

LONGstorySHORT

with LESLIE WILCOX



TITLE: Patrick Sullivan: Lifelong Problem Solver

LSS 1218 (26:46)

FIRST AIR DATE: 8/20/2019

I remember I flew over, and I met some people on the airplane, and I put a couple jobs together, sort of on the airplane. So, I did a bunch of apartments.

Coming to Hawai'i?

Yeah; I did apartments in Mokolē'ia, and I did some renovations in Waikīkī.

This is on the way here during a college break?

Yeah.

'Cause you had to pay for your hotel.

By the time I landed, I had put together three projects that, you know, I did in a week or so. And then, I had spare time and a little extra money. So, I kinda had a knack for doing this kinda stuff.

This ability to create jobs for himself on the fly got him through college, and he continues to amaze with a large business that welcomes international clients with very difficult problems, and works to solve them. Patrick Sullivan, next, on Long Story Short.

One-on-one engaging conversations with some of Hawai'i's most intriguing people: Long Story Short with Leslie Wilcox.

Aloha mai kākou. I'm Leslie Wilcox. Patrick Kevin Sullivan is the founder and chairman of Oceanit, a Honolulu-based company that has raised more than \$475 million in research and development funds since it was founded in 1985. A staff of about one hundred sixty scientists and engineers combines their skills in a mind-to-matter process to create solutions to some of the world's most difficult problems. Sullivan's path as a fearless innovator started when he was young, wanting to pursue higher education, and knowing that he would need money for that. By the time he entered college, he was already comfortable with bidding jobs and hiring workers.

My parents didn't have education. And there were five kids, so it was about feeding the kids. And that was pretty much it. My dad worked, my mom didn't.

What did he do?

Well, he started out doing aircraft maintenance kinda stuff in Los Angeles, and then he started doing some kinda landscaping work. And then, we moved up north to Seattle, and when they started the very first 747. So, he got recruited to work there as a mechanic. And I remember going through the mockup on plywood. It was really interesting, because the whole aircraft was made of plywood at that time. And so, the whole family moved, which I thought was a big, traumatic thing. Turned out it was a really good thing. But I thought, well, everything in the world is right here in L.A., and then we move, and I thought, there's nothing here. But it turns out there was a lot there. So, I mean, I learned a lot from that kind of an experience. But then, Boeing went through a down cycle, and it was just devastating. So, everybody was out of work, and everybody got laid off. So, living through those kinds of thing; right? So, that's what led him to: Okay, there's no more work, so we're gonna move. And you know, and that's kind of what—

And where did you move to?

So, we went from there ... I think we went to Arizona, Colorado, Wyoming, Texas.

And you were switching schools as you went?

Yeah; yeah. So, I went to four different high schools, which brings its own challenges; right? Because ...

You're the new kid in the room.

Yeah. So, the first thing is, within the first thirty, sixty days, you're gonna get in a fight. Just get over it; right? Do it sooner than later. But every school was like that. So, you go through these things, and you learn a lot. And so, that's why we moved around so much. I mean, they tried to keep everything together, but it was just really hard. And I think from my perspective ... that's why an education was so important.

You were living paycheck-to-paycheck, or job-to-job. Did you ever go hungry? Did you ever not be able to pay your rent?

Well, so, they struggled with that stuff, and my parents used to buy food in bulk. So, like half a cow; right? So, you carve it up, or powdered milk by the box. Right? So, it wasn't regular milk, but it was powdered milk. So, you always had something. And of course, lots of potatoes.

Do you eat many of them now?

My wife really likes potatoes. I still do. But you know they kinda made do. And then, when I was about seventeen, I started living on my own.

So, you left the house and were not supported by them at all, didn't live in the home?

Yeah. I bought a car. So, I started working when I was thirteen, and I saved up all my checks. And then, I just went out and bought a car when I turned sixteen. And the funny thing is, I didn't have a driver's license or anything, but I brought all the paychecks, I got the cash, and I just went in and bought a car. And then, I drove the car to the driver's license thing, 'cause I needed a driver's license. But otherwise, what are you gonna do; right? And then, when I started, you know, living on my own, that was it. Right? I had the car. So, my friends in college called it The Dodge Hilton...

You slept in your car at times?

Yeah; a lot. Because, you know, it was out of the rain and out of the snow, and it would sometimes get cold. But you know, when I think about it, I was mobile, and I could do all kinds of things, so I wasn't feeling sorry for myself.

Did you have a discussion with your parents before you took off?

Well, I wanted to go to college, and so, I ... drove to college. And that was it. Right? And I was able to get into the dorm. This was in Boulder.

How did you manage that? Since you came virtually without money.

