Podcast Episode

Season 2, Episode 2: Raphael Scheps, Co-Founder and CEO of Converge (UK)

From the ULI's New Real Estate Vanguard

Date: March 25, 2025

00:00:02 --> 00:00:03: Hello and welcome.

00:00:03 --> 00:00:06: My name is Robin Marriott of Property EU and I'm

00:00:06 --> 00:00:08: delighted to be hosting the second edition of the Urban

00:00:08 --> 00:00:13: Land Institute's Vanguard podcast series following last year's successful launch.

00:00:13 --> 00:00:16: As many of you know, the UNI brings together real

00:00:16 --> 00:00:18: estate and land use experts from around the world with

00:00:18 --> 00:00:21: a clear mission to shape the world via the built

00:00:21 --> 00:00:25: environment and have a transformative impact on neighborhoods, cities and

00:00:25 --> 00:00:26: communities.

00:00:26 --> 00:00:30: This podcast series focuses on that future and that's transformative

00:00:30 --> 00:00:31: impact.

00:00:32 --> 00:00:36: Now the Uli's Young Leaders Group recently selected 10 outstanding

00:00:36 --> 00:00:40: young professionals already making waves in the industry, calling them

00:00:40 --> 00:00:42: the new real estate vanguard.

00:00:42 --> 00:00:45: And I'm delighted to be SAT opposite one of them,

00:00:46 --> 00:00:49: Rafael Shepps, who is CEO and Co founder of the

00:00:49 --> 00:00:52: UK construction technology company Converge.

00:00:52 --> 00:00:53: Rafael, welcome.

00:00:53 --> 00:00:54: Thank you very much.

00:00:54 --> 00:00:55: Really excited to be here.

00:00:55 --> 00:00:57: So why don't you just start by telling us a

00:00:57 --> 00:00:58: little bit about yourself?

00:00:59 --> 00:01:00: Absolutely.

00:01:00 --> 00:01:02: So I'm actually not from a built environment or construction

00:01:02 --> 00:01:03: background originally.
00:01:04 --> 00:01:05: I'm a physicist by background.
00:01:05 --> 00:01:07: So I grew up in Geneva, Switzerland.
00:01:07 --> 00:01:10: I'm Swiss Israeli, so I have family back in Tel
00:01:10 --> 00:01:13: Aviv and ended up doing a, an undergrad at Cambridge,
00:01:13 --> 00:01:16: which is what really brought me to the UK in
00:01:16 --> 00:01:18: physics and then a masters in mathematics.
00:01:19 --> 00:01:22: So I knew quite a lot about sensor systems, complex
00:01:22 --> 00:01:26: systems and I discovered the world of, of construction shortly
00:01:26 --> 00:01:29: after Cambridge when my Co founder and I, so he
00:01:29 --> 00:01:32: was a, an astrophysicist from Cambridge as well.
00:01:32 --> 00:01:35: We're really looking at the the use of sensors to
00:01:35 --> 00:01:37: characterise complex systems in industry.
00:01:38 --> 00:01:40: I have to share something with you, first of all,
00:01:40 --> 00:01:43: before we delve into this, because I want the listener
00:01:43 --> 00:01:45: to understand essentially what your company does.
00:01:45 --> 00:01:47: But I just a few years ago, I remember one
00:01:47 --> 00:01:50: of my friends from football asked me, Robin, what do
00:01:50 --> 00:01:50: you do?
00:01:50 --> 00:01:52: I said, oh, I'm an editor of a magazine.
00:01:53 --> 00:01:54: And he said, oh, which one?
00:01:55 --> 00:01:56: I said, well, you've never heard of it, but it's
00:01:56 --> 00:01:58: to do with a property and construction.
00:01:58 --> 00:02:01: And he paused for a while and he and he
00:02:01 --> 00:02:03: said, oh, so do you write about cement?
00:02:04 --> 00:02:05: I was looking, looking down my nose at him and
00:02:06 --> 00:02:07: saying, I don't write about cement.
00:02:07 --> 00:02:09: I, I write, I write about billion dollar deals, investment
00:02:10 --> 00:02:11: deals and so on and so forth.
00:02:11 --> 00:02:13: So I guess this is prohetic justice for me.
00:02:14 --> 00:02:18: So because your company is actually intrinsically involved in the
00:02:18 --> 00:02:19: cement business.
00:02:19 --> 00:02:22: So why don't you tell tell the listeners actually how
00:02:22 --> 00:02:24: how that is and and what it does?
00:02:24 --> 00:02:25: Yeah, absolutely.
00:02:25 --> 00:02:26: And I think I've, I guess I've got a bit
00:02:26 --> 00:02:27: of a similar story.
00:02:27 --> 00:02:29: I went from looking at the stars and and how
00:02:29 --> 00:02:32: physical systems interact across the universe.
00:02:32 --> 00:02:34: They're looking at, you know, the built environment on on
00:02:34 --> 00:02:34: earth.

