

## Dan Lewis and Ram Parameswaran on Disrupting the U.S. Trucking Industry

Ram Parameswaran, Founder of Octahedron Capital, and Dan Lewis, Co-Founder and Chief Executive Officer of Convoy, joined members for a fireside chat at Latticework on December 16, 2021.

Ram and Dan discussed Convoy's vision and business model and explored the topic, "The U.S. Trucking Industry: A Case Study in Marketplace Economics".

*This conversation is available as an episode of Gain Industry Insights, a member podcast of MOI Global. (Learn [how to access](#) member podcasts.)*

*The following transcript has been edited for space and clarity.*

**John Mihaljevic:** A warm welcome to all of you joining us for this live session at Latticework 2021. I'm excited about this conversation between my good friend and terrific crossover investor, Ram Parameswaran, and Dan Lewis, an entrepreneur who is revolutionizing — if that word is not overused — the US trucking industry. Ram will say a few more words about Dan and what he's up to with Convoy, but first I want to give a little background about Ram.

He is the founder of Octahedron Capital, a global growth-oriented investment firm that makes concentrated investments in leading public and private companies that drive the world's internet economy. Before founding Octahedron, Ram was a partner and portfolio manager at another great crossover firm, Altimeter Capital. Ram has a tremendous amount of experience, both public and private, which informs his investments in both of those areas.

When I want to know what's going on in terms of companies before they hit the public markets, I look to Ram to tell me what the hottest private companies are right now, and who's doing some interesting stuff. That's how we got to Convoy. Ram, I'll turn it over to you to take it from here.

**Ram Parameswaran:** Thank you, John. I appreciate you having me and my friend, Dan Lewis, at Latticework 2021. All of the sessions you've done so far have been world class. I've learned a lot, so I encourage everyone to join in in future years.

I am excited today to chat to my friend, Dan Lewis. Dan is the CEO of Convoy, a company based in Seattle. We're going to talk a lot about Convoy today, but before Convoy, Dan was one of the senior execs at Amazon. He was at a startup that was acquired by Google, and was a group product manager at Microsoft, so he has the triumvirate of the major companies in the Seattle area. He was a consultant before that and an undergrad at Yale. We bonded when he came over to our house for dinner one time and he stayed overnight on our couch.

**Dan Lewis:** I'm always trying to save a couple bucks for the company and freeload at your house in San Francisco!

**Parameswaran:** It's a pleasure to have you here. I've known you for a few years now. It's impressive to see how you've grown over the years and, more importantly, how Convoy has grown. I'm excited to work with you over the next — hopefully — decade or so.

You have this incredible background in technology and supply-chain optimization — most recently at Amazon. You're a talented person. You could do a lot of things in your life. Talk to me about what got you started. Why did you pursue this particular space? Maybe even better, start by giving us an introduction to Convoy. What do you guys do? What is Convoy all about?

**Lewis:** The core business that Convoy offers today is full truckload delivery services for companies that are shipping freight in the United States. Approximately a trillion dollars is spent on trucking every year in the US. That's about 80 percent of total freight spend. The other 20 percent goes to rail, air, pipeline, and ocean. It's a big business.

The average trucking company has about three trucks. I did the math: I added up the number of trucks that are owned by the top 20 trucking companies, and it came to about 12 percent of the total fleet, so the industry is extremely fragmented. There are about 100,000 companies that ship truckloads of freight around the country. There are about 15,000 to 18,000 freight brokers that are helping truck drivers find jobs and match those jobs up with those shippers. It's like a trading model where you buy and sell capacity as a broker.

At Convoy, we are changing how it works. In the role of broker, we're orchestrating a much more efficient trucking system. Our primary customers are the top name-brand shippers in the country: Procter and Gamble, Kraft, Niagara Water, Costco, Target, Shell Oil, et cetera. They hire Convoy to move their freight. We do it through a network of 60,000 to 70,000 small trucking companies on our platform using our app. We orchestrate things so that we create round trips and backhauls, getting them the most efficient job. We created an auction system to do price discovery and to understand what the market is. We effectively clear and create this market for trucking. We take principal risk in the transaction and we're responsible for the fulfillment of the job.

