37. Warren Ward and Rachel Garcia

Gavin Kelly
You're listening to beyond 1894, a podcast dedicated to updating you on research, innovation and campus life happening at Louisiana Tech University.

Teddy
Hello, everybody, thanks for joining us. This is Teddy Allen with University Communications. It is a beautiful, brisk January day. And we're going to talk today about Louisiana Tech Research Institute. It's relatively new, you may not have known there was such a thing. But there is we're going to explain to you what it is and most importantly, what it means to you. This mechanism is here strictly to serve you for the rest of your life. Actually, I wish we had the director of operations here. And he could tell you more about it. We do have a Mears warm horde barn. Welcome to the podcast. Thanks for making time. Well, thank

Warren Ward
you, Teddy. Good to be here.

Teddy
You bet. He's a retired colonel US Air Force. Thank you so much for your service, sir. And you have brought along your friend, Rachel Garcia, a 2019. Tech grad in technical communication. Glad you're here. Glad to be here. You're a Program Manager for some of this stuff that's going on. So we're going to talk about that if you've been warm and able to get along since you've got this job. Have you have you and your boss get along since you got this job? Those definitely. And your job is evolved, right? Yes, it has evolved Technical Communication data analysts. But now we're running some programs that again, we're getting this thing up and running. It's kind of got new legs with a new building. That's coming that you can see from our 20. So Warren, let's start by just trying to tell people it's really not that complicated, but it seems complicated. Try to explain the concept of first of what the Louisiana Tech Research Institute is and what its purpose is.

Rachel Garcia
When we look at the structure of tech, the campus itself were classified as a center of excellence under Louisiana Tech University. We do have our footprint over here in Bowser city. There's a reason and purpose for that I like to think of it in the simplest terms is we're kind of the missionary for the Ruston campus and right now or the core of our work is with the Air Force Global Strike command, Barksdale Air Force Base.

Teddy
And so we're over here on the National Cyber Research Park is where we're at. So we came over today to talk to these two wonderful people, they're soon going to be moving into a new buildings of high tech 74,000 square foot facility here at the Research Park, started building in September 2020. Should be ready this summer. Is that correct?

Warren Ward
That's what we understand. It's moving quietly moving along.

Teddy
It's the government in the military in higher ed. So sometimes things don't go exactly to plan but eventually this is going to be exactly what we need it to be. And it's a there's just a lot of synergy provided through interdisciplinary science and engineering and policy. Education is gonna affect us economically. Tell us how Of course you're hearing Bowser because this is where the Air Force Global Strike command is. explain to people what the Air Force Global Strike command is.

Warren Ward
Well Air Force Global Strike command you'll hear me refer it sometime is AFDC if you want to do that, or Global Strike simply, but people in Northwest Louisiana are certainly familiar with a B 52. Out of Barksdale Air Force Base, Global Strike and compasses about I want to say about 35,000 people across I'm going to lose track of my number of bases about seven bases. But the V 50 twos here at Barksdale might not North Dakota. You've got three ICBM missile wings up in Minot, North Dakota, Cheyenne, Wyoming and Malmstrom up in Montana. We also have the ICBM launch facilities out at Vandenberg Air Force Base in California. We have a team set up over there and Kirtland Air Force Base New Mexico, there is a contingent there in error units up at office. Offutt Air Force Base in Nebraska, scattered all over. The core mission is just as it says, Global Strike, that means we can reach out and touch any target in the world from home basis. And there's professional airmen that do this each and every day. We do have the b ones. By the way people talk about those. They're not nuclear, but they do reach out and touch across the world. They've been heavily involved in the operations in the Middle East the past 20 years, and the B Twos Up in Whiteman Air Force Base in Missouri.

Teddy
So these Air Force and military men and women who protect us, and a lot of the way they do that is through the ASG SC. What Louisiana Tech does through the LTR is partners with the cyber Innovation Center and with the Air Force to do what how Rachel, would you explain hey, here's how tech is helping the government help you.

Rachel Garcia
I think the best way to explain it is that tech is helping the university Leatherby students are faculty get exposure to the Air Force because a lot of people don't have the opportunity to learn how the air force works and all these different branches within the Air Force. And that's what we're here for, kind of like the program that I'm over the week, just call it the fellowship program for short. This is an opportunity for Louisiana Tech students both mix of undergraduate and graduate students, and Louisiana Tech professors to be involved in a program that works on projects, real projects that are within Global Strike command. Currently, we do have three projects that are going on right now we have knowledge management, we have portfolio, Design Engineering platform, which we call Pete up, and NC three modeling and simulation. And these are Tech students and faculty that are working on this. And we are in our second year of this program. And one of the most feet or probably the most recurring feedback

that we've got from your one, and from fellows that are currently in the program is just that they had no prior Air Force experience prior to this program. And this has been a great way for them to get knowledge in this area, professional development this area. And that's how I would say that we're here to help Louisiana Tech,

