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## S6E11: How can teaching innovation fuel Maine's economy?

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Tyler Delargy

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## **S6E11: How can teaching innovation fuel Maine’s economy?**

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**Run Time:** 00:32:39

Innovation fuels entrepreneurship in Maine. In recent years, several small business startups with novel ideas for products have created and sold them at a global scale. For more than a decade, the University of Maine Foster Center for Innovation has collaborated with students, faculty, staff, startups and established organizations, and offered courses and other resources on how to innovate. It also serves as a hub for commercializing and developing businesses from university research.

In the final episode of Season 6 of “The Maine Question,” Renee Kelly, assistant vice president of innovation and economic development at UMaine, discusses how innovation occurs, what makes an entrepreneur, and how fostering both can help Maine grow its economy and retain talented individuals. Two UMaine alumni and startup founders — Amber Boutiette, co-founder of Marin Skincare, and Tyler Delargy, CEO of Real Time Reality — also join the podcast to share what they learned along their journeys to create new goods and enterprises.

### **Transcript**

[background music]

Renee Kelly: We completely believe that everyone has the capacity to be innovative, a proactive problem solver. That’s what we teach in our innovation courses is the systematic approach to innovation.

Ron Lisnet: Renee Kelly, assistant vice president for innovation and economic development at UMaine who believes, as many of us are now realizing, that there is an innovator, or at least a creative problem solver in all of us. I’m Ron Lisnet, and this is “The Maine Question” podcast.

What does it take to come up with a creative idea, a new product, something that no one has ever thought of before, which meets a need or fills a void? In a word, innovation is the skill needed to make all of that happen.

The Foster Center for Innovation at the University of Maine has helped hundreds of students, faculty members, and even the public take their creative vision, and turn it into a

going concern. A startup company, many of which have grown into bona fide viable businesses.

Named for Bion and Dorain Foster of UMaine class of '68, who were innovators themselves in real estate and other businesses, the center has also taught many thousands of students how to become creative problem solvers through the innovation engineering curriculum.

The Maine economy is built on the backs of small business which make up 95 percent of the companies in Maine. Matching smart, driven students who have a good idea with the research and development capacity and an R1 research institution like UMaine has spurred the growth of high-tech and low-tech start-ups and made the Foster Center one of the leading new-business incubators in the state.

We'll talk about the environment for entrepreneurs and start-ups with Renee Kelly. We'll also talk with a current and former UMaine student who each have started a company that is on the rise.

Our question for this episode of "The Maine Question" podcast, can you teach someone to be innovative? We start with introducing our guests.

Renee: My name is Renee Kelly. I'm assistant vice president for innovation and economic development at the University of Maine.

Ty Delargy: Hi. I'm Ty Delargy, CEO, and founder of Real-Time Reality, and about to be a graduated UMaine student in computer science and business.

Amber Boutiette: Amber Boutiette. I'm a co-founder and chief product officer at Marin Skincare.

Ron: Thank you all for joining us. We appreciate it. Exciting time certainly for you all and for everybody this time of year if you were on a university campus. We're talking about innovation in start-ups and entrepreneurship.

Renee, maybe you could start. Paint a picture for us. Give us the landscape in terms of the start-up and small business situation in Maine right now. What's the culture like? How big a part of the economy are we talking about?

Renee: It's quite a large part of the economy in Maine. It's growing. Maine has, for a very long time, been a small business state. About 95, or so, percent of the businesses in Maine have fewer than 500 employees, which is the federal government's definition of a small business.

What we're seeing now is the growth over the last 15 to 20 years of more innovation-driven businesses, small businesses that are start-ups trying to take something

new to the world. Not just to sell to the other people in their community, but try to sell outside of Maine or around the world because what they've developed is so unique that people want it from all over.

Ron: We'll get to your guys' businesses here in a minute. I'm excited to hear what the ideas that you guys have. What is it about Maine, the landscape, the people, the Yankee ingenuity, the geography? Why is it that it lends itself to small business like this?

