**RedZone Podcast Episode #67: Shola: A CIO’s Journey To Solving Global Grand Health Challenges| Lessons in Innovation| Mentorship| & Continuous Learning – with Shola Oyewole, United Therapeutics**

Bill: Shola, I want to welcome you to the show.

Shola: Thank you Bill! Thank you!

Bill: This is a lot of fun because we go back now close to 15 years ... and …gosh!

Shola: At least 15 years, yeah.

[00:00:30]

Bill: And you have been… The company you’ve worked for, United Therapeutics. I know everybody have just listened to the intro that I have given about your bio, your official bio, but I don’t think people really understand. When you started working here, how many employees were in the company?

Shola: I started working here in 2000 and the company had recently gone public, so there were probably about 30 employees then. We are now over 700 employees today.

[00:01:00]

Bill: 30 to 700. That’s a huge growth!

Shola: It is astronomical. Correct.

Bill: Well and I am super proud that I’ve known you the whole time.

Shola: Yes.

Bill: Well, let’s even go before that. Let’s talk about… to give people some context. Where were you born?

Shola: I was born in Nigeria, in a city called Lagos and I moved to America in 1987 to pursue a Master’s Degree in Information Technology at the American University. That was when I moved to America officially.

Bill: So what was it like growing up in Lagos? Am I pronouncing it right? Lagos?

Shola: Lagos.

Bill: Lagos.

[00:02:00]

Shola: Lagos is kind of like a New York City of Nigeria. That is where everything happens: business deals, advancement in everything, finance, technology, and all those things. Growing up in Lagos… Lagos is very very fast-paced. I was kind of a teenager in those days anyways so I cannot say I was able to fully enjoy that type of things, but it was fun growing up in Lagos. I love going back there. I travel back to Lagos every year and it is always a fun very very active place, like New York City.

Bill: So were you… Do you remember when you got your first computer? Do you remember the genesis of it all?

Shola: It was an Amstrad 64

Bill: Amstrad?

[00:03:00]

Shola: Amstrad. A-m-s-t-r-a-d. There is no more. This is about 20 something years ago. I purchased it on a trip I made to London. Amstrad was an electronics company. My first degree in Nigeria was in electronics engineering.

Bill: Oh Really? Ok.

Shola: And I minored in computer science. I was given a choice, an elective, and I chose programming, programming basics. And the only computer we had in our lab was Apple2 with an external tape drive. That was huge! It was big. My first project was to write an inventory control system, which I did, using Basic. So I learned basic on my own, I programmed it, and wrote an application and I was very very excited.

[00:04:00]

That summer when I went to London I thought I’d buy my own computer. I couldn’t afford an Apple 2 or Apple 2E. There was this company, an electronics game company called Amstrad and they sold computers for roughly 400 pounds in color. Also 300 pounds in black and white. I bought a 300 pounds black and white version. It came with very basic games, it came with basically operating…

Bill: Approximately when was this? What timeframe?

Shola: That was in ’85 I think.

Bill: ’85, ok.

Shola: 1985, yeah. I brought that back to Nigeria and I wrote a lot of software in Basic, and, by the way, that computer was more advanced than Apple2 because it had a built-in disc drive. So it had a tape drive, which I did not need because it had a buit-in disc drive so the programs were able to run/ load faster, all that good stuff. [00:05:00]

I later bought a printer so I could print all my code, because in those days if you lost your drive or if it crashes, that was it. So that was my very first computer, the Amstrad64, 128 I think. Amstrad 128.

Bill: So what made you want to come to the US? What was the genesis of that? You wrote your programs, you were programming, you got your degree in electrical engineering, what was the spark that said "I need to come to the US"?

Shola: I come from a very long line of educators, my parents are, they're very very ... They're educators, they have been all their lives. It is very natural for me, my siblings, members of my family to pursue a master's degree. [00:06:00]

My siblings have gone to different places to pursue theirs, some in England, some in America. At that time my brother, my older brother Byer lived in America and worked at the World Bank. As what happened, typically you go where you have a relative and you pursue further degree there. So if he lived in Russia I'd have gone to Russia. If he lived in Poland I'd have gone to Poland, but he lived in America in Washington D.C. and worked at the World Bank. I said "You know what? I'm done with my degree in Nigeria. I'd like to pursue a master's degree." And he was like "Okay, come on up." So I packed my stuff, everything fit in one suitcase, and I showed up in Dulles Airport, he picked me up. Within seven days I was enrolled at the American University.