What we've been able to do is go from being a broker to being a national trucking company. The broker gets some of the leftovers or some of the transactional spot freight. We're not really in that category anymore. We now operate our own fleet of trailers. We have a trailer pool. We have such visibility and connectivity into the truck drivers on our app that our customers have now put us in a new category, which is cool, where effectively we get to compete for all the freight that asset-based carriers would compete for. We're competing with dedicated carriers.

It turns out that a robust healthy network delivers a higher quality of service than dedicating a truck and a driver to a job, because something can happen with that specific truck and driver, but a network is resilient. We've been able to do that business as well. We've become a first-class national trucking company for shippers. We do it in a more efficient, higher-visibility, and higher-data way.

We've now gotten our platform to the point where it's big enough and robust enough, and it's the only platform that has a totally digital supply side. All the carriers and drivers use our app. There's nobody else right now in the country that has anything close to what we have from an adoption perspective. We've now opened it up to other brokers. Our competitors and other brokerages are now able to run on our platform. We recently launched that, and we've had a huge number of brokers wanting to use the Convoy platform to find capacity and find trucks that are on a digital network. I think we had 150 inbound leads come in during the first week.

We're opening it up. We've started building in a fuel card and financial services for truck

drivers. There's a whole bunch of businesses on top of that core trucking business that we built, but that's what Convoy does. We're providing freight transportation solutions for shippers and then we're building businesses on top of that — marketplaces and services around that.

**Parameswaran:** It sounds incredibly complicated. I think that's what got you going. Leaving Amazon, you wanted to tackle a really complicated market. Is that fair?

**Lewis:** I left Amazon because I wanted to do three things. One, I want to be part of a story. That's a personal goal of mine. I want to be part of a growth-stage interesting story. It's more interesting to work on that. I looked around at the time, and I didn't see any growth-stage companies in the Seattle area. There were several in the Bay Area I could have gone and joined (I used to live in the Bay Area), but there was nothing in Seattle with the right role and the right thing for me, so I went and started something.

I love the idea of marketplaces. I studied marketplaces in depth before starting Convoy. I also love the idea of a business that can start out as linear and grow linearly, but later become nonlinear. When I started this business, I didn't have a ton of money saved up. My wife's not working, and I have two kids. I thought, "How do I create a startup that has an extremely high chance of success?" I realized that one option was to think about a business where it's not so much about luck. It's about spending time with each of the participants and explaining to them how we can create value for them, but because it's so commoditized, in the future it can become a nonlinear, completely digital growth business.

Trucking is that. It's a B2B brokerage. You can spend lots of time upfront talking to every truck driver and every shipper. You can get the flywheel going and learn the mechanics, but trucking is a commoditized enough industry that you can then automate it in the future so it becomes scalable in a nonlinear way. That was a big part of why I thought it was such a cool space. I saw the opportunity for a high chance of getting it off the ground with the right discipline, but also extremely nonlinear growth through the core and adjacent businesses in the future.

**Parameswaran:** That's a good segue into understanding how the industry works. If you're a shipper, and you need to get your product from point A to point B, how do you do it? What is the process today? Walk us through the unit economics of the model. What were your big customers doing before Convoy came along? What do you provide for them? Let's talk about the past and the current, and then we can move on to the future.

**Lewis:** I'll talk about pre-Convoy and then things we've built as we've developed it, because there are a lot of fast followers out there as well.