Warren Ward
and Teddy Teddy, could I add to that, with for our students in particular, the projects they're working on, as Rachel said, are very real world projects. And they provide real data to the command itself. So it's a national security, tight focus. The students, not all but most are getting interim security clearances, it's secret level, which is valuable in itself. In my opinion, if you're a student that's graduating, and you're getting ready to go look for a job somewhere, if you can put on your resume that I have, I've had a clearance or have a current one. And I have provided something actually real world for the United States Air Force, that ought to be a big selling point to any employer.

Teddy
That's, that's not on my resume. I was born on Air Force Base, but was never cleared to do anything important. So some of these, some of these things that intelligent professors working on is like, I imagine it's very complex, how strike command has to communicate. And so that's one of the things that you're helping them learn how to do correct. What would it be another is digital interaction with data and stuff like that. Is that another? Well,

Warren Ward
the PDF program you're talking about, if I were to say this, the Air Force, I mean, we've been doing things this way for eons, almost. But there are a lot of niche type databases where maintenance data for all these different platforms I've talked about or stored, and heaven forbid, those databases talk to each other. So we take the expertise from the faculty and students at Tech, for example, in computer science and cyber engineering department, and they're helping build those interfaces, building what they called data lakes, so they can make sense of the data that global strikes getting. So they can present that to the commanders and leaders out there. So they can make informed decisions.

Teddy
So again, it's it's it's complex, but you're taking some complex and making it simple and available and keeping it secure. Talk a little bit as you will about the research aspect. And while we're working with the Air Force woodtech has a certain amount of intellect that the Air Force needs, right, and then you bring in private companies. So that way, a company can make a little money, and it's all driven to make the Air Force better. Is that a simple way of putting it?

Warren Ward
That's a good way to put it, right? Yeah. Okay, absolutely. So that's

Teddy
the main and then the, the reason we all want to work together is from the synergy aspect. And plus I can learn from you and your private business, and you can help me and I'm University not make any money, but I can intellectually help you.

Warren Ward
Yeah. And I think in bigger terms to the the Air Force gets a bargain. They're getting services from the students, if you will, the students get a bargain if they're doing real, real work. If their force were to contract some of these things out to other companies that may be more expensive, if you would, but the actual intellectual capacity we bring in the research facilities at Roston are world class. So it's just how do you expose them to it? So might say Rachel and I and the team here kind of that missionary. It's important for us to learn what the campus cap capacity is so that we can inform their force when we're dealing with those guys.

Teddy
Rachel, are you happy about your experience in Ruston? As a student the size of the train scared me to death?

Rachel Garcia
I was very happy with my experience as a student at Louisiana Tech. I loved the university. I love the rest and community loved everything about it. Where did you go to high school? I went to palmful High School and then went to tech.

Teddy
Okay, majored in technical communication. Kirk Stein Amano is one of your guys. We're always getting a lot of information from him about what's going on next door to Wiley tower in GTM. Did you imagine when you were seeing or Pineville? Did you see you doing something like this? I did not. Did you even think you would go into tactical communications

Rachel Garcia
did not fire original plan was biology. And just whenever I got into the University, I just went biology route, because I still didn't know quite what I wanted to do. So let's just go with biology. And then towards the end of my freshman year, I really utilize the Career Center in cainy. And they kind of helped me narrow down to my decision with English concentrate and technical writing. So that started my journey, I guess, to where I am now. Because my first quarter in the English department I took, took a technical writing class fell in love with it got a job opportunity as a student worker focused in technical writing for Office of Research and partnerships under Dr. Dua. And which two years later led to this opportunity over here. So just all kind of fell into place.

Teddy
So when you had V in Ruston, and you did y'all ever come up with a budget report to do anything to go to concert? A?

Rachel Garcia
I had a friend that was here. So every now and then I would

Teddy

I'm just wondering if when you were coming into Bhojan you looked over to your ride and saw where we are right now with all these big bills. Oh, well, that's nice. I wonder what's happening there.

