: Mm-hmm (affirmative).

Gina: It's the program [foreign language 00:05:35] and then they get bitten. And so then they're all out of it. And I think the reason that that occurs is because we just haven't learned enough about how to do the innovation part of strategic innovation. You started off asking me about R&D, and we've gotten... We're very much trimming our R&D budgets, and we're going out in an open innovation framework, [00:06:00] a lot of partnerships with universities, there's all kinds of ways of getting at the science and doing the engineering development, a lot of that part happens in house.

But the parts where we have to start to craft these new stream business models, it really requires a different kind of a management system. Your metrics have to be different. The processes you use have to be different. Even we find the kinds of talent that you're using has to be different. Your governance mechanisms, you have to [00:06:30] come at it sort of at the... At a portfolio approach, because there's a lot of failure involved in this.

Paul: Mm-hmm (affirmative).

Gina: And companies haven't learned yet to build that kind of a management support system for this to have the kind of steady state staying power to continuously create these kinds of things. So I think we're getting much closer to it. And we see so much more activity in this space. But I still see this program [foreign language 00:06:58] kind of a thing as opposed [00:07:00] to really beginning to think of this as a permanent sort of steady state level of investment in building this as a capability for your company.

Paul: That's an excellent point. Now, Heather, Gina touched on that idea that companies go all in, they get excited, then they get bit, which may be that they didn't see an immediate return on investment or something like that. And so then they start to back out and that seems to be a somewhat [00:07:30] common phenomenon that we hear from different quarters.

So let me ask you now, you're in charge with building the innovation culture at Jacobs, from your perspective, how should organizations pace the funding of their innovation programs, because that's going to be a key of course is the company is really sincere, will put some money behind it and kind of help to engender what Gina is saying, that stay in power. So how should they [00:08:00] pace the funding?

Heather: Sure, thanks Paul. So, I think the answer that I would provide, that I'm providing today at the hopefully near the end of the pandemic is probably very... Not very, but somewhat different from what it would've been even 14, 15 months ago. And I love the quote from Graham Wood where he said, "Change has never happened as fast before and it will never be this slow again."

I think the pandemic really accelerated the pace even more than it was before. He actually wrote that 11 years before the pandemic started. So [00:08:30] I think organizations need to be impatient in order to be able to get out ahead and then avoid being disrupted. But I think... When I say impatient I think they need to be impatient about the right things.

Paul: Mm-hmm (affirmative).

Heather: So what I mean by impatient is, being impatient about getting started, being impatient about getting rid of bureaucracy and red tape. Bureaucracy and red tape can slow things down and in some ways can almost be a sort of way of avoiding doing the hard things when it comes to innovation, but also impatient about killing projects that aren't going to be your [00:09:00] objectives, those sorts of things. But not impatient about seeing immediate, faster and financial results and growth.

So, with that, I think one effective strategy is to approach the buildup of an innovation program, similar to how you might fund an innovation project with lean startup methodology. And that's where, of course where you build, you measure, you learn and then start by understanding and reframing the problem. What are you even trying to solve with this innovation program? You're trying to stand up. Create your [00:09:30]

hypothesis of a solution by building an MVP, a minimum viable product and then test that MVP.

Paul: Mm-hmm (affirmative).

Heather: See if it's going where you want it to go. Create the innovation program with the expectation of it evolving as you go, not that it's going to be... That you're going to start... That you're going to finish the way you started. And then finally, once you do all that, then look to scale. I mean, because I think it's certainly possible to jump in... All in with a huge innovation program to start, but I don't think that's what I would recommend. And I think it's valuable to practice the innovation [00:10:00] methodology that we preach.

So being patient about getting started, being patient about testing your MVP of an innovation program, but don't be so impatient that you dump a whole bunch of money into a program before you've tested it, before you've seen that it's... Confirmed that it's what you need.

Paul: Yeah, and I could see that because if organizations get really excited, "All right now, we're going to be innovative." And they go all in, like Gina had said earlier and then they're not getting the results, the immediate results that they're thinking, [00:10:30] because it is kind of... It is a long game. It's not a short game.

Heather: Right.

Paul: That then they get frustrated and then executives kind of pull that sponsorship and then suddenly, it's like they've killed it before it's even had a chance to flourish. So how, Heather, should they temper their expectations of results?

Heather: So this is where I think organizations need to flip from being impatient, what I was talking about earlier, to being very, very patient. Because too often there's this expectation of immediate [00:11:00] results, immediate gratification. And realistically some innovations may take years to deliver results. So, I think it's a matter of shifting what we mean by results in the late stages. Then it's often the end game financial results, but in the early and middle stages, I think we should be focusing progress, on methodology, on culture change.