00:02:35 --> 00:02:37: I think what I mean, it all really started when
00:02:37 --> 00:02:38: we my Co founder.
00:02:38 --> 00:02:41: Now we're looking at the use of sensors across across
00:02:41 --> 00:02:44: industry and we we met one of the largest construction
00:02:44 --> 00:02:47: groups in the UK, Lang Arouk Lang Arouk construction and
00:02:47 --> 00:02:49: Lang Arouk took us onto construction sites.
00:02:49 --> 00:02:51: We'd never been onto construction sites.
00:02:51 --> 00:02:53: I think it's the first time I ever put a
00:02:53 --> 00:02:55: hard hat on steel toe cat boosts.
00:02:55 --> 00:02:55: Hi, Vis.
00:02:55 --> 00:02:59: And we started realizing one, how foundational the construction sector
00:02:59 --> 00:03:03: was, one of the most foundational industries out there, but
00:03:03 --> 00:03:06: at the same time how deeply under digitized the industry
00:03:06 --> 00:03:06: was.
00:03:08 --> 00:03:10: So when we set out to build converge, we we
00:03:10 --> 00:03:13: looked at really digitizing physical reality of construction.
00:03:13 --> 00:03:16: We've really been doing what physicists have always been doing
00:03:16 --> 00:03:18: in the world of physics, which is measure the world,
00:03:18 --> 00:03:21: try and understand it, look to predict it, but actually
00:03:21 --> 00:03:22: apply that to the construction industry.
00:03:22 --> 00:03:25: And specifically we, we started with cement and concrete.
00:03:26 --> 00:03:29: When we, we went on that site visit, we'd identified
00:03:29 --> 00:03:32: the concrete sat on the critical path of project delivery.
00:03:32 --> 00:03:35: When you're building a high rise tower, you can't build
00:03:35 --> 00:03:37: the 21st floor if the 20th floor isn't ready to
00:03:37 --> 00:03:39: go and if the concrete's not hit strength.
00:03:40 --> 00:03:43: And so the concrete structure sits at the the center
00:03:43 --> 00:03:44: of the construction process.
00:03:45 --> 00:03:49: And traditional testing of concrete was very traditional, very time
00:03:49 --> 00:03:51: consuming and very inefficient.
00:03:52 --> 00:03:55: And we realized that through sensors and data, you could
00:03:55 --> 00:03:58: look to massively optimize the productivity of concrete construction by
00:03:58 --> 00:04:01: essentially generating real time data on on the behavior of
00:04:01 --> 00:04:01: concrete.
00:04:01 --> 00:04:03: So, So what does Converge actually do?
00:04:03 --> 00:04:08: Well, we actually embed sensors well, install sensors on the
00:04:08 --> 00:04:09: construction site.
00:04:09 --> 00:04:12: Some of those get embedded in concrete, ultimately gather data

00:04:12 --> 00:04:15: about the behaviour of that concrete and use that data
00:04:15 --> 00:04:18: to inform the productivity of the construction process as well
00:04:18 --> 00:04:21: as the selection of the concrete type as well.
00:04:21 --> 00:04:24: And that's where, you know, there's a big angle as
00:04:24 --> 00:04:26: well or a big impact on, on the carbon content
00:04:26 --> 00:04:27: of that material.
00:04:27 --> 00:04:30: And the more we started deepening on the sector, the
00:04:30 --> 00:04:33: more we realized that not only it was deeply inefficient,
00:04:33 --> 00:04:35: deeply under digitized, but it was also one of the
00:04:35 --> 00:04:36: most polluting sectors.
00:04:36 --> 00:04:40: And concrete and and cement specifically accounts for 8% of
00:04:40 --> 00:04:40: global CO2.
00:04:41 --> 00:04:43: That's three times as much as aviation.
00:04:43 --> 00:04:46: And there was a huge opportunity to start using, I
00:04:46 --> 00:04:48: guess, the data and insights we could gather from all
00:04:48 --> 00:04:51: these sensors to also act as a lever on decarbonization
00:04:51 --> 00:04:52: of concrete.
00:04:53 --> 00:04:53: Thanks, Rafael.
00:04:54 --> 00:04:56: So there I was thinking I'd never get into cement
00:04:56 --> 00:04:58: as as a journalist, but I've looked around your website
00:04:58 --> 00:05:00: and I just want to show you something because I
00:05:00 --> 00:05:02: think it's quite informative for the listeners to get.
00:05:03 --> 00:05:05: So here we have a case study that you have
00:05:05 --> 00:05:06: been working on.
00:05:06 --> 00:05:09: It's to do with 40 Leadenhall, which is a a
00:05:09 --> 00:05:12: very big office block, isn't it in London?
00:05:12 --> 00:05:16: It's been developed by M&G and it's also nicknamed Gotham
00:05:16 --> 00:05:16: City.
00:05:17 --> 00:05:21: And I'm reading here that this is a 34 Storey
00:05:21 --> 00:05:22: tower.
00:05:22 --> 00:05:26: And your clients, what they what they've actually been asked
00:05:26 --> 00:05:29: to do is to build the concrete cores and then
00:05:29 --> 00:05:33: use a sort of a hydraulic self climbing framework that
00:05:33 --> 00:05:33: goes up.
00:05:34 --> 00:05:38: Now your sensors get embedded into the cement there on
00:05:38 --> 00:05:39: upon each pore.
00:05:40 --> 00:05:43: And what this does is give the the engineers real
00:05:43 --> 00:05:47: time information on how that concrete is setting or curing.
00:05:47 --> 00:05:50: I think the jargon is and what that means is
00:05:50 --> 00:05:53: that they can be sure scientifically on a database that
00:05:53 --> 00:05:56: they know exactly the from the first moment when it
00:05:56 --> 00:05:59: is safe to hydraulically lift that level up so they

00:05:59 --> 00:06:01: can begin on the next one.
00:06:01 --> 00:06:03: Which means that when the workers come to work on
00:06:03 --> 00:06:05: the project, say in the morning, there's no fluffing around,
00:06:05 --> 00:06:07: there's no messing around.
00:06:07 --> 00:06:09: They can get to work on whatever they need to
00:06:09 --> 00:06:11: do immediately, thus save living man hours.
00:06:11 --> 00:06:15: Now, I'd probably describe that shockingly, but perhaps you can
00:06:15 --> 00:06:17: just, yeah, it's perhaps fill in some of the gaps
00:06:17 --> 00:06:20: there and explain as sort of a real life scenario
00:06:20 --> 00:06:20: for us.
00:06:21 --> 00:06:22: Yeah, absolutely.
00:06:22 --> 00:06:23: And I think if you take, I mean that's a
00:06:23 --> 00:06:25: great example of a typical project for us.
00:06:25 --> 00:06:28: I mean high rise construction is, is heavily linear and
00:06:28 --> 00:06:29: and constrained.
00:06:29 --> 00:06:31: You know, you can't move to the next stage of
00:06:31 --> 00:06:33: works until you finish the previous stage of works because
00:06:33 --> 00:06:35: you're, you're building up a linear, you know, tower.
00:06:35 --> 00:06:37: You can only really go up and you can only
00:06:37 --> 00:06:38: go up when you're ready to go.
00:06:39 --> 00:06:41: So I think in that, in that particular project, we
00:06:41 --> 00:06:44: were actually using our technology in, in the core.
00:06:44 --> 00:06:46: So when you'll see a high rise building being built,
00:06:46 --> 00:06:48: you'll typically see the, the core, think of it as
00:06:48 --> 00:06:51: the, the elevator shaft being built 1st and then the
00:06:51 --> 00:06:52: slabs follow after that.
00:06:53 --> 00:06:55: It's quite common around London when you start seeing, you
00:06:55 --> 00:06:57: know, a lot of these skyscrapers being built.
00:06:57 --> 00:07:01: And then ultimately the, you can think of concrete like
00:07:01 --> 00:07:01: a cake.
00:07:01 --> 00:07:03: You're pouring it into a mold, it starts to heat
00:07:03 --> 00:07:06: up, it hardens or cures over time, and then eventually
00:07:06 --> 00:07:08: it's ready to go and you can demould it and
00:07:08 --> 00:07:09: you can move on.
00:07:10 --> 00:07:12: In the context of a core, you often use a
00:07:12 --> 00:07:14: system called a, a jump form system.
00:07:14 --> 00:07:17: So it's the formwork are the the molds that actually
00:07:17 --> 00:07:18: concrete gets poured into.
00:07:19 --> 00:07:22: And what's particular about the way you build cores is
00:07:22 --> 00:07:24: you, you have formwork systems that allow you to, to
00:07:24 --> 00:07:27: build sections and then sort of jump upwards and build

