Business Better (Episode 36): The History and Growth of Research Institutions, with Special Guest Brian Darmody from the Association of University Research Parks

Speakers: Scott Marty and Brian Darmody

Scott Marty:

Welcome to Business Better, a podcast designed to help businesses navigate the new normal. I'm your host Scott Marty, I'm a registered pat attorney and a member of the Intellectual property department, higher education group of Ballard Spahr. Ballard Spahr is a national law firm with clients across all industries and across the world. I spent the last 18 years working alongside higher education clients and have watched higher education institutions continue to invent and develop new ways to grow economic development, both on and off campus. This episode is part of a new podcast series where we'll visit with different leaders striving to grow economic development in their areas and regions of interest. We will be discussing new initiatives, new models, the interest and investment in technology parks, incubators and accelerators, as well as other creative economic development platforms being implemented throughout the country.

Scott Marty:

I'm very excited about our episode today as this episode features a discussion of nationwide trends and initiatives being used to cultivate communities innovation at global anchor institutions, such as universities, municipalities, federal labs, and corporations. Again, my name is Scott Marty and I'll be leading the discussion today. My guest is Brian Darmody. Brian is a fellow lawyer earning his JD from the university of Baltimore school law. Brian is currently the chief executive officer at the Association of University Research Parks, which you'll hear me refer to as AURP. Prior to his current position, Brian was associate vice president for Corporate and Foundation Relations at the university of Maryland and prior to that was the associate vice president for Research in Economic Development at the university of Maryland. Welcome Brian.

Brian Darmody:

Thank you, Scott.

Scott Marty:

Thanks for joining us today. Really excited, this is our inaugural release. You are going to be our first guest to give us your insights and your thoughts from almost 30 years of experience of economic development. So I know we've got a lot to get into, but maybe let's start with where you are now. Could you start with... And maybe we can start with this easy question, can you tell us a little bit about yourself and AURP?

Brian Darmody:

Sure. I mean, as you mentioned, I had a long background at the university of Maryland and before that I'd been on the hill and worked for a member of Congress and I worked for a delegate in Annapolis or state capital and actually worked for the federal government, worked for the healthcare financing administration as an attorney in the office of attorney advisor but then came to the university of Maryland when in-house council and there wasn't much need for lawyers back in the early 80s. But started there and because of my background in government relations work eventually moved into the role of being the lobbyist for the university. And then about that time, the Bayh-Dole Act had passed well a little bit earlier before I got there, but there was this interest in technology commercialization incubators.

Brian Darmody:

We started incubator on campus, one of the first and I started getting involved with policy issues like our state ethics law would not allow a faculty startup to come into our incubator and I thought, "Well, that's odd, isn't faculty startups the type of companies we want to come... That we want to go into our incubator?" So I put on my lobbying hat and went to our state and eventually after two years got our state ethics laws rewritten. So anyway that was an interesting area. And I started our tech transfer office because this was... In the early days, the go-go days of the tech transfer when I think a lot of university presidents thought, "Hey, we'll just stand up this office, it's going to make a lot of money and let's get going," without realizing some of the challenges that tech transfer requires and we can talk about that later.

Brian Darmody:

Anyway, so then wanted to... Got involved with something called the American Center of Physics, which was looking for a new headquarters and they had an initial group called the American Association of Physics Teacher in College Park and they said, "Well, Brian, this could be a big opportunity for the university and the greater Washington area to bring this very prestigious group of physics association to the DC area." And I said, "Great. I'll find out who does that." And to help recruited, and I looked around and there was nobody. So I just said, "Well, I guess I'm going to start working on this." And so I looked at the board and started working to get them to locate in College Park where we did not have a research park at the time, but we had a lot of land next to us and rather than having a home Depot next to us, I thought, "It would be great to have a physics group next to us."

Brian Darmody:

So and that was really the Genesis for our, what we now call the university of Maryland Discovery District. We own some of the land but where the... The physics group went on land that we didn't own but as I mentioned, it was important that this group, which we had a strong physics program at College Park could align with our academic group. And that's when I discovered there was this thing called the Association of University Research Parks and went to a couple conferences and eventually joined that, became the president, which is a volunteer position a while ago and then more recently they have... We have a very small staff, we have the CEO and to support people that are at, in this case at the university of Arizona Tech Park. So I became the CEO two years ago, two and a half years ago. So if it's okay with you, Scott I'll tell you a little bit about what AURP is.