[00:07:00]

Bill: Within seven days, but were you just being a student 100% of the time or did you work part time?

Shola: In Nigeria you can be a full-time student. Eat, drink, live in your parent's home for free. However in America everybody has to work. I did not know that. So I arrived here on a Friday and by Saturday I'd found a part-time job delivering newspapers at two in the morning until eight in the morning. It was a rude awakening.

Bill: Now what year approximately was this? Was this in the 90's, early 90's?

Shola: This was in 1987.

Bill: '87?

Shola: Yeah.

Bill: Okay, wow.

[00:08:00]

Shola: So within a few days I was delivering newspapers in a car I had purchased from a gas station fella, he had a sign - $900 or better. We went up to him, we negotiated down the price, he said he'll take cash. We went to two ATM machines because in those days the limit was $400 per ATM machine. My brother went to one ATM, we drew $400, his wife went to another, we drew $400 and for $800 I bought my first car in America, a Rabbit.

Bill: Oh right, a Volkswagen Rabbit.

Shola: It had 50,000 miles on it. That car was almost dead, but let me tell you something, after I drove it for one year delivering newspapers it truly died.

Bill: I think I told you that, that I delivered newspapers as well, roughly that same time frame, when I got out of college, just to pay bills. I was delivering papers from two until seven in the morning and then going to my day job right after that.

Shola: You had a day job?

[00:09:00]

Bill: And a day job. Yeah because I'd started a couple businesses. This was early early on before ... People say it takes you three or four businesses before you figure out how to make them work, so these were definitely on the fail businesses and it was using the paper route to basically pay down expenses. Because you could make 4,000 a month, just delivering these ... Maybe it wasn't 4,000, but like 2,000 a month just delivering newspapers.

Shola: I don't know what newspaper you were delivering, my salary was $171 a week for USA Today and I was using the money to pay for my credits at American University which are a couple thousand dollars per course. By the time you pay for fuel, mind you it was a car that was on it's last legs anyways, pay for service, pay for all that, wear and tear.

[00:10:00]Thank God for credit cards, because let me tell you something, Citibank sent me something in the mail, then it was a thousand dollar credit limit, that is how I financed my education. Credit cards and carrying newspapers all the way.

Bill: You've also gone on to further education as well, didn't you go on to another degree a couple years ago?

Shola: Yeah, about 15 years later I attended the executive MBA program at GW. That was probably eight or nine years ago that I graduated from that program. I was there as an accelerated fast-paced MBA program. It lasted about 18 months, so a year and a half. It was kind of a nice capstone. It was a perfect education, especially after working almost 15 years in the industry.

[00:11:00] It's a nice way to go back and cap it all off. Prior to that I'd taken a few Harvard Business School classes. They have week long courses, when you can, with other like-minded people, and I really recommend those courses. I think we spoke once about Singularity University, which I attended.

Bill: Right, you were the one who led me to Singularity.

Shola: Yes, that was an eye opener. I highly recommend it for every person, it just makes you think big.

Bill: You're going out to another conference just after our discussion today so you seem like you keep very much appreciate and inhabit as a part of your DNA is continuous learning whether it's getting a degree or if it's just going to a conference to learn. Would that be true?

[00:12:00]

Shola: Correct, 100%. I am a learner. I learn all the time, I learn from everyone, I learn from everybody I meet, I learn from my daughter every day. The other day she taught me an octopus had three hearts.

Bill: Three hearts?

Shola: I'm like why? Why? "Well dad, one is for thriving, one is for living and one is for diving." I'm like "What do you need three hearts for?" "Well, one has control of the left four legs, the other one controls the right four legs and then the third heart just synchronizes it all." I'm like "Amazing." So I'm always learning, continuous learning, when I hire people I encourage my staff to learn. I give them every opportunity to learn different things, new things and things that are not germane to their discipline, it's got to be something different.

Bill: Why would you do that? Why would you ask them to learn something different outside of their discipline?

[00:13:00]

Shola: Because I find that people are better and well-rounded. I prefer to work with well-rounded people. Well-rounded people think outside the box. They don't solve problems the same way and their not narrow minded. It would not be unusual for you to find communications, graphic design in my department. I will show you a virtual reality studio that's just right outside my office. What has that got to do with IT? Nothing. However think about learning, think about how you're going to train doctors and scientists down the road. Are they going to keep cutting up cadavers to discover stuff? How about you give them VR goggles, put them in a VR environment, where they dissect harmlessly, as many as they want. I am always looking for tools and people that are not a part of the norm.