The way these big companies would procure freight is that they would say, "What are the lanes I think I'm going to be running freight on next year?" There are 400 lanes across the country. It could be freight around the LA area. It could be freight between LA and Dallas. What are the lanes I'm going to run freight on? About how many loads am I going to be running per week? Over the next year, what is my estimate there or my forecast? I'm going to do an RFP, which will take six months. I'm going to go out there and do this RFP with dozens or a hundred-plus trucking companies and get all of them to give me bids on the lanes they want. I'll collect all those rates, go back and negotiate with them, get them to agree on a rate for the year at a certain volume level. There's a bunch of categories — for some of it, I'm going to have them leave trailers in my yard so I can load those trailers in advance; for some of it, I'll load the trailers when they show up — there are different kinds of

scenarios. All this stuff they'll put in the RFP.

Six months later, after a bunch of negotiations, it's done, and the carriers start running the loads. Inevitably, the shipper was wrong. They didn't know how much freight they were going to need in each of these lanes. They need more in some, less in others. A new store opens somewhere so they have to deliver to that store. A store closes so they don't deliver there anymore. Their volume changes significantly throughout the year.

The market also changes. Truck rates are volatile. They're up 100 percent from two years ago on a lot of lanes. The transportation providers then say, "I did agree to this for a year, but I'm not going to do it anymore," and they stop accepting the freight. That shipper is sending this freight out to the carriers that said they would do it in the RFP, but the carrier or broker that receives it says, "I don't want to do it anymore." It falls down what's called the routing guide. It goes from the primary provider who was the one who said they would do it to a bunch of backups.

All the backups have the option to take it or not. If none of the backups take it at whatever rate they gave a year ago, it goes into the spot market for an auction and it gets picked up there. They have redundancy upon redundancy upon redundancy to make sure somebody actually moves the freight, because they have to move that freight to their customer. Because the world is always changing, all these contracts generally fall apart or are not honored within a few months. That situation was exaggerated during the last two years.

That's how it worked before. Also, there was no visibility — there was no system for the shipper to see where the truck was. There was no efficient system to book an appointment. You might have a 60-mile job, but the appointment is not for 12 hours, so the truck sits and waits for 10 hours. It's an extremely inefficient system as you're trying to aggregate this all together.

What Convoy did is it put all the trucks on a grid and on a map so we could see them all in real time. We built a bunch of technologies that would figure out what is the optimal appointment time for every kind of job and then we'd work with our customers to get preferential access or digital access to be able to add those appointment times. It's still a hard thing to do, but we started working on that.

We operate within the traditional model, but we created better, new, innovative products at each level of the contract: the primary provider, the backup, and the spot market. That's why our customers love us.

We created a flexible, universal trailer pool. A company that needs to ship their goods to a bunch of retail stores wants to preload trailers, put them in the yard, and have the trucks roll in, grab the preloaded trailer, and leave. You don't have to load when the truck shows up. It's faster and more efficient. You can keep the stuff loaded in the trailers. It's off your dock, it's out of your warehouse, you don't bottleneck everything.

The problem with this is that it's rigid. You have to tell a carrier, "I need you to do this many loads, have this many trailers available for me." The carrier says, "I'll put those trailers there, but I'm not going to flex up. I'm not going to flex down." It's pretty rigid. The shippers get stuck because they don't know how to do this.

We created what's called a universal trailer pool. We have a Convoy-managed trailer pool. We make it available to any carrier in our network. We also have a technology system that

predicts where the trailers will be needed and has a rent-back system. It will find jobs, and help other carriers move those trailers around. We were able to create a flexible trailer pool. Whereas others could only flex up or down by five percent, we can flex up or down by 30 to 50 percent. We can do more or less for that shipper. We can also do spot market and transactional loads preloaded on the trailers. We have a whole system for doing that.

No one had ever done that before. That is a premium product. The margins are probably twice as good as the rest of the business. It's unique to what we're building. It's hard to build if you don't have a technology system with all these trucks on the grid on the network, and nobody has that right now. That's sold out all the time. I can't get enough trailers. (If somebody knows how to get me trailers, please help me!)

That's an example of what's different. It's a better and more flexible system, and shippers need flexibility because they can't predict their needs. Whenever they get into these fixed situations with their carriers, it's frustrating for them.