So it's a matter really of changing how you define results, depending on what stage of the process you're in professor Amar Bhide, in [00:11:30] Origin and Evolution of New Businesses. I love this, he said, "When winning strategy is not yet clear in the initial stages of a new business, good money from investor needs to be patient for growth, but impatient for profit." I just... I love that, because I think it really shows how critical it is, we very quickly need to test and discover whether an innovation has promised in order to meet our long term objectives.

Paul: Mm-hmm (affirmative).

Heather: We need to be impatient for profit impatient to make sure that it's going to work, but we really need to make sure that we recognize how critical it is to [00:12:00] get the model right before we scale. And that's that being patient for growth.

Paul: That's a good point. Now, Gina there's no shortage of great ideas and but it seems that relatively few of them are well executed. Why is there a breakdown between the discovery phase and the incubation and acceleration phase? And how can organizations shift so that they realize a greater ROI from their great ideas slash R&D departments?

Gina: [00:12:30] Well, I think if we start to think about what Heather is talking about in terms of patients.

Paul: Mm-hmm (affirmative).

Gina: What we find actually is in our lexicon of discovery, it's not just about the R&D either. I mean, that is where we're actually starting to articulate what opportunities could be. And instead of thinking about one opportunity, what we talk about is a domain of an opportunity landscape. Where you come [00:13:00] up with many use cases, many applications of a technology or a space.

Paul: Mm-hmm (affirmative).

Gina: And you start to go after each and every one of those so that over time, what starts to happen is it becomes pretty clear what the possibility is of this as a whole new business platform for us. And so coming out of discovery, what you want is a richness of an opportunity landscape. So we find that you kind of come up with one idea and you jet [00:13:30] set it through the likely hood of it working is probably pretty low. If it is in these more out there fields not your typical new product development, where you know you already have lower uncertainty.

Paul: Mm-hmm (affirmative).

Gina: So, but once that occurs, what we really find is that when Heather mentions about patients, the incubation aspect of things, of vetting what these opportunity are and beginning to think about what business models there are, [00:14:00] what the value propositions are and to whom, for each of these things, we really... In organizations today tend to short circuit that.

They frequently will go after what are the markets that want this and the value propositions. But what we find fails to happen at a project level is continuing to vet this internally within the organization. Because a lot of times where the market will [00:14:30] lead you as you're beginning to investigate and pivot with the business model canvas and the lean startup methods, those things may... The market may tell you the way that they want this business model to be valuable to them. Is very different and foreign to what the organization is used to providing.

And so you find this split between what you thought was going to be the proper organizational home, the proper business unit, for example, because the business model is so dramatically different in terms of what you're looking at [00:15:00] in the market. So all of the organizational uncertainties tend to get in the way and that... The projects that we've observed, that's what submerges most of these opportunities, is that they don't necessarily... The more you're learning in the market, where the real opportunity, the real money is, sometimes it becomes less and less aligned with your current organizational structure and current setup.

And so it's those kinds of discussions that need to kind of be ongoing [00:15:30] and continue you to happen. That's why I again go back to strategy. How do we align with our vision of our future? Not necessarily with our current organization as it is today.

Paul: Yeah, I mean, and it seems like it's... A lot of it is culture. And I mean, you hear the culture, how important it is. And it eats, culture eats strategy for breakfast or whatever the cliché is, but it's like... It seems like culture does play [00:16:00] a big part. That you can't take an organization that is outfitted a certain way or oriented a certain way and just because there's innovations in the marketplace you want to achieve that you're just suddenly going to flip the switch overnight and that culture's going to be... Going to change. You have to have some realism about what your organization is and work toward that. And that takes patience.

Gina: Yeah. And also, I think it just takes... Like what Heather was saying, [00:16:30] how do we kind of roll this out using the lean startup method? The first question is what's our objective. And so there are new stream creation initiatives that... Where the mandate for that is that it's supposed to align with the current business unit and current customers, but just maybe be further future. And if we're clear on that, then that's great.

But there are also elements where we kind of [00:17:00] say, we want to go beyond our current structure where we are today and kind of open that one up, and unconstrain ourselves from that. And then we cannot expect a culture to change. You need to maintain the culture that you've got in your mainstream, because that's what's doing today's business. And I mean, you want to keep that healthy.

Paul: Mm-hmm (affirmative).

Gina: So that's why we kind of talk about this mode where you have a group of people who are working on this new stream [00:17:30] thing that may or may not be aligned with your current business, but their job is to really kind of create the future for the organization. And within that, that group, that team and who they report to, that culture has got to be dramatically different from what is happening in today's business. But I am not an advocate of trying to change the whole company's culture to create these strategic innovations. The culture may be very, very valuable for getting [00:18:00] today's business done and we don't want to disrupt that today, so.

