#### Kasie Whitener (00:03):

Welcome back to The Moore School Podcast, Moore Impact. I'm Kasie Whitener, your host, and with me today, Dr. Sanjay Ahire. Michael j Mungo, distinguished professor and co-Director of Operations and Supply Chain Center, professor of Operations and Supply Chain at the University of South Carolina at the Darla Moore School of Business. Welcome in. We're gonna talk a little bit today about your experience in the Darla Moore School, and of course, the Operations and Supply Chain Center itself, and the big news, the INFORMS prize, and the big celebration we're gonna have coming up in December to celebrate that. So first, tell our listeners a little bit about you and your path, how you got to the Darla Moore School and what you do for the Darla Moore School and our undergraduates and graduate students.

## Dr. Sanjay Ahire (00:44):

Absolutely, Casey. Good morning, and thank you for having me here. I'll, I'll just give an update on the, the the recognitions. So this last year I was actually 2024. I was adjudged, the Carolina Trustees Professor of the Year by the board of Trustees at University of South Carolina. So that's, that's an update to the Michael J Mungo Award. <Laugh>.

### Kasie Whitener (01:10):

That's great though. Congratulations.

## Dr. Sanjay Ahire (01:11):

Thank you. Thank you so much. Yeah. So I have been at the Moore School since 2006. Dr. Malhotra, who used to be the department chair and a visionary of our school, had this vision for a cutting edge brand new operations and supply chain management program at the school. At that time, I was at University of Dayton, and I had started a an excellent operations management program there. And Manoj wanted me to come over here and and join heads with him and develop this new thing. So the rest has been history. We co-designed and launched the brand new program in 2007. Graduated the first cohort of a modest 30 students in 2008. And lo and behold, after about 15, 16 years this semester, we crossed 800 students in the program.

### Kasie Whitener (02:13):

That's amazing. Yes. So after just about a decade, decade and a half, decade and a half, and growing from 30 to 800 students coming out of operations and supply chain, that's fantastic.

## Dr. Sanjay Ahire (02:24):

Absolutely. Absolutely. And, and, you know, in conjunction with that, it's not just the growth of the program, but we have really risen in stature and quality as well. So in 2024 Gartner rankings we are ranked number three in north America among all the undergraduate supply chain programs. So we retain that biennial ranking from 2022, and we also for the first time actually ranked in top five for our graduate program. So we increased or rose up in that ranking from number six in 2022 to number five in 2024. So this is the first time that we are in top five for both undergraduate and graduate programs. So

### Kasie Whitener (03:08):

If I'm a 18-year-old, 17-year-old high school student, and I'm looking at the Moore School, why do I choose operations and supply chain as my major?

### Dr. Sanjay Ahire (03:17):

Absolutely. So in the old days what used to happen was because the major was not was new, and this field is slightly different than finance or accounting or marketing where Right. Just by the name of it, you know, what you're getting into operation and supply chain needs and explaining to do. And so when the students came to the Moore School some of the brightest students who major in international business, which is ranked number one for us for consecutive 6 26 years now, right? So, so the smart kids come from all over the country and beyond, and they're looking to measure in a second functional major because that's what IB requires. And they look around and, and they say, Hey, you know, this is a brand new program in the old days which is which is like finance, which is like accounting, but seems to be much more interesting in terms of the career path that it offers.

## Dr. Sanjay Ahire (04:16):

So that was the draw for the students. Now, increasingly over the years, because the program has succeeded in all of its outcomes for the students students when they apply to the Moore School, actually now are coming in with the intention of measuring in operation and supply chain. Now, I'll give you one more thing that has actually caught the eyes and ears of parents and students, and it's quite unfortunate, but the pandemic, the Covid pandemic really brought the field of operations and supply chain to the forefront. And within the consciousness of people when we had to struggle for toilet paper and and our groceries and everything, you know, it was the field of operation and supply chain and logistics that really held the world together. You know, I, I compare the COVID-19 pandemic with the flu pandemic of the nine 20th century Mm-Hmm. <Affirmative>. And the biggest difference was twofold. The information technology and the supply chain failure, right? These two things really helped us to survive the pandemic for the most part.