So, I did some loans. And the only thing I could do was math, but I got into engineering. And I applied to a couple schools; I got into a couple schools. I didn't really know what I was doing, but it turned out that was a good idea. So, it was School of Mines, which is for mining engineering, which is the best school in the country for that, and then University of Colorado. And then, at the time, I remember, I thought the girls were much nicer in Boulder, and of course, that's where I met my wife. So, that was probably a good move. But student loans, grants, a work study. So, I worked through all semesters in the lab, so I spent a lot of time in labs. And then, I started a business when I was probably seventeen, 'cause I started doing a lot of manual labor when I was probably fifteen, fourteen. Originally at thirteen, I was working in restaurants; right? So, I did everything from busboy, bellhop, dishwasher; did all that kinda stuff. So, I was earning some money. And before that, I was actually cutting yards. So, me and this guy, E.J. Babitt, we would compete for houses and get like a dollar, two dollars a house, right, to go cut the grass, and do all the trimming—

You did the sales and the work.

Right. So, we'd compete on doing these in the neighborhood. But I kind of learned by, you know, seventeen, eighteen, that I could earn money in the summer by bidding on jobs. So, I started doing landscaping and irrigation. So, I learned irrigation from working; right? So, I started out—you know, what happens is, I could dig a really good ditch straight; right? And they'd say: Okay, we're gonna show you how to lay pipe, right, and then we're gonna show you how to do joints, and then we're gonna show you—because everything I did, I'd try to do a good job. And so, slowly, they would give me like: Can you do this? And so, I learned everything from actually just doing the work. So, by the time I was maybe seventeen, eighteen, right in there, I was able to kinda bid. I'd bid jobs, and then I would put and do the installs. So, I did, gosh, Denny's, Sambo's, we did Motel 6, commercial office buildings, these little chicken places. And I would just knock on the door during construction and talk to the guy running the job, and say: You have anybody to do this?, and then give him a price. And then, I started it basically on a credit card. 'Cause I didn't have any money. I would do that to earn money to stay in college. Right? So, that's how I would um, help pay for college, too. So, loans, grants, work study, and doing these projects.

Did you hire people, or did you do all that landscaping yourself?

No, no; I would hire. And so, it turns out, I ended up with a Hawaiian crew. There are a lot of Hawaiians in Boulder, and they were in engineering; right? So, I knew a lot of guys. And so, I said: Look, you want to earn some extra money; you know, why don't you show up. And so, I would put these guys to work, and you know, it would just be physical labor, but they're young guys.

And pay them in cash?

Yeah; yeah. Or sometimes, I would hire ... you can go to like, these employment service things, where you got guys standing around that just need a job. In some places, there's like, corners where people that need work just hang out. And you go by and you say: Okay, can I get this guy and this guy. And you put 'em on the job. And sometimes they're good, and sometimes they're—you know, one of the problems with those guys in general, and it's an oversimplification, but you know, they get paid, and then they go get drugs. Or they get paid, and then they get alcohol. So, some of 'em are having issues. So, I had guys like that, too. But I would do that in Colorado, Arizona, and parts of Wyoming. So, one of the first big jobs I did was a big restaurant in Cheyenne. And I put the high school football team to work, literally. So, I also worked in between jobs as a roustabout, so in the oilfield. So, I worked at the time, in parts of Wyoming. So, of course, there wasn't much going on in Cheyenne, but Rock Springs was considered at the time the last boom town of the West. It was like something out of an old Casper Rawlins. So, I was in a place, an abandoned house with a bunch of guys across from the Rawlins Prison. And I put in a shower. I said: I can't stand this. Right?

So, I put in my own plumbing to make a shower. But you can make a lot of money working in the oil patch; right? But it's just hard, dirty work. And so, we were building the infrastructure. This was in the summer. So, you know, and I needed to make money.

How much time did this leave you for school?

I always studied. I enjoyed what I did in school. So, the goal was to make money to be in school. That was always the goal.

And how did you manage that? How'd you balance it?

You know, it's work; right? I mean, you just do it. And so, I never really worried about that, but yeah, it does kinda add a bunch of other things to complicate things. But in my view, school was the single most important thing. And so, I just focused on that. But by the time I graduated, I actually had put together a lot of money. 'Cause I remember when I got married, I thought I needed to buy a house, so I had saved up a bunch of money.

While you were in college?

While I was in college.

Paying for tuition on your own.