Another issue is you've got to set a price for a year, and that's hard. Those prices fall apart. Rates change all the time and people back out of their contracts and simply stop accepting the freight. We offer a service called Guaranteed Primary, where we say to the shipper, "We'll always have a truck available for you on these primary lanes. We'll get better and more efficient over time. We'll show you the underlying costs. We'll have a fixed margin so we won't take advantage of you, but we'll use technology to float the rate in your system throughout the year. We have a system that can write in new rates. If you're willing to accept a floating rate, we'll give you all the benefits of contract — commitment, guarantee, et cetera."

Other people couldn't do that because they didn't have the technology to build a floating rate in real time. They had to have a person work on it for three months to figure out what the rate would be. The floating contract rates system that we built gives our customers the ability to have the same benefits of contract freight — high reliability, always there for them, ability to get to know the same trucking company — but with a rate that can float in real time. For that contract piece, nobody had built something like that before.

When it came to the backups — the situation where the primary provider refuses the job so it goes down the tree to the backup provider — that rate was fixed for a year. Whatever you had bid in that RFP, that's your backup rate for the year. It would never change because nobody knew how to go in there and change it. We built a technology system called Dynamic Backup. It goes in and inserts new backup rates. When their carrier fails to take the job (which happens all the time), Convoy is there with a real-time price that they can get. It saves them several hours of waiting for it to go through that routing guide and the backup guide. They can just say yes to Convoy right away. We save them a bunch of time in getting a truck locked.

I'm getting a bit in the weeds here, but those are examples of real procurement and operational things we've done that are different, in addition to having real-time visibility of every truck, analytics, data reporting and the like, that shippers aren't used to having from their trucking companies.

It's been fun. We've created strong value at the operational layer and the procurement layer for these companies, in addition to having this robust, visible fleet.

**Parameswaran:** We've been on a journey with you for five or maybe six years now, and

during that time, you and your team — and I want to talk about your team in a minute — have put in so much effort throwing out product after product after product. Probably the reason we invested in you in this round is we saw the compounding effect of all the product improvements, and how all the different strategies have come to fruition over the last 12 months. It feels like you've come into your own and are seeing incredible growth rates and adoption curves.

Tell me about the team you've assembled. One of my beliefs is that talent density drives companies. You've assembled a world-class team. How did you attract some of the best people in the Seattle area to work for Convoy? Why can that talent density not be replicated by either incumbents or by fast followers? Also, could you walk us through who the fast followers are?

**Lewis:** Over the last two years, we have changed out effectively the whole management team. One or two people that are still on the senior leadership team were there before, but there's been a lot of change and adjustment. We've had great people at Convoy since the beginning, but most of these changes have been significant improvements from the perspective of their experience, scope of responsibility, and history coming into the company. I'm proud of that and I feel great about it.

When I was starting Convoy, one of our first investors was Bezos. He's obviously had experience building a big company with Amazon. He said something to me that I did not understand at all as an early founder. He told me, "You're going to hit a point where you need to get to the next level and you're going to spend a year and a half or two years just hiring." I remember thinking, "I'm not going to spend a year and a half or two years just hiring. That doesn't make any sense." He's continued, advising me, "Lean into it when it happens. Just lean into it. That's going to matter."

That's exactly what happened over the last two years We hit that point. We had several different areas where we needed to stretch and improve as a company. We've hired fantastic leadership — strong, cross-functional technical leadership out of Amazon. Mark Okerstrom, who came in as our president, is an incredible operator and financial mind. We've hired folks who are extremely capable in each of the different functions. We have a new, strong operations and customer service leader who's done this at Amazon, Expedia and other companies. It's going to be great.