Renee: Maine has a very independent nature or culture. People try to get by doing their own things. That has encouraged a lot of the small business activity that we see in the state because, "I like to do something for myself. I'm going to be my own boss." That's great.

We're also very creative. We do have that Yankee ingenuity thread running throughout our culture. It's also been a hindrance over the last several years as innovation requires new solutions to problems. People need to be able to collaborate. If you only have that independent streak and don't want to work with others, it makes it hard.

Part of what we've been doing at the Foster Center is to build that culture of collaboration and high aspirations to grow something beyond your local community and try to create ways for people to deliberately connect so that they can work together and grow business ideas.

Ron: There's no shame in asking for help.

Renee: Right, exactly.

Ron: Amber, let's start with you. Maybe you can tell us when you graduated from UMaine. What's the cocktail napkin picture of your company? How did you come up with the idea? Where are you now?

Amber: Sure. I went to uni for bioengineering undergrad. I believe I graduated in 2017. The dates are a little blurry. [laughs] It's been a while. I went for my master's in biomedical engineering in 2019. I was one of those people, for most of my life, who struggled with eczema. I have tried every single product there was. Every treatment from steroids to lifestyle changes, nothing worked for me.

When my partner and I were in grad school, we were working with this lobster scientist who was studying a protein that's responsible for the lobster's ability to pop off and regenerate their own claws. There was literature and evidence in literature to show that the same way that this protein helps something to regenerate claws, it might help prepare the skin barrier.

At that point, I was so desperate to try anything. We took this protein that they were looking at in the lab, formulated it into a cream, and tried it on my skin. In about two days, I started seeing my skin clear more than it ever has with any other product. After about two weeks, my eczema flares were completely gone.

This was so incredible and life-changing. We decided that we had to dedicate our careers to sharing this with other people. After we finished grad school, we moved down to South Portland and started Marin.

Ron: Where are you now? How many employees? Where are you in the pipeline of getting a start-up company going?

Amber: We launched in January of 2020 at the start of COVID and faced every hurdle that you could hurdle in [laughs] starting up a business. We ran it out of our home for the first year-and-a-half. Last summer, we got a 3,000-square foot warehouse and office space that we now run the business out of.

It's still just the two of us, but in the next month or two, we're going to be hiring our first marketing and social media employee. We're going to be growing the team soon. For now, it's just the two of us.

Ron: Exciting times.

Amber: Very.

Ron: That's great. Ty, you're not even graduated yet and you have a going concern here. Tell us about your idea.

Ty: Sure. Real-Time Reality was founded with the mission to create a way that we can know who's real on the Internet. Today, we see that two-thirds of the Internet, two-thirds of all accounts particularly on social media, are bots, people trying to impersonate others. It creates an unhealthy environment.

When you think that these Russian bot farms are corporations that are trying to create these leagues of fake people can have an influence on our perception of the world, of each other, create entire trending topics, and lead discussion, that's pretty scary.

The way that we're combating this problem is by essentially creating authenticated biometric scans of people and using that as a security and privacy measure. We obfuscate the data from other services and make sure that you are in control of your presence online and for the new, exciting Web 3.0, metaverse, 3D Internet.

In my generation, 87 percent of us play video games weekly. That's already Web 3.0. It's a very exciting place to be. We can actually stream into these environments as yourself, an

authenticated real human being with your facial expression, how you move so that these experiences and 3D environments can become more face-to-face, more social, more human.

In the end, a recreation of the real world, that all people have assurance. It's happening here in Maine.

Ron: To show you the demographic I'm in, I didn't know about Web 2.0, let alone Web 3.0.

[laughter]

Ron: We could be hearing things are progressing. When you say biometric information, is that fingerprints, eye scans? What are we talking about?

Ty: It's just photos. We have a mobile app that can be downloaded. You take a bunch of photos. We use that to create this safe biometric key from which you can manage your privacy and information online.

Ron: You're going to graduate and dive right into this?

Ty: Yeah. We're coming up on our one-year anniversary soon of being a company. That's the full intention. We've got plans B, C, D, E, and F. We applied for the Roux Founders Residency.