[00:14:00]Within my team I have communications, linguistics specialists. I have graphic artists, I have all kinds of people. I have techies too.

Bill: Certainly because you have a deep expertise in tech. What I want people to understand is when you got started you were the engineer at 30 employees right?

Shola: Yeah I was the IT department. I had a budget of $5,000 a month, so I had to choose was I going to buy a printer or a laptop that month.

Bill: This company has experienced such profound growth and impact in this local region, it's now one of the major growth companies in the Washington D.C. area. How have you been able to keep pace with starting small and constantly being able to evolve yourself as a leader to the point where you can lead a company of this mass and size along that whole trajectory?

[00:15:00] What has been the key to you keeping expanding yourself so that you can keep pace with the growth professionally?

Shola: I never get comfortable. Constantly learning and constantly ... Anything I build, I build it to last. So if you give me $5,000, I will ensure that I invest it in a way that whatever I build will last. It will last $15,000. The infrastructure you see today, it's the [inaudible 00:15:40] you saw when you first met me 15, 16 years ago. It has scaled up, yeah there's probably 300 or 400 more servers, maybe their in the cloud now but the point is the infrastructure is still the same. It was built on such a solid foundation that you could attach and grow.

[00:16:00] I always forecast growth, even though we were coming up roughly 30, 20 years ago, I knew it would be 1,000 one day. I knew it'd be 20,000 one day. I make sure every decision I make caters to that, I'm always thinking 10, 15, 20 years ahead. I adopted Cloud first. I mean not first first but I was very open to Cloud.

Bill: You were very ... Yeah you were first, one of the first to Cloud.

Shola: Yeah, because I felt that was where I could grow to the Nth degree without concern about expanding my data centers. The Cloud allows me to be as elastic as possible and all you need to do is get more bandwidth, turn up the pipes, I have unlimited Cloud access. Those are one of the things I've done to ensure that I'm ahead of the growth of this company.

[00:17:00]

Bill: So that on the technology side, I totally understand that part. And on the professional side, there’s different demands from a leader as you scale and organization, from decision making, and people and staff. How have you, where have you received guidance, or has it been completely internally driven, of what is needed to manage a company that is growing from an IT perspective.

Shola: I do a lot of self-learning. I attend a lot of conferences. I attend unusual conferences, not necessarily related to technology: a lot on leadership, on different industries. I am always learning. I cannot pinpoint one person that said this is what you need to do to accumulate growth.

[00:18:00] I observe others, you know Martine Rothblatt, the CEO of this company. I’ve watched her grow this company, I’ve seen her style, which I can relate to very very closely. So, in that sense she’s my mentor. I had an early mentor, whom you met?

Bill: Yes

Shola: About 12 years ago

Bill: You’ll have to tell that story, that a good one.

Shola: David Stang, I worked for him for a couple of years.

Bill: One of the first Anti-Malware products.

Shola: Correct, this was, we did some work together in 89’ and then he broke away and started his own company. He started an Anti-Virus/Anti-Spyware company called PestPatrol which turned around and sold to I believe CA(?)

Bill: Yeah I think you’re right

[00:19:00]Shola: And retired. I learned so much from David. He had such a strong work ethic, he was very smart, he was a prolific writer.

Bill: A writer?

Shola: He taught himself to program, he wrote the software himself. He wrote the software himself. I remember when he called me out of the blue and said ‘Hey Shola, I need you to come build systems in my basement.’ And we set it up in his basement until the servers became too many, then we had to move to his attic. And in his attic he had an aviary, so he had birds. So here we are working in the attic with about a dozen birds flying around us. We had like 20 servers and the room had to be a certain temperature so the birds could be comfortable. And you know you’re sitting there all day birds crapping on you it was fantastic. And David is the loveliest guy ever. We’re sitting shooting the breeze, birds flying around the place and we’re creating software. [00:20:00]

Bill: Amazing.

Shola: It was the greatest experience. That was a true startup company. That was a true experience of startup company. A one man company.

Bill: You know you never realize, he sold it for 4 million to CA right?