Rachel Garcia
Yeah, that's exactly what I thought. And I remember my first day pulling up to Mike because I interned with LTI the summer before I graduated. I remember pulling into the parking lot over here. Now it's like, Never would I thought I would be in this building one day, but here we are,

Teddy
you are doing a good job for us. Thank you, ma'am, will you and you mentioned you mentioned Dr dos to meet do. Back when the pandemic began, he entered the Air Force and global command worked together for some COVID-19 modeling to give all air bases heads up and it worked out great. See mates kind of got a lot on the ball. We don't need that anymore. But at the time, it was very important as far as keeping our Air Force, military personnel safe and whale. Okay, couple more things worn and we'll let y'all get on with your day. The global near peer competition calm sets, concepts and applications workshops. Is that still a thing that's going on? That's not

Warren Ward
going on right now. This Okay, some of the work kind of ebbs and flows and that was successful that was actually predates me, Rachel was here grounded that

Teddy
that was a one way trip when it was any way at all deals with planning, y'all are trying to think, several scenarios ahead to give our leaders the most best information that can have

Warren Ward
Yeah, and I won't go into great detail. But you can think about the world situation we're in, you know, you got the United States. And there's a lot of folks that don't necessarily like what we do, or our way of life that would like to threaten us. So this allowed the airmen an opportunity to kind of tabletop exercise, if you will, what if the other guys do this, what we do,

Teddy
and again, this is the university, this is a cyber Innovation Center, Air Force, Global Strike command, and of course, private business, all trying to gather together to make things better for everybody. I think it was in World War Two, when one of the generals, our Secretary said, You know what, I've been in this business a long time. But I've also seen private guys, and we need to, we need to get out in the military to come in here and start helping and made all the difference. Is there anything else y'all want to say about ltr? Before we, we let you go, maybe one comment on the new building for one thing, you can see it from the interstate being built. It's not funny looking into this Artech architecturally interesting building like some of these on this campus are,

Warren Ward
let me do one more shout out if you will, to the agility to the campus is offered, particularly in the industrial engineering department with Dr. Mary Finley. We got to basically notified by the Global Strike

Chief Scientist Office, I want to say late September when it came in, there's a competition called Global Strike Challenge. It takes months to do that, but they contacted us, can you help us with some data analysis and help us with a what they're calling out brief during the symposium in December, and we got that word in late September. And then we worked through that for October, November, and then presentation in early December, but you kind of look at data analysis you'd like to have numbers to work with. This was largely written English language, if you will. They had comments and then they wanted to put it in a scorable matrix and work through the process. So 2000 some odd comments later, we worked out a Likert scale through Jack Mozilo, one of the grad students over there. Fantastic young man. As Rachel said before, knew nothing about the Air Force, and we had to teach him acronyms. So here's an airplane. Here's what it does. And Jack had a great time. And we had great time working with him. So he's learned a lot global strikes, very pleased with the work they did. And it just showed the agility we have and being able to turn the air force on the assets on campus. So that was something I wanted to give a good shout out with. We're just completing all the reports on that now.

Teddy
Yeah, who knows what educational opportunity tomorrow bring? Exactly. We're all students on our campus, like Rachel, who were hanging around one day and then you know, a teacher cared or a program up and are they here's an internship, would you be interested, and then just turn them loose and see how far you can go. We've done

Warren Ward
some missionary work with Dr. John Matthews over the trenchless Technology Center and got him linked up with one of the Colonels over here on base who's been over to look at the center in the horizontal boring school, they offer it back in the fall. That's been pretty good. Just be having that flexibility. So the folks on campus know something you want us to know about? Reach out to us, we're willing to do that

Teddy
is the best way to do that through LT ri.org. Online,

Warren Ward
you can do that. That's the best thing. We've had a website ltr.org, we monitor that. And you can find us listed individually as well. If you look us up on the organizational structure, you mentioned about the building again, as I understand it, it should be open sometime this coming summer was just over there this afternoon going through, it's really coming up well, it's three floors, there's a lot of capability going into that building, I can't elaborate a whole lot on but again, very, very state of the art facility. And if you're driving by and you see something looks like the Imperial crawler of Star Wars movie, we gave the architect a hard time he says that's exactly the motivation, I'm

Teddy
looking forward, we all are to see what it looks like. It's pretty neat. Yeah, it's really been amazing what's happening in this little view acres over here, and mounds that come here and the ideas that are born all the time, it's going

Warren Ward
to go back to the things we've done, like the trenchless Technology Center, what we've attempted to do, and you know, COVID been an interesting restriction since I came on board. But you know, as the restrictions have lifted a bit, we attempt to take the whole crew over here to, from Bowser to the campus to basically do a field trip, meet the faculty, the staff and see what type of capabilities are there, like I say, so we can educate ourselves to know what's going on so that we communicate it we're there for so like, say the trenches technology turned into the colonel from the Air Force on to that started with the visit of us just checking it out. And there was a two visits involved with that. And then we got it all set up. We've been over to the Institute for micro manufacturing. That's pretty interesting, very grateful to the faculty there for letting us go through there most of that discussion, when you're talking to us, we're in over our heads, but at least we're seeing it you know, we're putting eyes on it, and meeting the people that we need to meet when we're talking to the folks there for us and hopefully other agencies as well. One of the goals we have in mind, I haven't had the rest of the team. I've been there myself with some other work I've done but I want to take the rest of the team over the new College of Engineering and Science Building. Go through that. And again, if you see us wandering around gokken and saying wow, you know, reach out to us because we would like to understand what's going on there because you get some fantastic capabilities. So I got some personal opinions that I think the civil engineering program could be useful to some of the things that called strikes going on new construction things but that's going to take some development I think to get some information and sell that that's something I think it's gonna neat