00:07:27 --> 00:07:31: the next section essentially using, using those hydraulic mechanisms that

00:07:31 --> 00:07:32: you referenced earlier.

00:07:32 --> 00:07:36: And so really the, the value proposition for that particular

00:07:36 --> 00:07:39: project was all about being able to cycle through each

00:07:39 --> 00:07:39: floor faster.

00:07:40 --> 00:07:43: And we're consistently seeing that we can enable construction of

00:07:43 --> 00:07:46: concrete structures using concrete DNA.

00:07:46 --> 00:07:48: So that's the name of the, the product that we've

00:07:48 --> 00:07:50: built that that sort of centers around concrete and concrete

00:07:50 --> 00:07:51: insights.

00:07:52 --> 00:07:53: 30% faster.

00:07:53 --> 00:07:55: And depending on the project, it might be 20-30.

00:07:55 --> 00:07:58: We've had cases of it being 50% faster as well

00:07:58 --> 00:08:02: because fundamentally when concrete sits on the critical path, you

00:08:02 --> 00:08:05: really need to get to to grips with how that

00:08:05 --> 00:08:06: concrete's behaving.

00:08:06 --> 00:08:09: And that's what our technology allows you to do in

00:08:09 --> 00:08:11: real time on your phone or or on a on

00:08:11 --> 00:08:12: a web platform.

00:08:13 --> 00:08:13: Excellent.

00:08:13 --> 00:08:16: So just taking you back on perhaps the beginning of

00:08:16 --> 00:08:17: the journey.

00:08:17 --> 00:08:19: So you end up going to, was it Cambridge, did

00:08:19 --> 00:08:21: you say to study maths and physics?

00:08:21 --> 00:08:22: Absolutely.

00:08:22 --> 00:08:24: Now, can you tell me that you contemplated playing a

00:08:24 --> 00:08:27: role in the constructions and property sector as you just

00:08:28 --> 00:08:29: described it back then?

00:08:31 --> 00:08:33: I think, I think the, the honest answer is probably

00:08:33 --> 00:08:33: no.

00:08:34 --> 00:08:36: If if you were to talk to you know, me

00:08:36 --> 00:08:38: 10 years ago and tell me I'd be, I'd be

00:08:38 --> 00:08:40: looking at optimizing concrete.

00:08:40 --> 00:08:43: I think I'd, I'd certainly wouldn't believe you.

00:08:44 --> 00:08:47: I mean, the, the closest I think you get to

00:08:47 --> 00:08:49: it is there is a, a video from 20 years

00:08:49 --> 00:08:52: ago, I think I was about 8 years old, talking

00:08:52 --> 00:08:54: about how housing was a, a massive issue across the

00:08:55 --> 00:08:57: planet and, and the affordable housing would be a, a

00:08:58 --> 00:08:59: key requirement for us to scale.

00:08:59 --> 00:09:02: So I guess there was a bit of inspiration early

00:09:02 --> 00:09:04: on, But then I, I did quickly turn to, to

00:09:04 --> 00:09:07: actually looking, looking up at the universe before, before making

00:09:07 --> 00:09:09: my way back to, to the built environment.

00:09:09 --> 00:09:12: And so actually most of my time at Cambridge was

00:09:12 --> 00:09:16: focused on cosmology, string theory, astrophysics, So looking at how

00:09:16 --> 00:09:17: the universe evolves.

00:09:18 --> 00:09:21: But in many regards that's not too different to, I

00:09:21 --> 00:09:24: mean, the, the, the skills and, and the, the frameworks

00:09:24 --> 00:09:26: you learn to try and explain the universe is actually

00:09:26 --> 00:09:29: not too dissimilar to the, the way one might want

00:09:29 --> 00:09:31: to explain how a construction site works.

00:09:31 --> 00:09:34: So it's a parallel I never thought I would make.

00:09:35 --> 00:09:37: But when I discovered the construction sector and how foundational

00:09:37 --> 00:09:39: it was and how under digitized it was, both my

00:09:40 --> 00:09:42: Co founder and I started realizing we could apply a

00:09:42 --> 00:09:44: lot of the skill set that we'd we'd really learned

00:09:44 --> 00:09:47: in an entirely different context, which was understanding how the

00:09:47 --> 00:09:49: universe works to to the the domain of the the

00:09:49 --> 00:09:51: built environment and the built world around us.

00:09:52 --> 00:09:52: It's amazing.

00:09:52 --> 00:09:55: Now, when you meet strangers, or perhaps you tell friends

00:09:55 --> 00:09:58: and family what you do, do you explain to them

00:09:58 --> 00:10:00: that you're in construction, in property?

00:10:00 --> 00:10:03: Or do you explain to them that you're an entrepreneur?

00:10:03 --> 00:10:06: Or do you say that actually you are a tech

00:10:06 --> 00:10:06: guy?

00:10:08 --> 00:10:10: So, so when I get asked what I do at

00:10:10 --> 00:10:12: a, at a bar, it always ends up with a,

00:10:12 --> 00:10:14: a small moment of dread as I have to contemplate

00:10:14 --> 00:10:17: explaining all sorts of things about concrete construction and how

00:10:17 --> 00:10:18: it all works.