### Kasie Whitener (05:20):

I think you're hitting on something really important, which is we weren't supply chain kind of operated in the background Mm-Hmm. <Affirmative>. We weren't really aware of the implications of it until Covid. And so then when people start to see it, they go, how can we do this better? How can I get engaged? How can I make a career for myself in that industry? So as you start to see more interest, are students coming with different questions? Are they coming with different problems they want to solve? I mean, has there been a change in the students that are coming in now after Covid?

#### Dr. Sanjay Ahire (05:49):

Yeah. Yeah. Actually definitely, you know, they're coming in with the intent of majoring in this field and contributing to, you know organizations directly. And, and, and, and the, the attraction to this major, or in general to this field, is that it is the field that actually creates the value for organizations. Every organization exists to provide some products or services to the customers or to the society. And you cannot have an organization survive if it doesn't know how to do that right. Right. You know, everything else is supporting that core mission of producing the products or services, and then delivering them. The way I define operations and supply chain is, is the field that entails strategy and tactics that create the products and services, but also creates the processes that creates those products and services and these products and services that the customers the organizations are able to provide and supply to the customers whenever they want these products and services, wherever they may be, and at the prices that the customers will be willing to pay for, right. These products and services. And doing all of this while making healthy profits so that the organization sustains and prospers, no organization can prosper

or sustain itself without having this core value proposition. And that's what operation and supply chain actually contributes to.

## Kasie Whitener (07:14):

It feels like that's the value proposition of the, of your organization, right? <Laugh>, which is Absolutely, here's what we help students see. Yes. We help you to identify all these different moving parts and how those moving parts are creating value Yep. For the company itself. Yep. And how then that company, by creating value, is able to sustain itself, hire people, employ people, continue to pay its suppliers, continue to grow, and Absolutely. And operationalize. Absolutely. That's so when we talk about an undergraduate experience, right? Mm-Hmm. <Affirmative>, they're gonna come in, they're going to take these classes, they're going to leave. What type of career Mm-Hmm. <Affirmative> are your students experiencing when they walk out the door of the Darla Moore School?

### Dr. Sanjay Ahire (<u>07:50</u>):

Yeah, absolutely. So, you know, when we started the program, we started with this mission of, of of producing graduates who not only know, but also have practiced the, the competencies before they graduate. And with the definition that I gave you of operations and supply chain, you know, it really opens the door for career paths along the entire product life cycle for a product or a service. So right from the design of products and services to, on the processes that produce these products and services. So we are talking about actually the career path that, that crisscross every segment of this product lifecycle, starting with product design and, and innovations where we place our students, you know, in, in those types of functional areas, but also making the stuff manufacturing operations on the actual shop floors production planning and control, sourcing quality logistics and distribution.

#### Dr. Sanjay Ahire (<u>08:52</u>):

So on the inbound or sourcing side, sourcing and procurement, how do you select the right suppliers, right? How do you evaluate them? How do you make sure that the right stuff gets to your doorstep in terms of the manufacturing operations? And then how do you make sure that you use those resources efficiently and effectively to produce the highest quality products and services? And the, the, the career paths don't stop there. You have to provide or deliver those products and services to customers. So on the outbound side logistics, distribution, but also configuring this entire network of supply chain. Mm-Hmm. <Affirmative>, you know, where do you have, where do you, where do you select those suppliers from? Where are they located, right? How do you manage the logistics? How do you make sure that you are locating your manufacturing facilities? Or if you are a Starbucks, where do you locate your stores?

#### Dr. Sanjay Ahire (<u>09:42</u>):

Right? You know so that you have strategic advantages and then optimizing the entire supply chain, you know, so there are, there are supply chain configuration and optimization jobs that our students get into, our graduates get into. I would put the career paths in terms of where our students get placed into four buckets. And I, I discuss this with, with new students and parents and employers and everyone that wants to listen to global you know, leading manufacturing firms. So, so companies like 3M, you know, and all the automotive manufacturing companies, BMW Mercedes Volvo, Audi, and so on, but also Tesla. And then on the, on the on the consumer product side, you know Johnson and Johnson p and g and, and the likes of that. And then you're talking about high tech firms like Intel and all the, all the you know you know meta Google Microsoft, LinkedIn.