Paul: Interesting. Now, Heather, you had mentioned earlier, you had quoted Graham Wood and you talked about the disruptions and then like how COVID, really kind of accelerated that. So here we are, we're a year into life with COVID. What has been learned across the corporate innovation landscape in this context from your point of view? What's changed for the better or for the worse? What opportunities [00:18:30] good and bad have been uncovered during this time?

Heather: Well, of course, I think it depends on which industry, which organization, which market you're in from the early days on.

Paul: Mm-hmm (affirmative).

Heather: Depending on where you were, I think for a lot of people, their early days, it felt like an apocalypse. And especially in the innovation side of things, depending on where you were, what market, what organization, what industry it may have been treated innovation, it may have been treated as a nice to have, a luxury that your organization may have felt [00:19:00] that it could no longer afford. But, I... That's one thing that I'm actually really proud of Jacobs for is that in the early days of COVID, we stood up a COVID 19 health system, critical response team. And the whole intent of this was to develop this global approach to our response. We were already right in number one in healthcare by Engineering News-Record.

But the pandemic really helped us to understand that we weren't really approaching healthcare as a... We didn't really have a global approach. And what I'm proud [00:19:30] of is the fact that I was asked to lead it. So we chose to lead with innovation during a time of crisis. And I think that's something that's really exciting, but that's not always the case. I think again, sometimes innovation is treated like an unaffordable luxury, which is unfortunate. But I think, some of the things that I think are better overall for, not just speaking for Jacobs, but for a lot of different organizations is our stronger reliance on global teams.

So with so much more increased use of video [00:20:00] conferencing and doing things remotely, it means that it's become second nature to turn to a global team, instead of just looking to see who's available in your region. It really no longer matters where the person is located. Sure, there are some challenges at times with time zones and whatnot, but I think it's helped us to really look globally first. But some things that maybe for the worst is probably that loss of those serendipitous interactions, those opportunities to explore things in a personal way.

Paul: Mm-hmm (affirmative).

Heather: I know at least for [00:20:30] me, I feel like workday feel so structured so much more structured than they were before. I'm not saying that I have more meetings, but I feel like there's less opportunity to just pick up the phone and call someone. If you feel like you want to talk to someone, you feel like you need to schedule a call. You need to have an agenda, you should cover the information that's on the agenda. And so really what we lose there, I think is that it's harder to get to know people as individuals. It's harder

to get to know what they're working on. If it's not on your agenda, when you have to schedule time with them, when you can't just bump into them [00:21:00] in the kitchen... Or meet up with them at a team dinner, it really takes that deliberate effort to regain opportunity for dot connecting. And a lot of that dot connecting can lead to innovation. So that's the part that I do think that we've lost during this time.

Paul: Yeah. And it's interesting, because I think that you really hit on that tension between resilience and innovation during times of crisis. So, yes we are in a time of unmitigated crisis, we've never kind of shut down [00:21:30] the world before and mask mandates, and all this other stuff we're now dealing with. So the natural inclination is avoid risk, play it safe, take care of core business. I'm just saying kind of speaking broadly. And so those companies or organizations they are going to have a little bit more of that intestinal fortitude to go out on a limb and innovate in a time of crisis, are probably laying the groundwork for future success, because [00:22:00] they had the courage to innovate at a time when others were pulling back. I guess time will bear that out. But it seems to me that that might be fortune favors the bold, maybe.

Heather: And the bold and the nimble, I would say. The ability to be nimble, to be flexible, to change when your original path is no longer possible or viable.

Paul: Mm-hmm (affirmative). Now, Gina, you had authored an article and you mentioned taking the opportunity to reconsider your [00:22:30] domains of innovation intent. Can you elaborate for our audience on what this means, especially as it relates to innovation versus R&D.

Gina: Yeah, I think that was an article about the pandemic and how should we be thinking moving forward? The concept of domains of innovation intent is a little bit of... It's what I was referring to broadly earlier, which is that there is today and there is the pandemic, [00:23:00] and there's definitely the crisis kind of thing that we've had to deal with this year.

Paul: Mm-hmm (affirmative).

Gina: But if you think outside of the pandemic first and you think about organizations that need to ensure that they're not going to be disrupted by creating these sort of new paths of growth for themselves, because every one of our businesses, unless they're on a huge growth path, they're basically dying. Some competitor is coming in and nibbling away and commoditizing [00:23:30] or some new technology's going to come in. So it's about constant renewal through new streams of growth. So the concept of a domain of innovation intent is... It's imagined futures and not just imagine based on sitting around in a cloud of smoke and coming up with something.