Scott Marty:

That'd be wonderful. That'd be wonderful.

Brian Darmody:

So AURP first of all, we're a nonprofit. So we only get revenue from memberships and sponsorships and a little quick history on research parks. So one of the first research parks was at Stanford in 1951 before the term public-private partnership had been invented. This was an early public-private partnership between Stanford university and the city of Palo Alto. And the engineering Dean at Stanford wanted to bring industry in closer collaboration with Stanford and how was he going to do that? Well, let's build space next to Stanford that the city of Palo Alto owned and this is long before Silicon valley. So this is when... If you know the history of Silicon valley, there were orchards around Stanford and the Hills there. When in the 40s and 50s, when Silicon valley first started, and one of the reasons it started was because Stanford Research Park started there.

Brian Darmody:

So that model got replicated across the country. So the folks in North Carolina at Research Triangle Park, some business leaders there saw they had a bunch of land. Tobacco was not the future of North Carolina. So they started marketing something called Research Triangle Park, the triangle being UNC North Carolina state and Duke university. So Research Triangle Park was a huge piece of land and for many years, people don't realize this. It was considered a failing research park because the Bayh-Dole Act hasn't passed there at the time, this was in the 50s and 60s, there wasn't tech transfer. And actually

one of the things that launched Research Triangle Park was president Johnson moved, what he called the HEW, health and... HEW lab, which was a federal agency to a Research Triangle Park because Terry Sanford had endorsed president Kennedy for president. And of course, president Kennedy had been shot and assassinated in 1963.

Brian Darmody:

And to honor the wish of president Kennedy, Johnson moved this EPA which now the Environmental Protection Agency under... It wasn't called that back then, to Research Triangle Park and that helped start Research Triangle Park. So you had research triangle park, you had an urban park in Philadelphia, where Ballard has a major presence. So one of the first urban research parks was University City Science Center in Philadelphia. I think that's pretty unique because you have a number of universities working together. And I know this is a shock, universities don't always work together, but I think University City Science Center is a great example of some smart city leaders that got the universities to work together. And so you had University City Science Center and then across the country, especially around land-grant universities, you had lots of research parks being developed.

Brian Darmody:

So in higher ed what happens when two people get together? Well, one of the first things they do is they form an association and the second thing they do is they hold an annual conference. So that pattern holds true here. So in 1986, the directors of Stanford Research Park, Texas A$M Research Park, Arizona State University, Central Florida University, Research Triangle Park that I mentioned earlier, gathered in the Arizona Sun, actually, I think it was at the Arizona State University Research Park and signed articles of incorporation for a nonprofit that at the time was called the Association of University Related Research Parks, AURRP.

Brian Darmody:

Luckily, we had some branding people that took out that first R so we reduced our name to AURP. But that was a nonprofit association form back then in 1986 and the focus was really on the real estate. It really was again, like tech transfer that we'll talk about a little bit later. I think a lot of university presidents said, "We'll build a research park and the money will come rolling in." Again, research park development is tough. It just doesn't happen and easily, so it does require some thought, it requires strategy, it requires leadership and requires research, usually. So but that... A series of public policies, both local state and federal help develop research parks. And I mean, if you think back on it, one of the first... President Lincoln signed the land grant act in 1856 and that was really one of the first tech transfer pieces of legislation. Although people don't always think of it that way, but essentially the federal government didn't have much money, but it had a lot of land. So it gave federal government land to states in return for the states creating land-grant universities focused on mechanical arts, as they called it, which now we would think of engineering.

Brian Darmody:

And so those land grants were created in 1856 and many of them because they had the tradition of extension, cooperative extension working with industry at the time it was agriculture and obviously that change, but those land-grant universities had that tradition of extension of working with industry. And so I... You twin that up with the idea of a research park and I think that led to many public universities wanting to start these research parks and we can talk about the growth, it's been amazing. We now, as a nonprofit, we have members in 42 states and a lot of them are land grants. I think out of the 14 institutions in the Big Ten, there are 14 institutions in the Big Ten, despite it's that name, all of them are AURP members with the exception of Michigan and Rutgers. So and that's true, the ACC would have a lot of members and then we have members in the Pac-12. So but it's not just universities anymore. One thing that I've been noticing is federal labs are members. So Sandia national labs has a research park in Albuquerque as part of department of energy lab there. And other labs are going to be becoming federal labs, they're going to be becoming AURP members.