### Dr. Sanjay Ahire (10:52):

Then you have the bucket of all the leading consulting firms, you know Boston Consulting Group, Accenture Goldman Sachs, McKinsey Ernst and Young, IBM and so on. And then the retailers and services. Here you're talking about all the big retailers, Walmart, target but also insurance companies, you know hospital systems. You have airlines now. These are the buckets of employers and all the leading organizations in those buckets of employers. Not only hire operations and supply chain talent. They, we have our alumni working in all of these leading Corporations. So for a, for a program that is coming out of South Carolina or Columbia. And we have only one, to my knowledge fortune 500 company that is headquartered in South Carolina Sonoco products company, which, which we work and partner with, you know quite a bit for a program that is not out of a major metropolis, you know or not out of an lvy League school. To have these outcomes is unheard of.

#### Kasie Whitener (12:04):

It's exciting to see the trajectory that the students from a curiosity, I'm interested in this, I'm aware of this, and then to go and study for four years, our degree is a four year degree. Mm-Hmm. <Affirmative>, where students are engaged right away and then throughout their program to have exposure to these different employers and these different projects. I wanna talk about that here in just a second. Yeah. And then walk out the door and get that employment and feel like they're contributing right away. Mm-Hmm. <affirmative>We've talked in a previous episodes about experiential learning. Mm-Hmm. <Affirmative> and how critical that is at the Darla Moore School. Can you share a little bit maybe anecdotally of some of the projects that your students are working on at the undergraduate and graduate level where they get real experience with these companies and a chance to not only make those professional connections, but see how what they're learning in the classroom is really being applied out in the field?

#### Dr. Sanjay Ahire (12:49):

Yeah. Actually, that is one of the most unique features of the program. It's an it's an applied program, if you will. So we have incorporated integrated experiential learning as a part of the program. It's through the Capstone consulting project that comes at the end of the program. And the students learn basically two competencies. One, the domain competencies of operation and supply chain, which is on the sourcing side, internal operations, and on the, on the logistics and distribution side. But the other facet that we have included is this business process perspective, where students are able to look at the status quo for any business process and make that process better, you know through using frameworks such as Lean and Six Sigma, where the students really learn about how to decompose a business process, deconstruct it, and then build it back as a better business process.

# Dr. Sanjay Ahire (<u>13:47</u>):

So that's coming out of the feeder courses. And we use the capstone consulting class through our operations and supply chain center, which is what we have actually founded to partner with some major corporations in South Carolina or, but also beyond, and also work with nonprofit organizations on the other side, such as hospitals and food banks and so on. We, we partner with these partner firms, and we they, they had to pay for the partnership and we conduct one project in the fall semester and one project in the spring semester. It is a faculty driven, faculty mentored project where we assemble teams of five students mentored by a faculty expert, and we have some real experts in, in, in the operations and supply chain center with decades of experience in manufacturing and services.

### Dr. Sanjay Ahire (14:45):

And I, myself, have done more than 250 of these consulting projects over my career. We have lean consultants you know, as, as a part of the center. So it is a very serious experiential learning project. It's a semester long project and we promise and actually deliver value to the client organization at the end of it. We have conducted more than 360 of these projects over the course of last 15 years. And because there's another thing that I'm gonna talk about, which is Sonoco, USC Lean Six Sigma Green Belt Certification. We have worked partnered with Sonoco Products company and their Lean Six Sigma champion to offer this very unique qualification that we provide opportunity for our students to get at the end of their project experience. And so, because we do that, we have to track the actual benefits because the students get evaluated on these projects in terms of the value that they have created for the client organization. So over the 360 projects, we have identified and, and generated client validated benefits exceeding \$330 million. And these are recurring savings or cost benefits that the the companies have had through the, through the program and through the projects. And these are generated by students working in conjunction with our faculty.

## Kasie Whitener (16:10):

So these are talk, let's talk about the Center, because we've been talking about centers on a few different episodes. Mm-Hmm. <Affirmative>, where we wanna kind of pull away the curtains and like explain what is a center at the university. This is external to the classroom experience. Yes. When we have these center projects. And so even though the students are engaged with the projects Mm-Hmm. <Affirmative>, it's not necessarily a course credit project for all of them. A lot of times it's them working outside of the class or intentionally trying to supplement their education through these center projects.