Yeah. And I thought: Okay, I need to have money to buy a house if I'm gonna get married. And then, I went to grad school and I thought: Okay. I didn't know much about buying a house, but I did it. I was probably about twenty-two, twenty-three; right? And so, I learned a lot. I learned how not to do it. And later on, how to do it. But yeah, I always kinda had a knack to make money. I never saw it as an endpoint as a way to be able to do the things that were important, but I needed to make money because when you don't have any money, and you know, I remember trying to qualify, I couldn't get food stamps, 'cause if you're in college you can't get food stamps. So, I'd buy like big cartons of eggs and loaves of bread, and a box of oranges, right, and live on that for a while. Because that's it; right? And you could buy subprime oranges. They don't have to be like the topline oranges, and you can get 'em in Alberton's, go talk to the produce guys in the back, and that kinda stuff. So, that's kinda what I did to make sure I had food. Not all the time, but there were times; right? So, that got me focusing on okay, I better earn some money. So, the work study was good, the grants were good. I paid off what's called ... there was basic educational opportunity grant, there was a thing called defense student loan, or something like that. And so, when I graduated, I had some debt, so I was able to pay it off, too. But it was never a question

that I wasn't going to be able to do it; it was just trying to balance all these different things.

That must have been an enormous burden for a seventeen-year-old, eighteen. I mean, you were juggling so much. I mean, sleep must not have been a priority at that point.

I probably didn't sleep a whole lot, yeah, I think.

When you look back, it was probably harder than you knew at the time.

Well, for a lot of these things, if you know how hard it's gonna be before you do it, you probably wouldn't. So, better not think about it, and just you know, kind of focus on what's the right thing to do. And no, I don't feel bad about it or regret it, but learned a lot in the process. Because it's not just the education for the sake of education, but for the sake of learning.

Entrepreneur Patrick Sullivan was always good at math, and decided early on that he wanted to be an engineer. Beyond that, he didn't have a plan.

When I started in Boulder, I wanted to do aerospace, and they were laying off aerospace engineers. So, I ended up pivoting into engineering physics. Which was a good move for me at the time. But you would think: Well, that's crazy. So, Boulder, you know, would educate most of the astronauts; they would all go through Boulder. So, you can see that if you went through aerospace in Boulder, maybe you could be an astronaut. But then, that whole thing kinda went down. So, industries go up and down, but a good education is much more durable. And so, I thought engineering and physics is good. You know, 'cause it's very broad, it's applied, you know, hands-on. A big emphasis in nuclear, so I thought at the time: Well, I should do nuclear engineering. And then, I worked in an atomic and nuclear lab for a year, you know, during the school year. And I thought: You know, maybe I need to get outside more. Because we had a cyclotron which would produce these particles. And that was really interesting, and I spent all my time going through the data; that kinda stuff. But I think that was a good experience, because I thought: Okay, maybe I don't want to do this quite like this. And that was another thing I remember. I walked by and picked up a sample of something that was radioactive. And you know, when you work with stuff, you think: Ah, no big deal. I picked it up, and I walked by a Geiger counter, and the thing goes off, and I thought: Jesus. You know, you get really comfortable, and that's kinda dangerous; right? So, I thought: Okay, I need to think. So, I didn't stay on the nuclear track, although did lots of atomic and nuclear stuff. Which was good; it's a good intellectual exercise.

Yeah; because all the way along, it sounds like you were looking and seeing where things were going, and re-tracking yourself.

Yeah.

You mentioned meeting folks from Hawai'i at Boulder. Was one of them your wife?

Mm; yeah, I did. So, Jan was finishing up, and I kinda met her here through a friend of mine, Mike Ako. He introduced me. But then, she was going back, and I was just finishing. I had a semester to graduate. And so, she went back early, and I let her drive my car, which people thought: Wow, you must really like her. She didn't have a car. But it was funny, 'cause the car, I had built it from junkyard parts; right? So, everything kinda got bad, so I rebuilt everything. Went to the junkyard, bought all the parts, put it together. And the dipstick for the oil pan, there was a dipstick, but the real one was a calibrated coat hanger. Because all the parts didn't match, but I made it work. And so, she didn't know about the coat hanger, so she went in, and they kept pouring oil in this engine, and said: There's something wrong here. So then, they had to put it up on blocks, drain it all, and do all these things. But later, they told her: It's the coat hanger on the side. Calibrated.

And she fell in love; right?

Yes. She's amazing.

And you didn't have a true home state to return to. You'd moved around a lot, but she was—

She did.

--a person of Hawai'i.

Right. And so, in the beginning, so when I finished up, I got a job at Storage Tech, which is really a spinout out of University of Colorado, and created that whole tech corridor. So, I would go to work in the College of Engineering wing, actually, 'cause there was no infrastructure, there were just kinda forms and stuff. So, I started doing that. I was gonna go to grad school, and I started applying. But then, I thought we might stay in Colorado, but then realized that that's not how it works. And it's a wonderful thing. But, yeah. So, she said, you know: We can live anywhere, but just make sure it's in Hawai'i.

Got it.

So, Patrick Sullivan moved to Hawai'i, and earned a PhD in engineering from the University of Hawai'i at Mānoa. Time for a new plan.

And at that time that you were going through the PhD program, did you know what you'd be doing with it?