00:10:19 --> 00:10:21: I tend to keep it short and start with, you

00:10:21 --> 00:10:24: know, I, I Co founded a start up that optimizes

00:10:24 --> 00:10:27: and decarbonizes construction using data and AI.

00:10:27 --> 00:10:30: And then you start to, to scratch, you know, the

00:10:30 --> 00:10:33: surface and start going under the surface and, and really

00:10:33 --> 00:10:35: looking to, to explain what that means.

00:10:35 --> 00:10:37: So typically the first question that ends up being, oh,
00:10:37 --> 00:10:38: what, what do you measure?
00:10:39 --> 00:10:41: And, and that's when you start going into, well, you
00:10:41 --> 00:10:43: know, we look at the materials and concrete is where
00:10:44 --> 00:10:45: we started, but we also look at the tools.
00:10:46 --> 00:10:49: And if you think of a construction site, it's made-up
00:10:49 --> 00:10:52: of people using tools in an environment to move material.
00:10:52 --> 00:10:55: So if you can actually start gathering data about the
00:10:55 --> 00:10:57: people, the tools, the material and the environment, then you
00:10:57 --> 00:10:59: started to build a a complete model of construction.
00:10:59 --> 00:11:02: And that's actually the the end goal for Converge is
00:11:02 --> 00:11:05: really building out this entire model of the construction process
00:11:05 --> 00:11:06: using sensor information.
00:11:06 --> 00:11:08: Concrete was actually just just the beginning of a much
00:11:08 --> 00:11:09: longer journey for us.
00:11:10 --> 00:11:12: And hopefully by the time you finish explaining that the
00:11:12 --> 00:11:14: person from the bar hasn't actually started to walk away.
00:11:14 --> 00:11:15: Absolutely.
00:11:15 --> 00:11:18: Occasionally that happens and I've had a few unique moments
00:11:18 --> 00:11:21: where people actually are genuinely interested.
00:11:22 --> 00:11:23: We're genuinely interested now.
00:11:23 --> 00:11:26: You mentioned decarbonisation a few weeks ago you announced a
00:11:26 --> 00:11:27: funding round, didn't you?
00:11:27 --> 00:11:28: And I think it was.
00:11:28 --> 00:11:30: Perhaps you could tell us a little bit about this
00:11:30 --> 00:11:31: because it is relevant.
00:11:31 --> 00:11:31: It would.
00:11:31 --> 00:11:34: It also instructs us to where this industry can head.
00:11:34 --> 00:11:37: What kind of role can a company like yours play?
00:11:38 --> 00:11:39: Yeah, absolutely.
00:11:40 --> 00:11:44: Super excited to have announced sort of $20 million investment
00:11:44 --> 00:11:44: rounds.
00:11:44 --> 00:11:47: It was led by AUS based fund called OGCI climate
00:11:47 --> 00:11:51: Investments, OGCI Climate Investments or so OGCI stands for the
00:11:51 --> 00:11:53: oil and Gas Climate initiative.
00:11:53 --> 00:11:57: It's actually backed by some of the largest energy companies,
00:11:57 --> 00:12:00: you know, total BP, Shell, who have essentially created this

00:12:01 --> 00:12:04: independent consortium specifically focused on decarbonization.

00:12:05 --> 00:12:09: What's really interesting about that is, is you've actually got

00:12:09 --> 00:12:12: an incredible team, super scientific in their approach to to

00:12:12 --> 00:12:16: decarbonization, looking to deploy over a billion dollars across, you

00:12:16 --> 00:12:19: know, their first fund and they've got a number of

00:12:19 --> 00:12:21: other sort of initiatives as well.

00:12:21 --> 00:12:23: So very much a specialist decarbonization investor.

00:12:24 --> 00:12:27: We felt very much mission aligned with the team over

00:12:27 --> 00:12:27: there.

00:12:28 --> 00:12:30: We as a company didn't start as a as an

00:12:30 --> 00:12:31: impact company.

00:12:31 --> 00:12:34: It was very much about optimizing time efficiency and, and

00:12:34 --> 00:12:37: you know, we founded Converge in over seven years ago

00:12:37 --> 00:12:38: now.

00:12:38 --> 00:12:38: So it's been a while.

00:12:38 --> 00:12:41: It was at the, the dawn of construction tech before

00:12:41 --> 00:12:42: construction tech was cool.

00:12:43 --> 00:12:45: And, and at the time, I think decarbonization was not

00:12:45 --> 00:12:47: on the agenda of most construction companies.

00:12:48 --> 00:12:49: It was all about how do you hit the bottom

00:12:49 --> 00:12:50: line?

00:12:50 --> 00:12:51: How do you optimize my construction costs?

00:12:52 --> 00:12:54: And so the, the value proposition very much centred around

00:12:54 --> 00:12:54: that.

00:12:55 --> 00:12:57: Over time, as we've gathered more and more data, in

00:12:57 --> 00:13:00: particular about concrete, we started to realize that that data

00:13:00 --> 00:13:02: can have an impact on the carbon content of that

00:13:03 --> 00:13:03: concrete.

00:13:03 --> 00:13:07: You're seeing lots of novel concretes, novel chemistries, you might

00:13:07 --> 00:13:10: have seen the likes of carbon cure, which you know,

00:13:10 --> 00:13:13: captures carbon into, into concrete or, or solidia on the

00:13:13 --> 00:13:16: sort of carbon capture side, but also new concretes like

00:13:16 --> 00:13:19: SEM free that are using novel materials that are cement

00:13:19 --> 00:13:19: free.

00:13:19 --> 00:13:21: And, and as a result, sort of net zero in

00:13:21 --> 00:13:22: terms of carbon impact.

00:13:24 --> 00:13:27: And, and so we started realizing that that all this

00:13:27 --> 00:13:30: data we'd gathered about the behavior of concrete could really

00:13:30 --> 00:13:32: impact the carbon content of concrete.