#### Dr. Sanjay Ahire (16:39):

Now, the operations and supply chain center is, is, is slightly different. All of the projects that they do that we do are coming outta the Capstone Consulting project class, which is a four credit hour class for the students. So they get credit for this. And because it is four credit hours, they're expected to work more and more rigorously on these projects. And, and, and typically, you know a student will spend anywhere from 10 to 20 hours per week on, on these projects. So across a team of five students, we are really talking about anywhere between 800 to 1200 hours person hours over the course of the semester. And you add to that somewhere around a hundred to 150 hours of the faculty mentor's time. So these are real professional level consulting projects. And we have had this feedback from, from our partner firms.

### Dr. Sanjay Ahire (<u>17:32</u>):

And when, when we talk about these partner firms, we are really talking about some really big companies like Johnson and Johnson, Siemens, Trane, Ingersoll Rand, Delta Airlines, BMW Sonoco Product Company Nephron Pharmaceuticals. So we have, we have a history of working with more than 40 of these partner firms across the last 15 years. And they, they demand value from these projects. 'cause Every company has to pay in \$50,000 per year to be a member of the center. Right. So when, when you put money on the table, everyone gets serious, right? And so these projects are about conducting process improvement for their mission critical processes. And, and and, you know, and these are being sponsored at the level of senior directors, vice presidents, and many a times CEO level. So when you are having sponsorship at that level, these projects are really front burner projects that are not to be kept on the shelves, but they get implemented.

### Dr. Sanjay Ahire (18:32):

And that's where you're generating more than \$330 million in saving or across these projects, right? So almost 800, \$900,000 per project. But then how can you actually evaluate the value of a project that saves lives in a hospital? Right, right. Or feeds hungry people, you know? So so, so we have done some very interesting and exciting projects, and I'll give you a couple of examples of that That'd be great. That we are working on. We are, we have, we have worked on projects from manufacturing sector, from hospitals and so on. But this is the first time that we are actually working on a project with South Carolina Department of Education. And Ellen Weaver, who, who is the superintendent of the schools for South Carolina Mm-Hmm. <Affirmative>, she's in charge of more than 1200 schools in the, that's right. In, in the state. We are working on improving the transportation of the students to their schools. So, we are working right now on developing strategies and optimal routings for charter school students, you know across three school districts across the entire state of South Carolina. And, and it is going to be you know, helping the students to be, be assigned buses that take them to the schools in the shortest amount of time.

### Kasie Whitener (19:49):

Which improves access to charter schools. Yes. Which improves the possibility that students are getting the education they're looking for. Mm-Hmm. <Affirmative> the one best fit for their learning style Yeah. But also the one that's gonna set them up for post high school education and, and careers.

## Dr. Sanjay Ahire (20:03):

Absolutely. Yeah. Absolutely. So, so, you know basically, you know, when, when I look at a project like this, it's very similar to the projects that we did with Harvest Food Bank. Mm-Hmm. <Affirmative> about two years ago, where we optimized the students, optimized the entire retail donations, pick up logistics for the state of South Carolina from more than 500 retail locations using more than 65 agencies. And here we are talking about community centers, churches, and so on, right? To, to pick up these these donations from all of these retailers, bring them into the food bank locations, and then, you know, distribute them through the through the retail agents through the community agencies, and sometimes directly, you know, picking up the donations being picked up by the agencies and, and, and then distribute them to the Hungary residents of South Carolina. I'll tell you, we actually optimize the retail donations, pickup strategy logistics for the entire state of South Carolina for Harvest Food Banks. And it has enhanced the capability of the of the food bank to distribute 11 million more mills annually to Hungary residents of South Carolina,

## Kasie Whitener (21:16):

Which is real impact on real people.

#### Dr. Sanjay Ahire (21:19):

Real people. That's fantastic. And this was done by an undergraduate team working with me, and in conjunction with the CEO of Harvest Food Banks.

#### Kasie Whitener (21:27):

Just really exciting stuff to see our students making that kind of impact on their community and, and on our state. And the Center has been recognized for this work, this huge prize. Tell us a little bit about this prize you've just won, and, and then we'll talk about the event that's coming up to celebrate it.