Well, so that's a good question. Everybody said: Do you want to be a professor? And I said: Not really; it's too slow. I said: Nothing personal, but you know, for a lot of this stuff, it's just not moving fast enough. And they said: Well, then why are you doing this? And I said: Well, education; I'm trying to learn. And to this day, that's exactly right. And my goal was to do things.

But you didn't have a specific purpose; you wanted to just apply what you knew?

Yeah. I was interested in all kinds of things. And so, when I finished, the option was, I could be, you know, at the university level type of thing. Which is good in a lot of ways, but again, for me, it wasn't fast enough. And there was the shipyard, which is some really good people doing important work, but I didn't want to do that. So, I created Oceanit. But I kinda knew how to do that. So, I thought: Yeah, okay, I can do this.

You mean, you knew how to start a company?

Right.

Because you ...

'Cause I learned a lot doing these kinds of projects and jobs when I was in college. And you know, how to bid a job, how to run a crew, how to deliver stuff, how to execute. That wasn't really a big deal. That always kinda came naturally. So, the thing that was important for me was, I was very interested in learning the science and the applied science and engineering of stuff. 'Cause for me, that was really fun, and it was something that would allow me to build and do things; right? Make things; which is really what I wanted to do.

And the sky's the limit; right?

The sky's the limit.

Or beyond the sky.

Right. So, it's not limited by subject or field; it's really limited by imagination. And that really became Oceanit.

Which means ...

Well, it's a Greek and Latin derivative of ocean-dweller. But see, the thing about the ocean, the ocean is a teacher in so many ways. But when you do work in the ocean, it's very interdisciplinary. So, it covers everything from, you know, physics, chemistry, biology, hydromechanics. So, it's probably the biggest mashup of all science, is the ocean. So, for me, it was kind of like an applied physics PhD, focused on fluids. And then, I did applied electrochemistry and a bunch of other things and materials, but it was a mashup. And it turns out that mashup of fields and technologies is what we do today at Oceanit; right? So, it's in energy and aerospace and materials, and all kinds of things. But if I think about it, that is kind of what it takes to build in and around the ocean. So, that worked out.

Not everybody who moves to Hawai'i wants to stay. Clearly, you do, and you have. What was it like for you being the malihini in Hawai'i, introduced to all kinds of new people and ...

Well, I had a classmate, Eric Yee, who became a physician here; he's Hawaiian-Chinese. And I used to go surfing with his brothers. They had a big house in Nu'uuanu. And we had done this road trip, right, in the Dodge Hilton. So, I brought Eric—

In your old car.

In my old car. We drove down to the Keys, we did all this stuff. And Eric hadn't been through the South, and we had this other guy from New York. And so, it was a really interesting trip, where we'd dive in on the Keys, and Eric was amazing. We were grabbing lobster, and we'd just cook on the fire, and doing all these things. But I would stay with him and his brothers, the Yee brothers, and we'd go surfing. And so, it was kind of interesting, because we'd go out surfing—of course, they were all much better than me, and I was not that good. I mean, I've gotten better. But they would say: Okay, ditch the Haole, right, he's gonna be the bait for the shark.

And they'd go out there, and I'm going: What?

But I learned a lot from them. They were super, super-nice people.

That doesn't sound so nice.

Well, they were just so nice, I thought. But it really touched me that in the community, they're so giving and so supportive. That was before I met my wife.

You came to Hawai'i for love.

And you started this business here. Obviously, you are reaching far beyond here, but would it be easier to be somewhere else from a business standpoint?

Well, that's a good question. We just had this group here this week from Korea because they want a license for the Country of Korea. We're gonna do, I think, a pipeline in Turkmenistan this quarter. We're actually gonna do heat exchangers in Abu Dhabi. I mean, this stuff is all just kinda cranking. And it was all invented here, and developed in the lab, but the market is the rest of the world. And that's how we view it. So, for manufacturing and certain things, you can build facilities in different places. For the magic, this is the place.

One example of an innovative product Oceanit developed is the LifeBed, which has sensors to take vital signs without intrusive wires and electrodes over moving clothes. It started out as a request from the Department of Defense to improve triage on the battlefields. Since then, it's been adapted for hospitals, long-term care facilities, and homecare, because it can monitor vital signs without touching the patient. Thanks to Patrick Sullivan of Kailua, O'ahu for sharing his life stories with us. And mahalo to you, for joining us. For PBS Hawai'i and Long Story Short, I'm Leslie Wilcox. Aloha nui.

You've trademarked, I believe, something called intellectual anarchy.

It always starts with asking a basic question, a fundamental question. Not necessarily a question that's about a science thing, but maybe a life thing, but basic question. So, getting the right question is a really big deal. When you ask the right question, then you go on this sort of a journey in exploring an answer. And that leads to a lot of interesting things.

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