Brian Darmody:

We also... The other phenomenon I've been noticing is a lot of hospital systems now want to engage with the local community. It used to be the only reason you would engage with the hospital was as a patient, but these are large centers of clinical trials or centers of important job centers in urban locations often. So one example locally where I am is Children's National is building a new research campus at the Walter Reed campus in DC. And they have JLABS, part of Johnson & Johnson, it's a bio incubator. And so they joined us and they're part of our group that focuses on life sciences. So what you're seeing is it's not just universities, we have community colleges that are members, we have federal labs, we have whole associations, regions joining us because this idea of building communities of innovation is very compelling and the growth of our industry and the growth of development in our parks illustrates that level of interest.

Scott Marty:

Well, I have to admit that's the first time I've ever heard someone share the experience where the Research Triangle Park was considered a failure as it's the gold standard for most of us here. So that's an interesting history there, but it's also something I think that I've probably seen in my career that you've seen in yours as well. I mean, you've been doing this for 30 years, I've been doing it for almost 20 and seeing research institutions who use that as our global term to include colleges, universities, hospitals, federal labs, just research institutions, trying to find ways to commercialize their technologies to try and invoke economic development. So aside from the growth and you preempted one of my questions, which is wonderful because it makes my job easier, which is the trends that you're seeing, so one of the trends that you've mentioned so far is that... Is the expansion outside of colleges and universities.

Scott Marty:

It's taking from what Stanford did and the public-private realm before that was really a buzzword. But over the last, let's just say five to 10 years, aside from expanding to federal labs and hospital institutions, what are the trends that you're seeing? Are you seeing an emphasis on particular technologies? Are you seeing an emphasis in particular regions? What are those trends that you're seeing?

Brian Darmody:

So it's a good question. So one I'm definitely seeing is the interest of being near human capital, which a lot of research institutions are. Now I like to say the biggest tech transfer event happens once a year in most regions and it has nothing to do with patents, that tech transfer even, we call graduation. So having corporations understand that and so... And corporations aren't necessarily going to move their headquarters next to the university, but research parks are an easy way for a corporation to demonstrate to students and potential employees that they are a great place to work. And so in College Park we have Capital One, which has its AI machine learning lab here in the university of Maryland Discovery District. They have something similar at the university of Illinois Research Park in Champaign Urbana, State Farm has a presence in university of Illinois Champaign Urbana and State Farm, maybe people think of it as insurance company. They want to be branded as a technology company, right? Just like Capital One does and lots of other companies.

Brian Darmody:

So getting in front of students is certainly part of it, but then it's easier to partner with faculty, right? I mean, they can have a research relationship with the faculty, maybe a consulting relationship that doesn't flow through the university but still being able to tap into those faculty brains is another reason why corporations want to locate. So big corporations being adjacent to universities through research parks is a trend that I'm definitely seeing because the war for talent, we're on the front lines of the war for talent. And so despite COVID 19, corporations still want smart people and research parks are part of that. So that's one trend.

Brian Darmody:

The other is certainly in the interest in biotech, right? So biotech Genentech went public in 1980, that was six years before we were formed. And I mentioned the Bayh-Dole Act that gave universities the right to own intellectual property for federally sponsored research that also passed in 1980. So if you look at... And Scott, I know you know this, if you look at the universities that have done well in tech transfer, almost all of them have been in the life science side right? Because while the time for maturation of those technologies takes a long time and you have expensive wet lab space and other kinds of challenges, the reality is in terms of, if you just look at revenue and that's probably not the best way, that's one way of measuring it, but it is with the life science involvement of universities where you're seeing the greatest level of revenue on that very basic level, but the growth of biotech across the country around universities and other spaces is something that's pretty amazing.