00:13:33 --> 00:13:36: And I think that the biggest sort of realization or
00:13:36 --> 00:13:38: impact we can have, I mean, we came to this
00:13:38 --> 00:13:42: realization as we were doing a lot of impact modelling
00:13:42 --> 00:13:45: alongside OGCI actually was that by by helping influence the
00:13:45 --> 00:13:47: cement content of existing chemistries.
00:13:48 --> 00:13:51: And you know, we estimate that there's about 10 to
00:13:51 --> 00:13:53: 15% of excess cement in most concretes.
00:13:54 --> 00:13:57: You'd be looking at a global opportunity of about 400
00:13:57 --> 00:14:00: million tons of CO2 that could be reduced just attributable
00:14:00 --> 00:14:03: to essentially overdosing of cement and concrete.
00:14:03 --> 00:14:06: People put a bunch of extra cement into concrete because
00:14:06 --> 00:14:08: we don't have good data and and converge can help
00:14:08 --> 00:14:09: solve that problem.
00:14:09 --> 00:14:13: Well now you mentioned you, you started this was it
00:14:13 --> 00:14:14: 8 years ago, so 2014, Yeah.
00:14:15 --> 00:14:17: Can you just explain when was the moment that you
00:14:17 --> 00:14:19: realised, Oh my gosh, I'm actually going to found a
00:14:19 --> 00:14:19: company?
00:14:20 --> 00:14:21: This is the name.
00:14:21 --> 00:14:22: Where did the name come from by the way?
00:14:22 --> 00:14:25: And what were your experiences of setting up the company
00:14:25 --> 00:14:26: and building out a team?
00:14:27 --> 00:14:27: Yeah, absolutely.
00:14:28 --> 00:14:31: So we actually joined an incubator called Entrepreneurs First that
00:14:31 --> 00:14:32: you might have heard of.
00:14:32 --> 00:14:35: So it was, it was right at the beginning of
00:14:35 --> 00:14:35: EF.
00:14:36 --> 00:14:40: These days EF is a pretty, pretty huge sort of
00:14:40 --> 00:14:41: tech investor.
00:14:41 --> 00:14:44: At the time I think it was 5 or 6
00:14:44 --> 00:14:47: people and my Co founder and I had had applied
00:14:47 --> 00:14:49: right after Cambridge.
00:14:49 --> 00:14:52: Ended up joining sort of what they called Cohort 3
00:14:52 --> 00:14:55: with all sorts of ideas about the future.
00:14:56 --> 00:15:00: Really what led us to converge was this common fascination
00:15:00 --> 00:15:02: for digitizing the physical world.
00:15:03 --> 00:15:05: It it was all about sensors and how could sensors
00:15:05 --> 00:15:06: help optimize industries?
00:15:07 --> 00:15:09: But yeah, I mean, I think EF was a a
00:15:09 --> 00:15:11: huge catalyst to then, you know, look at look at
00:15:11 --> 00:15:13: building out, building out converge.

00:15:15 --> 00:15:18: And from, from there, we discovered the construction industry quite

00:15:18 --> 00:15:20: serendipitously when we met Langouroek actually.

00:15:21 --> 00:15:23: And Langouek took us onto a construction site and, and

00:15:23 --> 00:15:25: really did come to that realization that, that there was

00:15:25 --> 00:15:26: so much to do in that sector.

00:15:26 --> 00:15:28: And at the time, most people thought we were totally

00:15:28 --> 00:15:30: crazy to want to disrupt construction.

00:15:30 --> 00:15:32: I mean, I, I remember the, the very first investment

00:15:32 --> 00:15:34: round we raised, it was, I guess you could call

00:15:34 --> 00:15:35: it a pre precede.

00:15:36 --> 00:15:38: It was about four, 100K back at the back end

00:15:38 --> 00:15:39: of 2015.

00:15:40 --> 00:15:42: And our, our investors explicitly told us we're investing because

00:15:42 --> 00:15:44: we like you, but we're pretty sure that within six

00:15:44 --> 00:15:47: months you're going to pivot to another industry.

00:15:47 --> 00:15:50: And it, it, you know, it's pretty nice 7-8 years

00:15:50 --> 00:15:52: later to be able to say, well, actually we, we

00:15:52 --> 00:15:54: stuck it out in this sector and, and, and actually

00:15:54 --> 00:15:55: the thesis was correct.

00:15:55 --> 00:15:58: We were perhaps a few years early to the market,

00:15:58 --> 00:16:01: but certainly these last three years COVID had a tremendous

00:16:01 --> 00:16:06: positive impact surprisingly on on the digitization of the construction

00:16:06 --> 00:16:09: sector and and accelerated the need for digital technologies.

00:16:09 --> 00:16:10: Exactly.

00:16:11 --> 00:16:13: Looking at your website by the way, So listeners, we're

00:16:13 --> 00:16:14: looking at his homepage.

00:16:14 --> 00:16:15: Now who who are we?

00:16:16 --> 00:16:17: Now look at look at this.

00:16:17 --> 00:16:21: We are convergence you call yourself now it's then it

00:16:21 --> 00:16:25: says our ever growing team is diverse, OK, skilled.

00:16:25 --> 00:16:27: Yeah, I can, I can believe that.

00:16:27 --> 00:16:29: But then it says and seriously good looking.

00:16:29 --> 00:16:32: So you're obviously not short of confidence.

00:16:33 --> 00:16:34: Yeah, absolutely.

00:16:34 --> 00:16:35: No, we do call ourselves convergence.

00:16:35 --> 00:16:37: We've built a strong culture at the company.

00:16:37 --> 00:16:39: I think it was, I mean, we both my Co

00:16:39 --> 00:16:42: founder and I saw, you know, building that, that strong

00:16:42 --> 00:16:45: culture as a, a bedrock to, to building an exciting

00:16:45 --> 00:16:46: business.

00:16:47 --> 00:16:51: Ultimately, what was quite remarkable, I remember a few years

00:16:52 --> 00:16:55: into the business, we'd grown to, you know, about 1520

00:16:55 --> 00:16:56: people.

00:16:56 --> 00:16:58: And we very quickly realized we had just as many

00:16:58 --> 00:16:59: nationalities across the business.

00:17:00 --> 00:17:02: And I think we, we'd grown at some point to

00:17:02 --> 00:17:05: about 2530 and realized we had, we had over 18

00:17:05 --> 00:17:08: nationalities across that, which was, it was really nice in

00:17:08 --> 00:17:11: terms of sort of the diversity of thinking and thought

00:17:11 --> 00:17:13: that that brought to the table.

00:17:14 --> 00:17:17: We've also wanted to build a, you know, very collaborative

00:17:17 --> 00:17:20: culture, but also very scientific one.

00:17:20 --> 00:17:22: And that one lands differently with different people.