Shola: You know I don’t remember wat he sold it for but I mean.

Bill: I bet that was an experience.

Shola: It was.

Bill: There’s a great story that you shared with me about how your mentors have played a role. For me being, an observer, you were in this beautiful building here, United Therapeutics is built in Silver Spring Across the street there is a lab, I don’t know if you’d call it a lab or facility, for the lung tissues. Maybe you could explain what that was built for, and your role, and what you had to put together to make that come about.

[00:21:00]

Shola: Okay. So um, as some of you might realize, there are roughly 200,000 patients waiting for lung transplants every year. Roughly 2000 of them actually get a successful lung transplanted.

Bill: So roughly 2000 out of how many?

Shola: 200 out of 200000 that get lungs that match and are successfully transplanted. Because remember you’re taking organs out of person A, and you’re putting them in person B. Person B’s body is going to naturally try to reject those lungs no matter how close these two people are. So we heard of a group of doctors, (?) General, had devised a way of processing lungs prior to transplanting them. And wat they did was they used special chemicals to profuse those lungs, basically it’s a flush out or anything that may trigger a rejection. They did this, one every couple of months. And we heard about them and you now united therapeutics is at the forefront of lung research. It peaked our interest. We spoke with them, we partnered with them. And very casually the CEO said Shola, is there any way you can automate this, were we could have electronic medical records for each lung that are profused so we can actually track them, you know find out the genealogy and all of that? And my reaction was yes because I never say no to her. She challenges, and challenges me and really the sky is not the limit with her. There’s no limit here, so I said sure we can do it. And we did.

[00:23:00]

So we went to Toronto General, my engineers and I, we observed how this was done on pigs. We observed the entire process of removing lungs from one set of pigs, to another, we observed everything from the machines that did the work. Then we went and spoke to vendors and asked do you have software that can do this? They’re like no. Nobody had ever done this before. And nobody had ever connected so many devises to work like that before. We went to speak to medical device companies, to find out which of those devices lent themselves to being IoT. So my goal basically was, figure out all of the devices that are used to manage these lungs, to profuse these lungs, and to get the IoT versions of these devices.

[00:24:00]

Bill: Internet of Things

Shola: Internet of things meaning they are IP addressable. So that way as they are profusing the lungs, they are collecting data, or recording data that are streaming to an electronic records system that had built in the cloud. All this was new to us, none of us

Bill: I mean this is uncharted

Shola: Totally uncharted, totally new. And we built this proof of concept, I mean I just had a developer never done this in his life, never. It was just a .net programmer he’d never done any cloud work, but he has it all stream to the cloud. Every piece of data, we can track every set of lung that are profused. So we built the proof of concept it worked, bought the machines, and built the (built in ?). So today we have a state of the art, it is the only kind in the world with six operative (?), where six sets of lungs can profuse simultaneously in a period of six to eight hours. All that can be done electronically, the data streamed securely, into the cloud.

[00:25:00]

Bill: S this has a huge benefit for people, obviously now you’re essentially commercializing this ability to flush a lung that gets sent to you. So the lung is shipped to you correct? And then you you’re using the word profuse, I look at it like draining the radiator of a car, like cleaning the radiator out, and then sending it back out right?

Shola: Pretty much, the medical term, the technical term is profusion. But pretty much that’s what it is, I mean we’re flushing, and what that does, for the pair of lungs is it makes it more viable for a successful transplant.

Bill: Well my father just went through a heart transplant, so that world is fresh, that was just last year, so putting an organ in someone’s body that’s a big deal.

[00:26:00]I’m just very very fascinated by your ability, and your willingness to jump on a transformational project like that. And tackle it and, turn it around into something that is a revenue generating source, for the organization And I think that that’s a unique ability that you’ve developed, is the ability to handle the raw infrastructure piece, I’ve watched you in action with the architecture and design and I know that that’s something that’s near and dear to you from an architecture point of view, but then you’re also in all the plank support needed for that, but then you’re also in the transformation as well. Is that something that Martine, is that because she pushes you in that direction or is it because you say no no, I want to play, I want to play offense and defense.