We've MTI grants and funding and taking advantage of the burgeoning innovation economy here in Maine, all of the programs that Renee and the folks at the Foster Center have been kind enough to share and tell me about, and all of these opportunities. We're getting some Innovate for Maine intern this summer. It's exciting time.

Ron: Exciting times as well, that's great. Now, we're sitting in this beautiful building here on campus up near Hilltop, if any listeners are familiar with the campus.

Renee, the Foster Innovation Center, tell us what is it, what is its mission?

Renee: The Foster Innovation Center was created about 13 years ago with the mission of building a culture in the state of Maine that is innovative and entrepreneurial. Prior to that, my work involves helping to take the research and development that happens at the University of Maine and turn that into economic opportunity for the state so new companies or new products for existing companies.

We are starting to see some of that activity pick up as the state invested more in the university's research and development capacity and in other places throughout the state -- the creation of the Maine Technology Institute. What we were lacking was the bankers,

attorneys, potential investors, mentors, experienced entrepreneurs who'd grown high-growth businesses.

We didn't have those people in this day. At least they weren't visible. I think there was only one intellectual property attorney in the whole state at that time. We said. "If we're going to grow this, we need a culture. It takes a village to grow a startup -- an innovation-driven startup."

"We need not just the people who are going to start the companies, but the people who are going to support those companies in their growth."

We said, "We have close to 12,000 students at the University of Maine, and a certain percentage of them graduates every year and ends up in Maine. If we could start to build the skill set in those students and a mindset -- this is something that I can do, I can get involved in, and I'm excited about it -- then we can start to see that culture in the state."

Soon thereafter, we worked with an alumnus, Doug Hall, to develop an innovation curriculum here at the university. That's the foundation of that skill development work that we do, and it's also the foundation of a bunch of the programs that we do.

We're building these innovation mindsets in our students and now also our faculty and staff. We've done workshops and trainings for business leaders throughout Maine. We've trained more than 1,000 business and government leaders.

Over the past year, we've been training K through 12 educators in innovation practices. Our mission has been to build this innovation culture that will allow startups, allow the research and development that's happening at the university to grow and create opportunities in Maine.

Ron: It doesn't happen overnight.

Renee: It does not. Culture change takes time. [laughs]

Ron: Now, Amber and Ty, I want to ask you how you've accessed and leveraged the foster center here a minute. Before we get to that, just a basic question for you, Renee. What is innovation? Can you teach someone to be innovative and creative? Or are you born able to play the violin, and it's something you can do?

Renee: We completely believe that everyone has the capacity to be innovative, a proactive problem solver. That's what we teach in our innovation courses, is a systematic approach to innovation. A lot of people think they're creative, but then they don't know how to execute on their ideas. That doesn't get you innovation.

Other people feel like they don't have a creative bone in their body, but they can get things done. We try to bridge that gap with a set of skills for each of them in a repeatable methodology -- if you will -- to innovate. We completely agree that anyone can innovate within their sphere of influence or what they care about.

Ron: But not play the violin.

Renee: Maybe not play the violin. [laughs]

Ron: Now, Amber for you. How did the Foster Innovation Center help you get your company off the ground? What did they do for you?

Amber: Oh, my gosh, better question was probably, "What have they [laughs] done?" I started my entrepreneurial journey when I participated in the student symposium. There was our senior capstone project we were presenting at the student symposium, and we met Renee and ended up winning the innovation award.

That was a really incredible experience for us because, for our senior capstone, we had the idea that there was potential to commercialize it, but had no idea if it was possible and if it was, "Where do you even start?" With that, we won some mentoring and got introduced to the foster center.

By being introduced to them into the curriculum as a whole, it helped us get that first startup off the ground. We participated in mentoring, and eventually, I took some of the grad student classes and further learned that way. I participated in the murder program for my graduate project. We've leaned on them in so many different ways over the years.

Ron: Ty, how about you? What did this place do to help you get your idea off the ground?