Brian Darmody:

I mean, they're converting space in downtown Manhattan, which I was always told you can never economically convert a building into wet lab space very often because of Florida ceiling heights and lots of things involving HBAC systems. But I mean, if you're doing that in downtown Manhattan you can do it pretty much anywhere. And you're seeing a lot of space being converted into biotech as part of the biotech revolution that saved us from the worst parts of COVID 19. I mean, it was pretty dramatic and dreadful enough as it is, but if we hadn't had all of the work basic research that had led to RNA and CRISPR technologies, we would be in much deeper trouble than we are.

Scott Marty:

Now that's... It's interesting because I just finished reading your article that you co-author with Richard Bendis, who's CEO of president of BioHealth Innovation. And it was a really interesting read to me in the context, because biotech's near and dear to me, that's the field that I practice in primarily in the biotech and life sciences side on the IP and commercialization. But I found it interesting because you had identified several key concepts that you think make that biotech innovation attempt to commercialize that technology, you've identified particular concepts that you think are important and I think they were basically six, we had strong leadership, significant industry engagement, talent, which is your human capital that you just referenced, access to capital, research assets and facilities, marketing and brand awareness.

Scott Marty:

So if we were to take those six and apply it to the conversation that you just shared with me, what three are you finding to be the most important for people who are starting these research institutions, that are looking to either build or grow as they're trying to identify where to get involved. Which of those six concepts would you be looking at if you had to pick three?

Brian Darmody:

Well, I guess one of them would be certainly talent, right? You need the science and thank you for mentioning that article and I'm not a scientist. I was really looking at public policy issues that help develop whether it was the founding of NIH and the venture capital industry and the Bayh-Dole Act and lots of others, but it all starts with the science. So you definitely need the scientists in the right areas. I just read... Finished reading Walter Isaacson's, The Code Breaker and it's about CRISPR technology, and that's a great read by the way. So highly recommend that to anyone listening and that delves into some of the challenges between in this case, Boston and the Broad Institute and Berkeley and a lot of interesting things that happened that helped ultimately develop the vaccine.

Brian Darmody:

So having scientists, whether you're at MIT or whether you're at the university of Nebraska where we have a research park, the point is talent can be developed anywhere across the country. And at universities that have... They have to have the right facilities, they have to have the right departments and molecular biology or bioengineering or whatever. So talent would be one. Second brand awareness, so you mentioned that that's important because companies, they may not be aware of your

strength and so having organizations develop a good brand and it can't just be a slogan. You can't go to New York can get a PR company, it has to be a real brand and it has to illustrate the actual comparative advantages of your region.

Brian Darmody:

And it could be biomanufacturing, it could be something maybe not as cutting edge as CRISPR technology, but a lot of these technologies in the bio world that require facilities and a trained workforce to help continue our supply lines, if they get challenged like they did in COVID 19 and having some domestic supplies. And the third one is leadership or entrepreneurship, having people in industry that just don't stay in industry but then become thought leaders for that region, mentors or students and having that ecosystem where it's not just one company, a biotech company that's sitting by itself and doing well, but it's not giving back to the community. So in my own area, AstraZeneca has one of its headquarters in Maryland and it's been very strong in reaching out to the community and it hosts an annual conference, brings in other biotech companies and universities and federal labs to help brand this area because a lot of people view this area as a government but in fact, we have a robust biotech industry and they really took leadership in trying to help brand with what they call now the BioHealth Capital Region.

Brian Darmody:

And other regions like Philadelphia has Cell Valley, I think. So there's other regions and this... But it has to be more than just a slogan. It really has to have some teeth behind it and some alignment of whatever you have as a comparative advantage. And so you have to do an analysis on what is your comparative advantage? Because not every place is going to be Silicon Valley, not every place is going to be Bay Area in San Francisco but every place can compete.

Scott Marty:

That's interesting. I mean, again, I think a lot of what I see is on the general side. I think the projects that I typically get involved in are on the biotech side. So if we take those three factors that we just went through using the biotech industry and the BioHealth Innovation that's going on there, do you think that those factors change as the technology change? So you mentioned Silicon Valley. So if we move out there, it's more of a high tech reputation. So do you think that those three factors that lead to success for this type of economic development movement change from technology to technology?