00:17:22 --> 00:17:25: But we very much operate on the basis of the,

00:17:25 --> 00:17:26: the scientific method.

00:17:26 --> 00:17:29: We we have hypotheses, we look to validate or corroborate

00:17:29 --> 00:17:31: or falsify those and then build the business out that

00:17:31 --> 00:17:32: way.

00:17:32 --> 00:17:35: Yes, it says 8 no 11 languages between you.

00:17:35 --> 00:17:38: It also says I really hesitate to ask this question.

00:17:38 --> 00:17:39: It says 3 species.

00:17:40 --> 00:17:42: Dare I even ask what that means on your your

00:17:42 --> 00:17:43: own website there?

00:17:45 --> 00:17:47: I'll, I'll let you ask our marketing Director.

00:17:48 --> 00:17:50: You'll get back to us on on, on that one.

00:17:51 --> 00:17:54: So looking, looking back now on when you started up

00:17:54 --> 00:17:56: the company to where you are today, are there are

00:17:57 --> 00:17:59: there kind of any things that you wish you had

00:17:59 --> 00:18:02: known then that you do know now that would help

00:18:02 --> 00:18:05: people that are thinking of, you know, being becoming entrepreneurs,

00:18:05 --> 00:18:07: getting or getting into this sector?

00:18:08 --> 00:18:09: Yeah, there's probably loads.

00:18:10 --> 00:18:14: So the question is, where do I start The yeah,

00:18:14 --> 00:18:19: the, the, there's, there's a few, a few areas.

00:18:19 --> 00:18:22: I mean, some that are more construction specific or construction

00:18:22 --> 00:18:25: tech specific that, that I think are really relevant.

00:18:25 --> 00:18:27: And I know those that are, that are maybe a

00:18:28 --> 00:18:29: bit a bit more generalized.

00:18:31 --> 00:18:35: I think to anybody looking at construction tech, the the

00:18:35 --> 00:18:38: one piece of advice that I'd give is is it's,

00:18:38 --> 00:18:41: it's a, it's a highly taxonomized industry.

00:18:42 --> 00:18:47: So by that I mean towers, bridges, hospital projects, tunnels,

00:18:48 --> 00:18:51: they're all very different, right?

00:18:51 --> 00:18:53: I mean, and at surface level you might go, OK,

00:18:53 --> 00:18:57: well, you've got infrastructure, you've got residential real estate, you've

00:18:57 --> 00:19:00: got commercial real estate, you've got industrial sort of structures.

00:19:01 --> 00:19:03: But for a long time, we, we started off building

00:19:03 --> 00:19:05: a product that was geared at at like too broad

00:19:05 --> 00:19:06: of a segment.

00:19:07 --> 00:19:10: And, and we started realizing that actually we needed to,

00:19:10 --> 00:19:12: we needed to taxonomize the construction sector.

00:19:12 --> 00:19:14: And in our case that came by by kind of

00:19:14 --> 00:19:18: looking at sort of segments, but also types of construction

00:19:18 --> 00:19:18: methodologies.

00:19:19 --> 00:19:21: So whether you were building a tower using post tension

00:19:21 --> 00:19:24: concrete or whether it was a regular reinforced concrete frame

00:19:24 --> 00:19:26: was a huge had a huge bearing on whether or

00:19:26 --> 00:19:29: not, you know, you were delivering value to the end

00:19:29 --> 00:19:29: customer.

00:19:30 --> 00:19:33: And then the, the type of elements you might be

00:19:33 --> 00:19:36: pouring, whether you were, you were building a foundation or,

00:19:36 --> 00:19:39: you know, a beam, I mean, all of these parameters

00:19:39 --> 00:19:42: started forming part of whether or not we had product

00:19:42 --> 00:19:43: markets fit.

00:19:43 --> 00:19:44: And, and you know, the, the common piece of advice

00:19:44 --> 00:19:46: you'll often get when you start a start up is,

00:19:46 --> 00:19:47: you know, the first thing you got to do is

00:19:47 --> 00:19:48: get to product market fit.

00:19:49 --> 00:19:51: Because once you get to product market fit, then you

00:19:51 --> 00:19:52: can start scaling the value proposition.

00:19:53 --> 00:19:55: But in construction, you really got to focus on who

00:19:55 --> 00:19:56: are you actually selling to?

00:19:56 --> 00:19:59: Because it, it's a highly fragmented market.

00:19:59 --> 00:20:01: That means there's a ton of opportunity, but it also

00:20:01 --> 00:20:03: means you you need to to sort of build the

00:20:03 --> 00:20:04: right layers of abstraction.

00:20:04 --> 00:20:07: To think about those, those different sub segments and build

00:20:07 --> 00:20:10: a product that's as as massively applicable to all of

00:20:10 --> 00:20:12: them as possible, but but one step at a time.

00:20:12 --> 00:20:15: So kind of segment by segment and and that's kind
00:20:15 --> 00:20:16: of Al mean.
00:20:16 --> 00:20:18: I you know, I remember a few years ago we
00:20:18 --> 00:20:21: we had sort of feedback coming from our customers.
00:20:21 --> 00:20:23: Some loved the product, some were like, oh, it was
00:20:23 --> 00:20:26: nice, but you know, wasn't necessarily a must have and
00:20:26 --> 00:20:27: super confusing.
00:20:27 --> 00:20:29: And and then the more you start digging in, the
00:20:29 --> 00:20:32: more you realize, Oh, well, actually the the fragmentation of
00:20:32 --> 00:20:34: that market means you really got to start thinking about,
00:20:34 --> 00:20:36: you know, these complex segments individually.
00:20:38 --> 00:20:40: Question now about leadership, if that's OK.
00:20:42 --> 00:20:45: It looks like a a young company you've mentioned I
00:20:45 --> 00:20:48: think working collaboratively.
00:20:48 --> 00:20:52: But just speaking personally, do you have a leadership style?
00:20:52 --> 00:20:55: Have you had one developed or are you still developing?
00:20:55 --> 00:20:58: What kind of sort of Coats founder and Coats CEO
00:20:58 --> 00:21:00: do you see yourself as?
00:21:01 --> 00:21:02: Wow, what a question.
00:21:03 --> 00:21:04: Do I have a leadership style?
00:21:04 --> 00:21:09: I mean, I, I, I think yeah.
00:21:09 --> 00:21:10: I mean, I, I don't know if what I, what
00:21:10 --> 00:21:12: I was saying, what my team would say are are
00:21:12 --> 00:21:12: one and the same.
00:21:13 --> 00:21:14: Well, we we can check.
00:21:15 --> 00:21:15: Absolutely.
00:21:17 --> 00:21:18: Listen, I mean it comes back to the culture across
00:21:18 --> 00:21:19: the organization, right.
00:21:19 --> 00:21:23: So there's, there's kind of four key behaviours that that
00:21:23 --> 00:21:24: we've set out at the company.
00:21:26 --> 00:21:27: Collaborative is, is one of them.
00:21:27 --> 00:21:30: Scientific is another outcome focus is 1/3 and and ultimately
00:21:30 --> 00:21:32: sort of responsible as the 4th.
00:21:32 --> 00:21:34: So it's about building a, a culture where you know,
00:21:34 --> 00:21:36: if a fire is burning and it's not yours, you
00:21:36 --> 00:21:37: don't just let it burn.
00:21:37 --> 00:21:40: That's what we mean by responsible by collaborative.
00:21:40 --> 00:21:43: It's always about assuming best intent on, on the other
00:21:43 --> 00:21:45: side of, of people you're working with.
00:21:46 --> 00:21:49: By scientific, it's about sort of taking a data-driven approach
00:21:49 --> 00:21:52: and and by by outcome focus it, you know, it
00:21:52 --> 00:21:54: really comes down to you've got to focus on what