Ty: I have a pretty similar journey. Back when I was in high school in 2019, I actually became friends with Justin Hafter and Patrick Reading and saw this cohort move through the foster center and share their stories about how things were working out.

I, at the time, had been working on science fair projects and was dead set in becoming an entrepreneur. It took me a couple of years to find that right idea. When I did, I enrolled in the innovation 121 course and applied here, I think, on the same day.

Then coming here, you don't know what you don't know until you know what you don't know. I'd say that that's one of the big intangibles that they taught me. Learning that process, the innovation engineering portion of things. We have this concept that Eddie Great Design, the Dyson vacuum, iPhone. All of these things, how a Lamborghini looks beautiful.



You need that mastermind architect, and the innovation engineering course taught me that there's ways that you can structure idea generation in a group. You don't need to do that as a sole entity.

From that course and learning practices for how I can foster an innovative culture within my business to the ability to be here into the wee hours working on code, and have whiteboard space in a conference room to hold meetings. These are huge, huge things that I couldn't be able to do alone in a tiny apartment.

Connecting me with resources, mentors telling me that I'm on the right track. Being able to go up to them and bounce a pitch against them when they've heard hundreds and hundreds of pitches and heard me pitch them hundreds of times and tell me that I'm getting closer to the mark or straying further away is...I wouldn't be able to do any of this without them.

Ron: Now, we've heard this term a couple of times as we've talked here, "Innovation engineering." Renee, what is that? How did it start? Just give us the give us the lowdown on that.

Renee: That's the curriculum that we developed when we opened the center here that teaches a systematic approach to innovation. It's offered as an undergraduate minor for UMaine students and as a graduate certificate as well.

It does teach this innovation mindset, how to approach problems and how to approach testing your solutions, as well as a whole toolkit to help you in that process.

It was developed when Doug Hall, who's graduated in the class of '81, and after graduating from UMaine went to work for Procter & Gamble initially, and even though he was an engineering graduate, worked in their product marketing department. In the Procter & Gamble company, they were like the product managers. When they had a new product idea, those people managed it through the process.

He learned a lot through that process such that he went out on his own and started helping other Fortune 100 companies innovate and develop new products. Pepsi, American Express, names that you would recognize in your household. He's written books and been on TV. Because of all of that, he had been invited to be the convocation speaker here on campus.

Right around the same time, we were planning this building. We reached out to him and said, "Hey, you're this innovation expert, and we're creating this Innovation Center. What would you do?"

At the time we were creating the Innovation Center, we thought we were going to do an entrepreneurship curriculum. He said, "I wouldn't do that." "Why wouldn't we teach

entrepreneurship?" He said, "Only a small percentage of people are like Ty, who know from the get-go that they want to be an entrepreneur. Most people don't, but everybody needs to be able to innovate." That just rang a bell.

Of course, everybody needs to be able to solve problems. Everybody needs to be able to communicate their solutions effectively. Everybody needs to implement ideas. We started working with him on developing this curriculum. We've had thousands of students at the University of Maine.

We have shared the curriculum with other universities around the US, and we also have trained business leaders, both through our efforts and through Doug's business. Around the world now, there been something on the order of about 40,000 people who've been trained in this innovation curriculum developed here at UMaine.

Ron: A common misconception is that it's about that word, engineering, but you can be an art major, a philosophy major.

Renee: The reason it's called innovation engineering is that it's very systems-oriented. We're teaching our students not only an innovation mindset but a systems-thinking mindset. When you can see how pieces fit together, you can solve problems more effectively, and you can see where there are opportunities for improvement.

It's not only seeing systems and using those to identify opportunities for improvement, but innovation engineering itself is a system. It's a whole collection of approaches and resources to create innovations, whether those are new products and services or just innovations for improving our communities or improving your own work habits.

It can be used at any level. It's really about a proactive problem-solving approach.

Ron: Amber and Ty, you both are -- what's the term -- sought-after commodities because you're young people. Maine wants to keep young people starting companies, that whole thing that every state wants to have. Can you talk about growing and progressing with your businesses here?