Paul: Yeah.

Gina: But really looking at trends and multiple kinds of trends and how they could come together and [00:24:00] including technology and science trends, but social trends, et cetera. And really start starting to articulate how that could really impact a problem



area or raise an opportunity space that we as a company, at... Jacobs, for example, need to really take a lead in and we need to have a stake in the ground. And that future may not take place for 10 years. But we all know it's coming. We all know that there is a fresh water problem. We all know that there's a huge climate change problems. There used to be a... [00:24:30] There's a smart city issue. There's always these huge kind of issues arising.

Paul: Mm-hmm (affirmative).

Gina: And then the key is how do we start to articulate a domain of innovation intent associated with that problem or opportunity space. And we write it in almost a paragraph form and describe what that really is or could be. And I've seen senior leaders from Corning do this. I've seen them from a number of different companies. Many different companies [00:25:00] try to do this and some really struggle with doing this.

But what it allows you to do is then gain leadership commitment to those domains of innovation intent and then begin to back cast as opposed to forecast forward. Now, you say, "We've got this future now, what do we need to do to get there?" And that becomes the guardrails in which you unleash the creative idea generation that will help us move forward. So now you've got a portfolio of opportunities [00:25:30] that you're trying with your MVPs and all those things within each of those domains of innovation intent.

And so it's not the... There's no distinction from R&D, R&D is guided by it. Our strategic partnerships, our alliances are all guided by how we execute on these domains of innovation intent.

Paul: Now, Heather, Gina was talking about kind of future forecasting, future planning and Jacobs, you coincidentally [00:26:00] is undergoing a significant transformation effort itself right now called Focus 2023. Can you tell us a little bit about that effort and how a strategic innovation mindset is allowing a company to ensure its evolving solutions have clear pathways to market and as potential sources of growth?

Heather: Let me start out first by providing just a little bit of background, it's Focus 2023, as you said, that's the name of it. It's the transformation that we're going through [00:26:30] to really transform us into being a company like no other. So there are 10 work streams from across a variety of areas. They include everything from growth to global integrated delivery. And the work stream that I'm leading is called how we work Jacob solutions.

There are about a dozen initiatives under my work stream currently, and then hundreds across the entire Focus 2023. So what excites me most about this transformation is the very discipline, very strategic [00:27:00] approach we're taking to innovation. So there isn't really much that we're working on in the work stream I'm leading, that we weren't already pursuing within our Beyond If innovation program, but what really makes it transformative is the strategic approach we're taking across all of the hundreds of initiatives company-wide to make sure that we're embedding innovation transformation

into everything we do. We're really trying to break down a lot of those silos that previously prevented more widespread adoption of innovation.

Paul: Mm-hmm (affirmative).

Heather: [00:27:30] So we're also taking a much more portfolio type approach to our innovation investments. So what that means is things like balancing our portfolio of solutions to cover all three innovation horizon, making sure that we're covering different markets, different geographies, different stages and everything from the way that we quote fill the funnel of innovation ideas across the business, to how we filter and prioritize them for making sure that we align [00:28:00] them with our strategy and taking a portfolio approach. To even how we put them through an accelerator and then bring them to scale, all of these steps we're focusing not only on our corporate strategy and a strategic approach, but we're also very focused on organizational change management, OCM.

Because it really doesn't matter much what processes, tools or systems we create. If we don't embed innovation in our culture, we won't achieve the growth we're seeking. So I [00:28:30] definitely agree with what Gina was saying about, making sure that we stay true to our core business, but even that core business we feel strongly in addition to the... Even the horizon three side of things, we still do feel like we need to continue to serve our clients in new and different and innovative ways.

Paul: Yeah, and that's a good point because the clients are asking, I know at Jacobs and I'm assuming that most companies, clients are asking and what are you doing in terms of innovation or how are you [00:29:00] innovating, or... In some kind of way they want to know what the value add is. There some curiosity there, so.

Well Gina and Heather, I want to thank you both so very much for joining me today and talking about this, it's very fascinating to really kind of peel back and understand more about strategic innovation and kind of getting a deeper look on what companies and organizations need to do to get a little more serious about innovation and [00:29:30] not just hosting the odd hackathon here or there, throwing some money at something, but really making a... Making it a part of the culture and something that is going to be fully fleshed and allow the company to take those innovations to market. So, I want to thank you both very much for your time today.

Gina: [inaudible 00:29:49] Thank you.

Heather: Thank you.