00:21:54 --> 00:21:56: you're outcomes are rather than your tasks.
00:21:56 --> 00:21:59: And, you know, I've seen cases of people doing 100
00:21:59 --> 00:22:02: tasks to only realize the wrong outcome.
00:22:02 --> 00:22:05: And that that's always, you know, heartbreaking because you've got
00:22:05 --> 00:22:07: someone dedicated doing a bunch of work, but actually realizing
00:22:07 --> 00:22:08: that the wrong thing.
00:22:10 --> 00:22:12: Now going back to, you know, what does that mean
00:22:12 --> 00:22:13: in terms of my leadership style?
00:22:13 --> 00:22:16: I mean, I'd like to, to think we're quite a
00:22:16 --> 00:22:20: sort of, you know, bottoms up organization in, in that
00:22:20 --> 00:22:25: we're, we're looking to, to really put the, the individual
00:22:25 --> 00:22:28: contributors that are at sort of the edge of the
00:22:28 --> 00:22:32: organization front and center in, in the decision making.
00:22:32 --> 00:22:35: They're ultimately the experts of, of their domains.
00:22:36 --> 00:22:39: And so it's about building systems across the organization that
00:22:39 --> 00:22:41: allow you to to make the best decision based on
00:22:41 --> 00:22:43: based on the experience of those, you know, those stellar
00:22:43 --> 00:22:46: individual contributors you're bringing into the team.
00:22:49 --> 00:22:49: Thank you.
00:22:49 --> 00:22:53: In your mind, we've mentioned that recent funding round that
00:22:53 --> 00:22:57: you've, you've the investor that's come in, obviously that's successful,
00:22:57 --> 00:22:59: a big milestone for the company.
00:22:59 --> 00:23:02: But in your mind where, how big can this thing
00:23:02 --> 00:23:02: grow?
00:23:02 --> 00:23:04: Are you, what's the ultimate goal?
00:23:04 --> 00:23:06: Would it be an IPO for example?
00:23:06 --> 00:23:08: In the fullness of time, where do you see this
00:23:08 --> 00:23:08: thing going?
00:23:09 --> 00:23:09: Yeah.
00:23:09 --> 00:23:12: I mean, I think, you know, we, we believe there's
00:23:12 --> 00:23:15: a, a multi billion dollar opportunity to fundamentally optimise and
00:23:15 --> 00:23:18: decarbonise construction using digital systems.
00:23:19 --> 00:23:23: What converged us today is what we optimize concrete.
00:23:24 --> 00:23:27: But over time we see that evolving to optimizing materials
00:23:27 --> 00:23:31: and then beyond materials, optimizing resources on construction and decarbonizing
00:23:32 --> 00:23:35: the, the entire sort of construction sector using digital technologies
00:23:35 --> 00:23:37: and digital tools as as enablers.

00:23:38 --> 00:23:40: So it's, it's really, I mean, we're really a data

00:23:40 --> 00:23:43: company and we're using data to help inform decision making

00:23:43 --> 00:23:46: within construction groups to allow them to optimize efficiency and

00:23:46 --> 00:23:47: sustainability.

00:23:48 --> 00:23:50: And, and when you look at the labor productivity gap

00:23:50 --> 00:23:53: that exists in construction, I mean, there's a $1.6 trillion

00:23:53 --> 00:23:54: labor productivity gap.

00:23:55 --> 00:23:58: And then you look at the carbon emissions, you know,

00:23:58 --> 00:24:02: there's, there's essentially gigatons and gigatons of emissions that could

00:24:02 --> 00:24:06: be reduced ultimately through, through better visibility on, on, on

00:24:06 --> 00:24:09: your actual kind of carbon impact as as an industry.

00:24:09 --> 00:24:12: But all that requires a digital enabling layer.

00:24:12 --> 00:24:14: And, and that's where we see kind of converge fit

00:24:14 --> 00:24:17: in as, as the, the physical intelligence platform.

00:24:17 --> 00:24:19: So there's, there's a bunch of platforms out there looking

00:24:19 --> 00:24:22: at financial intelligence or they might be looking at design

00:24:22 --> 00:24:24: tools that, you know, how do you better design buildings?

00:24:24 --> 00:24:27: The, the specific definition of, of where we want to

00:24:27 --> 00:24:30: be is a physical intelligence engine, a platform that allows

00:24:30 --> 00:24:33: you to, to understand the ground physical truth of what's

00:24:33 --> 00:24:36: going on and then feed that insight within the construction

00:24:36 --> 00:24:37: organization.

00:24:37 --> 00:24:39: We, we see it as an open and interoperable future

00:24:39 --> 00:24:42: that that means that we're, we're not the best sensor

00:24:42 --> 00:24:45: company, we're not the best dashboarding tool, but you know,

00:24:45 --> 00:24:48: we do think we can become the best physical intelligence

00:24:48 --> 00:24:51: platform and then feed that intelligence to all the stakeholders

00:24:51 --> 00:24:54: that need it within construction companies.