Do you feel like, with the Foster Center as a base but then just around the state, do you have everything you need to grow this business where you want to go with it into the near future here?

Amber, let's start with you.

Amber: We definitely do. Similar to the Foster Center, there's a very great entrepreneurial community down here in Southern Maine. Just that innovative approach to problem-solving, and systems thinking in general, is something that a lot of people in the community share.

For us, specifically, bringing in talent, I don't think that we'll have a hard time finding other people who have a similar mindset and can help us grow and innovate, and just grow here in Maine.

Ron: Ty, and are you going to keep this concern in Maine and stay in Maine for now, anyway?

Ty: Absolutely. I love Maine. It's a great place to be, the way life should be, as they say.

Ron: Did you come up with that?

[laughter]

Ty: No, not an innovation of mine, I can say. The ecosystem has really burgeoned over the last 20 years. That's what's made it possible to stay here. It's a great place to be not just because of the resources but because of the fact that it's new. We are still a tight-knit community. You can call up some of the other CEOs around Maine and all of the other entrepreneurs and get advice.

We all want to share it with each other. I've talked to students in my class and in classes around campus about how they can become entrepreneurs here and leverage the resources that they have. Similarly, others have done that for me. It's just this systemic thing that we need to keep going.

I would encourage everyone to stay here because while there might be more money in California or other places like that, it's highly competitive. You can't find a waitress in LA that doesn't have some lines or scripts or some short films that they want to show you.

In that way, the diversity of different industries here and the fact that we have a smaller population, so there's not going to be...There's Blueshift. We have Kintech. There's a couple of software companies, one aerospace company. We each live in our own area and have the opportunity to excel in our separate fields.

Renee: One thing I do tell students who are coming through the center with startups is in Maine, you can be a big fish, relatively smaller pond. While that small pond in some ways might have some disadvantages, you're probably going to be more successful finding funding in Maine.

Even though there's less money total than you are going to, let's say Silicon Valley, where, as Ty said, there's one of you on every doorstep, and everybody's competing for that funding. One of the things that we try to do at the foster center is help students get exposure to other people and make connections.

We also have some unique resources in the state. For instance, a really, really important one is the Maine Technology Institute, which was created by the State of Maine around the same time that the state started investing in R&D at the University, and it funds companies that are developing new innovations to bring to market.

Most students in other parts of the country don't have access to a pool of funds like that. They might have to win a business plan competition to get some seed funding or something like that.

Most of our students with some coaching and pulling the right pieces together, can successfully obtain those funds and have \$20,000 to get their business idea off the ground and go after more over time. Then we still have the pitch competitions and other things that students can participate in. Ty just won \$5,000 Tuesday night in our pitch competitions.

Ron: One question I want to ask is that people may assume that the foster center is just for students, but you've worked with nonprofits government agencies, Department of Education, faculty staff. Can people from the public come...? Who can access what you have here at the foster center?

Renee: Our niche is trying to help those entrepreneurs and companies that have true innovations that they want to bring to market. Something that's not available anywhere else. Yes, we welcome any entrepreneur from the state to reach out to us if they have an idea.

Not only will we help connect them to resources and provide some coaching, but we'll look for opportunities to connect them with other resources on campus. Whether it's faculty and staff who have expertise that might be able to help them or resources like our advanced manufacturing center that might help an entrepreneur prototype their innovation.

The foster center has become the hub of research commercialization, definitely for UMaine but also we're supporting other research institutions around the state that have innovations that they're trying to commercialize. We have a whole set of programs. Amber mentioned the murder accelerator. She participated in that as a grad student with her faculty member.

We were through that program, which is intense four-month process of figuring out, "OK. We have an innovation. Is there actually a true market opportunity for that innovation? If so, what's the best way to get there?" We put the team through a pretty rigorous process to have a clear plan at the end of that four months.

We just started our fifth cohort of that program. Amber was in the first cohort of that program, so she was one of the groundbreakers for that. Just from that, we've had seven new startups emerge from university research.