Teddy
when you bring your your team over, maybe bring them over on the day that the Bulldogs are playing baseball, or that the lady texture is playing softball, speaking in the facilities like the the the engineering building, and have a good time out there. It's a really magical place last spring. Bulldogs opened up in about a month. I think from the very day we're talking. They have their home opener against Wichita State in late February. Yeah, we'd love to do that. Just say and I'll buy a hot dog for popcorn and maybe choo choo train will come by Rachel remind you of all times. Perfect.

Warren Ward
I'm hoping to negotiate him. I mentioned it to him last week when I was over, but Colonel Ritter over at the Air Force ROTC debt 305 When we get to the building to finally open I'm hoping that we can negotiate and get a color guard out of ROTC because I'm I'm a product of that organization. And I think it'd be kind of cool to come full circle on that.

Teddy
Well, if you haven't met on campus in a while and unit you need to slide by there because besides the engineering, building, so much more new stuff, campus improvement screenspace we have a new Aspire piece of art APA business building the biggest piece of art in our Lincoln parish, I would hope and thank, before I let you go. This is all about problem solving complex problems. And I know a lot of stuff that y'all do is classified. So please don't tell me. But is there a simpler problem that the lack of like Sumeet working with this COVID modeling? Is there a problem like that that's come along that y'all teamed up to solve fairly quickly, that would make sense in everyday life.

Warren Ward
Like say the most recent in the quickest one was that just that Global Strike Challenge thing, and it's that's more data data modeling in general, that one was a specific purpose. But I think the school is very flexible in that you get the capability, certainly all over and demonstrate you can move fast. Again, our bread and butter work with right now is with Global Strike command, the Air Force, but there's no reason in my mind why it couldn't be take the infrastructure in this area of anywhere from the train depo out at cross lake where they do repairs, the power industry, electrical power industry with AP swepco, perhaps medical industry, I think the gamut out there is is just making the right contacts and being that in between? Well,

Teddy
it seems that the students that tech and the programs that tech leadership there is very agile and moving and willing to take chances if you've been to, you know, dispose the students even with those them in over their head, at least in they know and can swim catch up. Have you been surprised? Either one y'all at the intellectual capabilities of some of these young people that y'all are working with all?

Rachel Garcia
I would say yes. And like how quickly they are to pick up on the Air Force. I mean, it's, it can be very intimidating. I mean, it's a lot of information at one time. And when you come from no prior knowledge to it or background, it even for me, it's I have no power, Air Force, or military background. And there are still new things that I'm learning every single day. And I think one thing that I always see in this fellowship program, specifically with the students is how quick to learn they are on all this Air Force terminology, the how it works, the organization levels, and just going out there and finding opportunities for themselves within the Air Force that they didn't know was out there. Whatever, like project there started the program, so

Teddy
and now they're helping change those things. And they are Yes. Me and you are a little bit older than Rachel Warren, the the fill up black youth more youthful when you're around all these smart young whippersnappers.

Warren Ward
Oh, absolutely. It's it definitely helps to keep up it helps your psyche for sure. I just find great reward in reaching back to school and find an opportunity for the students. That's what refreshes me and keeps me going every day, you know, used to be able to had the same feeling, teaching a new pilot to land a jet or something like that or pull it behind a tanker refuel. So I think the instructors feel that when they're in the classroom and they see that light bulb come on, I think from where we are, we see that light bulb come on when they're talking in making this research really happened making that product, big that customer Air Force in this case, say yes, I want some more of that. So go Bulldogs

Teddy
Go Bulldogs were, again ltr. I was involved in a lot of stuff, solving a lot of problems. One of the other things they're doing is just giving students a lot of opportunities that you can they'll be able to use for their whole life. Before we let you go Thank you both for joining us also to Gavin Kelly for getting this

recorded. Thanks to the other folks shall work with at ltr on Thank you Warren for your service. As always. And Rachel, I want to tell you go Panvel and thanks for bringing up the Career Center. If you're a student don't forget it's there for you Nick can make a whole lot of difference. Thank y'all. We'll see you next time. Okay, till then.

Gavin Kelly
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