Brian Darmody:

No. I think they're pretty agnostic and pretty generic. One thing that is happening obviously is there is a lot of convergence in different technologies. So what do you need wet lab space is a lot of drug discovery going computational. I'm interested in the way quantum computing might change the way... It's not just about Cypress, quantum computing could change all of the current cryptology on one hand, which we need to have quantum proof our cryptology. On the other hand, it could help lead to faster ways to do drug discovery. So there's clearly convergence of like the traditional life science versus data science, it's all converging and lab on the chip and how we do clinical trials, it's all going to be... I think that's all going to be changing.

Brian Darmody:

So I think getting back to the facility side of research parks and things, making sure you have a flexible approach to facilities because as technology changes facilities are going to change or need to change. So trying to anticipate how that might change, who knows. I mean, I was just reading some of the vaccines need these cold freezers, and there is a big demand for these ultra cold freezers, but now they're thinking maybe they don't need to be held in those cold freezers but regular refrigeration for a month for some of the vaccines. So that just changed and there was huge demand investment in these ultra cold Freezers but it may not last. And so being able to have facilities can pivot is an overarching thing as science changes.

Scott Marty:

Well, I think another trend that you've mentioned several times now is that as I grew up, a lot of these incubators and accelerators were oftentimes just university or college or institution specific. And one of the trends that I've seen this

expansion that you've discussed, which is this public-private partnership. It was interesting historically as you shared earlier, that really Stanford was doing that before. What I saw anyway is universities and colleges calling the university of X's innovation center, and it was really a breeding ground for university technologies. Are you seeing that trend to where it's going back to that original Stanford model where it's more of a public-private partnership or public-private initiative companies and research institutions are starting to come together?

Brian Darmody:

Yeah. Yes. I am seeing that, although I call it the P3, so public-private, philanthropic partnership, P4 I guess, with four piece because that's another trend I'm seeing foundations and others are in terms of diversity, equity and inclusion kinds of initiatives are really putting the onus on universities to not just be technology leaders, but be community leaders and training and making sure you have a diverse workforce and things related to that. But also a lot of foundations are looking for more impactful social response and a lot of research parks and incubators are aware you can make some investments and see some actual impact on the community. So I think the philanthropic piece is something interesting that hopefully will continue.

Scott Marty:

So it's interesting because we've talked about a lot of existing location and existing programs and things that we've seen are already in place, part of our listeners may be considering entering into the tech park space entering into the accelerator incubator. What advice would you give to them if for someone who's not quite into or have that program already developed, what advice would you give to them if they're looking to get into this type of economic development phase?

Brian Darmody:

So do your homework, you may have some elements of that already in your area. I'm always surprised even with the internet sometimes there's lack of awareness of what's happening. So that's one, two be creative. How do you... Again, don't start... Walk before you run, so don't start with a grandiose plan that be the Silicon Valley or whatever. But think about what assets you have, what assets you might be able to attract and make it sustainable. Don't develop a white paper and put it on the shelves and let it gather dust. And I mean, just practical things. So AURP, we are place based. So we have a lot of members and if you want to drop me an email, we'll put in my contact information at some point here. But so we are place based. There are other associations out there that are in different parts. There's something called INBIA, the business incubator.

Brian Darmody:

So if you're really looking at business incubation and technology incubation, INBIA is a great organization. They have tons of white papers and other things there. SSTI, the State Science and Tech Institute is, again, an association of state policy makers and they have a great set of ideas. So steal ideas from other states. I mean, just one quick example. So Maryland has a bio investor tax credit. So the tax credit goes not to the company, but investors. And so it's been pretty successful in helping launch some biotech companies in the state of Maryland. If you're in Utah or Illinois or whatever, you should steal that idea. And my guess is Illinois and Utah has some great ideas that Maryland should have.

Brian Darmody:

So understanding what other states and other regions are doing and borrowing their great ideas is something you should do and make sure you have all parts of the ecosystem. So it's not just the university, the state has to be involved, the region, if you're in the city, the city, the county and hopefully you'll get people rowing in the same direction because there's going be some great opportunities here. The federal government is going to be investing a lot in a lot of technologies as part of the endless frontiers act that you may have been reading about. It has a new name but at some point in the Senate has its version, the house has its version, the Biden administration has a slightly different version, but there is clearly going to be... Because of concerns about competition from China and elsewhere, there's clearly going to be in the next year or so, a lot of investment in new regional hubs.