[00:27:00]

Shola: Well I mean I look at myself, as a solution provider. I look at whatever I produce as a product. In fact that’s how I build myself today. I build products. If my solutions can help this company generate revenue, then my solution is a product. We’re not even called IT, were called the business systems group. And just recently we have you know, a new name which we use to preface all the products this group delivers. So if you can think of workshops, podcast, TED Talks, well we call those nexus works. Nexus talks, you know things of that nature. So I consider myself, that is what I do, I produce things. So if she needed a solution to automate profusion, my job was to make a product that could do it. That is how I build myself. The plumbing is important, the IT plumbing infrastructure is important.

[00:28:00]

If that was not solid and secure there’s no way I could have this opportunity. And I glad I work for a CEO that trusts me, that’s always pushing the edge of science and there are no limitations when it comes to her.

Bill: I think this is inspiring for the people listening, I mean regardless of what position you’re in within the organization. The right circumstances have to align themselves for someone to trust you to take it on. But I think you built that trust by constantly delivering on the stuff that was necessary and the seizing those opportunities as they presented themselves. It’s remarkable that you’re taking on branding and promotion and renaming your department. You’ve got to tell the story about your help desk. And what started, because you’re part of the West Coast group an innovation west coast group, and I said we got to have this on the East coast, as well.

[00:29:00]But it’s funny you took on helpdesk, can you explain what you did with helpdesk because I think that’s really interesting for people listening.

Shola: Okay so because I was the first IT department, 20 years ago, no 17 years ago, I’ve seen the helpdesk evolve over time. And folk’s kind of associate the word helpdesk with things don’t wrk. And I said, no no no no, that’s not what help desk is. Help desk is a product, right? To make things, to make your life easier. It’s not about fixing broken iPhones and fixing broken laptops and things like that. So I thought, what if we rebranded ourselves? Rebranding is one thing, but you also have to deliver. So I thought we’re going to create something similar to the Apple Genius bar.

[00:30:00]And I hired a company to help us with the branding strategy. And we worked very closely for a few months and we came up with a new name for my helpdesk, we call it the NEXS team, N-E-X-S, it means a whole bunch of technical words, the network……but I’ll tell you one thing just yesterday one staff members just said you know what, let’s just say it’s called New and Exciting Stuff. So that’s what we call ourselves now. So we opened our genius bar, which is just proof of concept, a couple of hours every day in the cafeteria we set up toys, we set up gizmos, gadgets, drone, robots, and all that and people stop by and they hung out with us they eventually began to know who we were.

[00:31:00] Because you know in IT, nobody really knows who you are. And we made sure everybody had turns managing the NEXS the genius bar, so that way that gave the IT people exposure to the business, the business people exposure to the IT people that are usually behind the scenes making things happen. It worked both ways. And we did this for about 11 12 months and it was so successful that my boss approved budget money to build two permanent NEXS bars one in North Carolina and one in Silver Spring. We’re going to launch the first one next week, and the second one in two weeks’ time. And we’re moving the IT away from things, now these are perks that we deliver.

Bill: So people can bring anything to you is basically what you’re saying.

[00:32:00]Just like the genius bar, like bring me your broken your whatever and we’re going to take a swing at fixing it.

Shola: Exactly. We’ll guide you if we can’t help solve the problem. People have problems with their home computers, their kids’ computers, we provide guidance and conversation if we can’t help. We don’t have all of the answers, but we will certainly ensure that the person leaves satisfied.

Bill: Well I know we have to wrap up this conversation because I know you have to get on to a meeting, but this is I hopefully the first of a couple rounds we can do together to really inspire our listeners who look at things differently. Who have a different perspective, As we wrap up is there anything important for the leaders listening to this, some guiding wisdom as we wrap up today?

[00:33:00]

Shola: My advice to leaders is do not be a rock. Be a learner. Always learn, be always open minded to learn. There’s so much to learn, and during the path of your learning your leadership increases and it improves. You can help people even more. You can never stop learning. My father died a few months at 94 and the man never stopped learning. I saw him hunt and peck on the computer once it was ridiculous you know he moved the mouse all the way to end of the screen and he was stuck for hours. He didn’t know that all he needed to do was simply pick up the mouse, bring it back home and you know control the pointer again. He thought he had lost the mouse.

Bill: That’s great.

Shola: there are so many things we take for granted you know? You should have seen that man stuck, and I did not now he was stuck. Until he finally says you know what Shola help me the mouse has disappeared. I said ad just pick it up and bring it back. [00:34:00]

Bill: Well this is great Shola I appreciate you for your time today, and it has been a lot of fun.

Shola: Thank you Bill.