### Dr. Sanjay Ahire (21:43):

Absolutely. So, so this is the informs prize it's called INFORMS UPS George D. Smith Prize. It is it is awarded by INFORMS professional organization and informs stands for the Institute for Operations Research and Management Science. So our, our field of operations and supply chain has roots in the operations research and management science field. In fact, our department is called Department of Management Science, which is application of scientific and mathematical approaches to management and operations research is research into operations to optimize and improve those operations, which actually has roots back into applied mathematics. So, <laugh> so become you know around the world circuit, I'm myself, a chemical engineer, and in, I'm in the business school, you know, being leading the operation and supply chain program. So you, you see the connection, right, between applied math engineering in fact, operations and supply chain management in many ways is a business face of industrial engineering.

### Dr. Sanjay Ahire (22:45):

So we bring the business savvy to the field of industrial engineering, but it also has integration of applied math, statistics, operations research, and so on and so forth built into and integrated into the teaching of the entire field of producing products and services and distributing and logistics of that, and improving the processes that do all of these things, right? So, INFORMS is the oldest professional society in our field, it, it has its roots in the applied math work in 1940s. In fact, it is credited as one of the two things that helped the allies win the World War II, along with the invention of radars. And after the Second World War, it found its applications of all of those techniques and tools that were developed to optimize all of these logistics during the Second World War.

## Dr. Sanjay Ahire (23:37):

And that came into being and, and transferred, transformed into the field of operations research and management science, the application of that in the, the business context, or in other societal context, right? So this, this society was formed in 1950s, and it has always recognized the applied side and the value of application of all of these scientific knowledge to different sectors of the economy. So about 12 years ago the society said, why not reward or award or reward the best programs that produce this talent that changes the world for real. And that's where, you know UPS actually underwrote, you know, and it's in memory of their second CEO George D. Smith who really believed in the power of operations research and management science. So this award is given to the best program in the world that prepares their students for successful careers in application of operations, research and management science to business and and, and over the years operations, research management science.

#### Dr. Sanjay Ahire (24:48):

And increasingly, because of the availability of the data and the technology and and the ability for us to analyze large scale data to make better business decisions, this entire field of operations, research management, science and analytics has converged into one major discipline. And so INFORMS gives the award to recognize programs that are able to use operations, research management, science and analytics to prepare graduates for successful careers in these fields. So we just won this global prize. The way it works is you have to apply for this prize, and there is a very rigorous application process. And so we applied alongside 24 other 23 other programs from across the world. And I'm talking about Europe, Asia North America, everywhere. And, and you, you, they select top three finalists. And then these top three finalists have to present their programs in person to a jury of seven at the INFORMS Analytics Conference, which is attended by more than a thousand analytics professionals.

### Dr. Sanjay Ahire (25:56):

And we are talking about leaders move movers and shakers in operations, research and management science from fortune hundred companies, but also research institutions researchers, practitioners, and so on. You present it to the jury of seven that consists of judges from companies like Amazon and UPS and, and LinkedIn and so on. But also leading academics from Carnegie Mellon and such. We presented that on April 14th in Orlando conference. And we competed against two other excellent globally recognized programs, national University of Singapore, which has a top 10 ranked program in business analytics across the world. And University of Waterloo from Canada, that is number one ranked co-op program in the world. And here we were competing based on our operation and supply chain and business analytics concentration that we have at the undergraduate level, primarily complemented by smaller programs at the MBA level.

### Dr. Sanjay Ahire (26:59):

And we were able to pro provide this very novel approach to ap application of operations research and ma management science and analytics through the operations and supply chain domain, using that as a reference discipline to produce business graduates that are savvy users of operations, research management, science and analytics. It's a very different approach to than, than the other two programs or, or the past winners of this award that have dedicated master's programs in business analytics for the most part, and focus on training students in the tools of analytics. What we have here is we have an a, a, a marriage, if you will, or a blending or integration of operations, research management, science and analytics to help business graduates become better business professionals. And that was the unique value proposition that we had. And so we ended up winning this prize, and we are very proud of it.