Brian Darmody:

And there's also a push not to keep them in Silicon Valley or the Boston area. So whether it's through EDA regions, because the US Economic Development Agency has the country divided up into regions. There's some push to have a number of these clusters per region. So you need to start thinking about how you might respond and you can't respond when the RFP comes out because by then it's too late. It's like Amazon HQ2, you don't have a whole lot of time. So right now you should be thinking about how can I align my strengths. I wrote a blog about this a while ago. Align my strength, it can't be a single institution. It really has to be a regional approach because no institution really has the breadths to cover everything from incubation to community involvement to basic research to applied applications to do it alone. So anticipate that and get ready because I think it's going to be a great time for biotech, for AI, for Quantum, energy research, that's a huge area that there's going to be a lot new investment and a lot of our parks and a lot of our universities and fed labs have great technologies in energy and the same in biotech in other fields.

Scott Marty:

No, that's great. Well, I think that from that, hopefully people understand what a great resource that you can be and what a great resource AURP can be. And so here's a little fun thing I've been doing with some of my guests and is... So if I'm coming to visit you Brian and we're going to sit down, where are we going to eat?

Brian Darmody:

The hall in College Park in the Discovery District. It's a funky place that a lot of our students are the servers and it has a great kitchen and most importantly, it has good outdoor dining with the... And the dog with the bandana running near you and all of the classic college kinds of things that you see at a place like that.

Scott Marty:

That's awesome. So I think a lot of us would love to go back in that time machine and be that person running with the dog with the bandana, for sure. All right. One thing I always like to always ask is if people want to get in touch with you, if people want to learn more, how do they do that? Are there any upcoming events or opportunities that our listeners should be looking out for?

Brian Darmody:

Yes, absolutely. Glad you asked, Scott. So at briandarmody@aurp.net is my email address and aurp.net is our web address. So we do have things coming up. One we have our BioHealth caucus meeting, which will be virtual, the afternoon of June 8th. And we will have eight to 10 state bio ecosystems. So bio, the big bio organization has state affiliates like Bio Michigan, BioOhio Virginia Bio. So we will feature 10 of those states, eight to 10 of those states on very lightning round, five minute presentations. So it's not a long session. We'll have a session with somebody from the National Academy of Science that came out with a new report, protecting the... Safeguarding the bio economy. We'll have... You mentioned the journal of commercial biotechnology where I wrote that article.

Brian Darmody:

We'll have the two editors of that journal and one of them is Moira Gunn who used to... Was a host of BioTech Nation on NPR and Tech Nation and they'll be talking about cluster development that is explored in that particular journal article. We'll have an update on the federal endless frontier act and it's new name and how that might affect bio investing. And we'll have a CBRE, we'll be doing a analysis of life science clusters across the US and where there's a shortage of wet lab space and where it's being built. So the afternoon of June 8th virtual, and then in October, we will have in person at the University of Utah Research Park in Salt Lake City our conference, October 19th to the 21st, a great gathering of people from across the country and we'll have a special session on the growth of space tech.

Brian Darmody:

So we haven't talked about space tech, but commercial space tech with SpaceX and NASA, the International Space Station, we'll have some reps from NASA. So we're going to have a whole look at how the private sector is suddenly invest... Not suddenly, but is increasing its investment in space just like it's been investing in biotech. So and how those space business clusters are creating communities of innovation on the ground. So that'll be a special session that's part of our overall conference at Salt Lake hosted by the university of Utah.

Scott Marty:

Wonderful. Well, I know that I will be out there in October in Salt Lake City so I look forward to that hearing a little bit more from our future Elon Musks. So, well, I think that about wraps it up for the day, Brian. I want to thank you again for making time for us today for art.

Brian Darmody:

Well, thank you, Scott, for asking great questions and I look forward to working with my colleagues at Ballard and with all your offices across the country and with our research parks across the country and innovation districts. And please let us know how we can help.

Scott Marty:

I'll do that and I'll make sure I give our mutual friend, Roger Winston a thumbs up from the call today. So thanks, thanks so much. To our listeners, please make sure you visit our website, www.ballardspahr.com where you can find the latest news and guidance from our attorneys. Subscribe to the show in Apple podcast, Google Play, Spotify or your favorite podcast platform. If you have any questions or suggestions for the show, please email podcast@ballardspahr.com. Stay tuned for a new episode coming soon. Thank you for listening.