00:24:54 --> 00:24:57: And and that's where the multi billion dollar IPO lies

00:24:57 --> 00:24:58: in my view.

00:24:58 --> 00:24:59: Please stay in touch with me.

00:25:01 --> 00:25:03: I will want to know you then when that happens,

00:25:03 --> 00:25:03: for sure.

00:25:04 --> 00:25:04: Yeah.

00:25:04 --> 00:25:05: Physical intelligence.

00:25:05 --> 00:25:06: I love that phrase, by the way.

00:25:06 --> 00:25:08: Yeah, that that's, that's lovely.

00:25:08 --> 00:25:08: That says it all.

00:25:09 --> 00:25:13: For those listening that want to become successful, you're still

00:25:13 --> 00:25:14: a young company.

00:25:14 --> 00:25:15: You yourself are still very young.

00:25:16 --> 00:25:18: Is there a single piece of advice that you can

00:25:18 --> 00:25:21: give listeners that want to want to be successful in

00:25:21 --> 00:25:23: there, in this, in this a field like this?

00:25:25 --> 00:25:28: There's, there's a few, I think, I think if you're

00:25:28 --> 00:25:31: talking construction tech specifically, get out there on the construction

00:25:31 --> 00:25:34: site and, and, and listen, I'd say that's, that's, that's

00:25:34 --> 00:25:37: probably the, the biggest impact thing you could do.

00:25:37 --> 00:25:38: Which is what happened to you, right?

00:25:39 --> 00:25:39: Yeah, yeah.

00:25:39 --> 00:25:41: And, and I think combined across the organization, we must

00:25:41 --> 00:25:44: have spent thousands of hours on construction sites by now.

00:25:44 --> 00:25:47: Understanding the pain points, understanding the challenges and and those

00:25:47 --> 00:25:48: learnings are invaluable.

00:25:49 --> 00:25:50: And anything more generally.

00:25:51 --> 00:25:54: Fundamentally, if I think back to our story, right, I

00:25:54 --> 00:25:56: mean, our, our, our investors thought we were crazy early

00:25:56 --> 00:25:57: on, right?

00:25:57 --> 00:25:59: I mean, the broader investment market didn't think there was

00:25:59 --> 00:26:00: a market in, in construction tech.

00:26:02 --> 00:26:05: And, and it really probably did come down to sort

00:26:05 --> 00:26:09: of a certain irrational conviction in our own views about,

00:26:09 --> 00:26:10: about the industry, right?

00:26:10 --> 00:26:13: And so if you, if you do believe you've, you've

00:26:13 --> 00:26:15: found a market, you found an opportunity, I, I, you

00:26:15 --> 00:26:18: know, you want to hold on to that conviction because

00:26:18 --> 00:26:21: it, you know, the chances are that you, you've got

00:26:21 --> 00:26:23: to a gut feel about a particular sector for a

00:26:23 --> 00:26:23: reason.

00:26:24 --> 00:26:28: And you've identified an opportunity that's, that's worth, that's worth

00:26:28 --> 00:26:29: going after.

00:26:29 --> 00:26:31: And I, I guess if you combine that with what

00:26:31 --> 00:26:33: I said earlier, which is go, go listen to the

00:26:33 --> 00:26:36: customer, then you know, your, your first idea might not

00:26:36 --> 00:26:37: be the right one.

00:26:37 --> 00:26:39: But so long as you've got, you know, the right

00:26:39 --> 00:26:41: level of conviction and the right amount of customer input,
00:26:41 --> 00:26:44: then I think ultimately you'll eventually iterate towards, towards the
00:26:44 --> 00:26:44: right product.
00:26:45 --> 00:26:45: Yeah.
00:26:45 --> 00:26:46: So belief belief.
00:26:47 --> 00:26:49: Believe in your products, believe in yourselves essentially.
00:26:50 --> 00:26:50: Absolutely.
00:26:51 --> 00:26:53: And just finally, is there any, I don't know if
00:26:53 --> 00:26:55: you listen to podcasts or you have much time for
00:26:55 --> 00:26:58: reading, but is there a particular book or podcast that
00:26:58 --> 00:27:00: you can recommend to people that would help them on
00:27:01 --> 00:27:01: their journey?
00:27:02 --> 00:27:06: Yes, in the construction tech world, certainly the the Construction
00:27:06 --> 00:27:08: Physics Substack is a is a really great set of
00:27:08 --> 00:27:12: articles on on the dynamics of construction tech and opportunities
00:27:12 --> 00:27:13: that lie within it.
00:27:15 --> 00:27:15: Is that easy?
00:27:15 --> 00:27:17: Easy to find by the way.
00:27:17 --> 00:27:18: Yeah, yeah, absolutely.
00:27:18 --> 00:27:21: Just just Google construction physics and and I think you'll
00:27:21 --> 00:27:22: find it in on Google.
00:27:22 --> 00:27:25: And any other groups that people can look at to
00:27:25 --> 00:27:25: to to join.
00:27:25 --> 00:27:28: Yeah, so if if you're the founder of a construction
00:27:28 --> 00:27:31: tech startup, there's actually the the C Tech Club, which
00:27:31 --> 00:27:34: is a group of over 100 construction tech founders.
00:27:34 --> 00:27:37: There's a Slack channel, there's a WhatsApp group, and that's
00:27:37 --> 00:27:40: a super valuable resource to talk to other construction tech
00:27:40 --> 00:27:42: founders about their journeys and stories.
00:27:44 --> 00:27:44: Check it out, listeners.
00:27:44 --> 00:27:45: There you go.
00:27:45 --> 00:27:46: You heard it from the horse's mouth.
00:27:46 --> 00:27:48: Thank you so much, Rafael Scheps.
00:27:49 --> 00:27:51: Thank you for joining us on this podcast.
00:27:51 --> 00:27:52: It was a pleasure.
00:27:52 --> 00:27:52: Thank you very much.
00:27:53 --> 00:27:55: We hope you've enjoyed this podcast.
00:27:55 --> 00:27:58: To find out more about the other episodes of this
00:27:58 --> 00:28:00: series, go to the Young Leaders page on the ULI

00:28:00 --> 00:28:01: Europe website.