## Dr. Sanjay Ahire (28:03):

I think we are the first program to have this orientation of really using analytics meaningfully to make business graduates, better business professionals to really harness the energy of, or, or the power of analytics, rather than becoming tools experts. We are producing expert users of tools. That is what we actually competed based on. And I'm very happy to say that we won this prize. And we have this very marquee event that we are planning from the Moore School of Business that is going to celebrate these two major milestones for the operations and supply chain program. The first is the Gartner rankings where we are now ranked in top five programs across North America for both our undergraduate and graduate programs. And then the second one is the informed prize that we won. So for this event that will be happening at at the Moore School on December 5th and sixth we will be actually having the celebration.

#### Dr. Sanjay Ahire (29:04):

It will be a two day event. And we are inviting the, the leadership of UPS most likely the president of UPS is going to be the headlining the event along with the president and executive secretary of informs they are coming to actually commemorate and and, and, and, and give the trophy to us. It's a big deal. And, and it'll be having keynote speakers such as USC's president president Amiridis it's the, the South Carolina Secretary of Commerce, Harry Lightsey will be there. And it'll also be headlined by a couple of CEOs from our operations and center. So center operations and supply chain center. So Lou Kennedy, you know CEO of Nephron will be there. Donna Isgett, CEO of McLeod Health will be there. And I'll tell you one more thing.

#### Dr. Sanjay Ahire (30:01):

Our program is making waves out there in the field. Our graduates are rising, you know, much faster than their peers in their organizations. So this event will be also headlined by the CEO of Nexar. And he is alum of our program. His 2012 alum, you know Zach Greenberger he, after graduation in 2012, went out and worked for Gexpro, then he moved to Tesla, and then he moved to Lyft. He was the Chief Business Officer for Lyft. Right. And now he's the CEO of Nexar. He just accepted the offer recently. He will be coming and speak be a part of the platform party.

### Kasie Whitener (30:47):

It's an exciting event. It's fun to celebrate. I mean, the fun is in the winning, right? Yes. So it's really great to be acknowledged and to be recognized. Your hard work has not gone unnoticed. In fact, the building of this program has been really a, a jewel in the crown of the Darla Moore School of Business. Thank you. So I need to have you back on the podcast so we can talk about your research specifically and the other research that takes place in the operations and Supply Chain center, because I know you all are producing a lot of really great new knowledge. Yes. And not just applying the knowledge, but also bringing in that knowledge and, and making it applicable for your students. So I'm grateful very much to you for being here for today.

## Dr. Sanjay Ahire (31:25):

Thank you. And, and one last thought. This is a team effort. You know, we have a great team of center faculty mentors and the entire department faculty. Some of us have taken the lead and, and been working on this for years. But there are many others that have come along the way and actually enhanced the quality and the reputation of the program. So I thank all of my colleagues, you know, from the management science department, and also the previous leaders like Dr. Malhotra, who really, this was his brainchild. He, he, he made the first strategic decision of hiring me. Then we made the second strategic decision of hiring Dr. Jack Jensen, who used to be the managing director of the center. And, and, and the three of us actually helped grow the program from, from its modest roots. But then we have had our other, other, other partners in the crime, if you will. Professor Pearse Gaffney Giulaino Marodin, Carrie Queenan, Dave Precht, and many along the way alongside the tenure track faculty and that work in the department. And it has been a team effort. What, what does it say? It, it needs a, a village to raise Village child. A village. That's right. It really needs a village to raise great operations and supply chain graduates. And I'm thankful to my department and the team.

## Kasie Whitener (32:39):

This December 5th event is going to be just I think a really great opportunity to spotlight that entire department, the center Yes. And all the wonderful things that the Darla Moore School is doing for our students. Thank you so much.

#### Dr. Sanjay Ahire (32:51):

Sure. We'll be recognizing our industry partners as well, because they have been integral to the success of the program. So, of course I cannot stop talking about this program. Definitely love. Love to be back. <Laugh>,

#### Kasie Whitener (33:04):

<Laugh>. Well, you're going to have to it's gotta be the end of the show. I would love to have you back. You'll be back. We'll talk a little bit about the program after we've done this wonderful event in December.

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Dr. Sanjay Ahire (<u>33:09</u>): Absolutely, absolutely.
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Kasie Whitener (33:09):

Thank you so much for being here. This has been Moore impact. When you learn more, you know more. And when you know more, you do more. Thanks for listening.