We've had other collaborations with private sector partners around the state to bring those other innovations to market. We're really excited about that. We keep adding on as we see opportunities to build upon what we've already done where there are gaps as the teams are trying to develop their startups and commercialize their technologies.

Ron: As we begin to wrap up here, we always like to ask, what do you see in the future? What's the crystal ball showed to you? Amber, let's start with you. If you look out five years, what's a realistic best hope for future for Marin Skincare? Where do you think it's going to go?

Amber: We are hoping to grow the company, still here in Maine. Of course, we're going to grow the team. We're working on that vision right now, the specifics, and putting together our hiring plan. We are considering bringing skincare manufacturing to Maine. That's a resource that we don't have here. That's a big goal of ours. Developing new products and changing the way that eczema is managed.

Ron: Wow. Big goals.

Amber: Yeah. [laughs]

Ron: Ty, how about you? What do you see in five years, realistic best-case scenario?

Ty: Hopefully, we'll be going up, [laughs] not down. In the next five years, we're looking to launch our beta this summer. The product will be out there and well developed. Hopefully, we'll have a lot of people that use it on a daily basis.

Hopefully, we see that this has a positive effect, not just on people's ability to manage their own security and privacy, which they can't now, but hopefully, it also has a positive psychological effect.

Part of this mission for real people and having real interactions face to face and the ability to do that with the assurance of who's real is the idea that if we're not stuck in a system where we're sorted by likes and comments and follows and all of these kind of stuff that some of the depression that comes along with my generation.

The issues with body image and feeling like you're constantly being compared to these celebrities and super-popular people and all of this, that that starts to dissipate as people put value back on just being themselves and interacting with other human beings.

Ron: I hope you are hugely successful because we definitely need that for sure.

Renee, we'll give you the last word. We just learned this spring that UMaine was named an R1 university, the highest level of research activity. I imagine you're well versed in what that means. To take us out, in terms of what the Foster Center's going to be or the startup entrepreneurship culture in Maine, what do you see happening?

Renee: As the research enterprise, if you will, of the university grows, that just creates more opportunity for innovations to be commercialized. We're excited about the growth of that activity at the university. We will grow our innovation and commercialization support in concert with that.

I mentioned we've done five cohorts of the MIRTA program. We've been doing one per year. I could see in five years we have enough activity between what we're doing and the way we're supporting other research institutions that we're running that year-round, spinning off more businesses and engaging more students in that activity.

Within the State of Maine, we are on the cusp of starting to seize that culture change. I want to see, especially in the rural parts of the state, young people feeling empowered that they can create something. Whether it's their own company or they know they can go to work for a Maine company. There are real opportunities here to innovate and make a difference, not just in Maine but beyond.

[background music]

Ron: Exciting times. We wish you all success. Thank you so much for sharing your stories.

Renee: Thanks.

Ty: Thank you.

Amber: Thank you. [laughs]

Ron: Thanks for joining us for this, our final episode of Season Six of "The Maine Question." We'll be taking some time away as summer gets going, but work begins soon on Season Seven. We've already got some great story ideas to dig up that we can't wait to share.

In the meantime, you can find all of our episodes on Apple and Google Podcasts, Spotify, Stitcher, and SoundCloud, UMaine's Facebook and YouTube pages, as well as Amazon and Audible. Questions, comments? Send them along to [mainequestion@maine.edu](mailto:mainequestion@maine.edu). Thanks for checking us out. We'll catch you next time on The Maine Question.

*The University of Maine in Orono is the flagship campus of the University of Maine System, where efforts toward racial equity are ongoing, as is the commitment to facing a complicated and not always just institutional history. The University recognizes that it is located on Marsh Island in the homeland of the Penobscot nation, where issues of water and its territorial rights, and encroachment upon sacred sites, are ongoing. Penobscot homeland is connected to the other Wabanaki Tribal Nations — the Passamaquoddy, Maliseet, and Micmac — through kinship, alliances, and diplomacy. The university also recognizes that the Penobscot Nation and the other Wabanaki Tribal Nations are distinct, sovereign, legal and political entities with their own powers of self-governance and self-determination.*