The key thing I found for getting people to want to come and do this is painting a story around all of the opportunity in this space, and why it matters. One of our values is "know why". Why does this matter? It matters for the planet. There's a huge amount of waste in trucking. The capacity shortage is more about inefficiency than it is about a lack of drivers. The inefficiency is real, and it drives a lot of empty miles, wait time at facilities, and a lot of unnecessary fuel burn. A lot of people care deeply that the work they're doing every day impacts something beyond their own personal bottom line. There are a lot of options out there, so why not do something that matters. That has been important.

When someone joins our leadership team, I tell them, "You're going to have great people on your team, but this leadership team that you're part of is your first team. Here's our story. Here's the journey we're on. Here's our mission. Here's what we're trying to do. This is the narrative of the industry. This is what's happened, and this is where it's going."

We get to play a key role in the disruption of one of the biggest, most interesting, most topical industries in the world right now which is supply chain. For a long time, there wasn't

much disruption or technology in trucking. When we started, we were kicking that off, especially because visibility was there.

Prior to 2015, truck drivers didn't have smartphones. Prior to smartphones, there was no financially or logistically feasible way to get a device into every truck in the country. An independent driver with one or two trucks running around the country doesn't want you to mail them a GPS unit. They're not going to install it. They're not going to use it. They certainly don't want seven different units, one from each of the brokers they work with, so that was not even feasible. They didn't have smartphones until the free phone supplied by AT&T and Verizon was a smartphone on Android or iOS, which happened around 2015.

This was totally a greenfield opportunity. It wasn't even possible to do this in trucking. We can paint that picture: this is the moment in time when this is going to change the hundreds of billions of dollars that has been spent by people using offline methods — calling, emailing, faxing — to get the information around traditional boiler-room sales models that are zero-sum game, short-term thinking trucking solutions that are very one or the other — either a totally flexible brokerage or a totally rigid carrier. That whole traditional model has worked brilliantly in the past, but there's a better way. It's worked historically — we've all gotten the stuff we need — but there's a much better way. There's a lot of pain we can remove. That was not possible before.

That's how we sell people. It's the time for this to happen. Whether a Convoy is here or not, hundreds of billions of dollars is going to shift from the old way to the new way over the next decade. That's where trucking is going. Why not help write that story and make this happen?

People are excited about being part of stories. That's what they want to spend their time on if they're operators. They want to feel like they could be part of the narrative of the industry. We look back and say, "How did supply chain get improved? How did trucking change during its time of renaissance or revolution?" It's because the technology changed to make it possible, and some disruptive companies got fired up and built that storyline for the industry. That's what we're doing, and people get pumped about that.

**Parameswaran:** Quantify this a bit more because it's clearly an archaic industry. We all know the big top-line number: 700 billion dollars or so is sent via freight. Walk us through the profit pools in the old archaic industry which is what got you guys excited and let's talk about the future. What is your economic model? How do you guys make money?

**Lewis:** There are a lot of models, but the core brokerage model is a model where you make money on the spread. Historically, brokerages have had a spread anywhere from maybe 15 to 18 percent — some were in the 20 to 25 range, some were a bit lower that were doing maybe more long haul, but that was the kind of take rate on the spread. They would buy and sell trucking capacity, and that's what they kept. The average was about 18 percent when we were starting Convoy. That's historically where it's been.

When we started, we adopted the same spread model because it was the fastest and cleanest way to get into the industry. There are additional ways that other companies make money. Every carrier needs a bunch of equipment and a bunch of services, so there are providers who are offering that equipment and those services to truck drivers and small trucking companies, to help them run their business. There are some virtual fleets doing that today. There are a bunch of other service providers that have those tools and services, and carriers are willing to pay for that. There's direct monetization of carriers and the carrier experience.

Other ways people have made money over the years is through data and software for shippers that help shippers run their procurement processes, track and manage trucks, make buying decisions, try to make efficiency decisions on how they operate their warehouse and do inventory planning. Those are ways historically that people have made a lot of money.

When we look at what Convoy can do, we started with that spread model. As I mentioned, because we have a completely online network of trucks, with tens of thousands of trucking companies and hundreds of thousands of trucks that are engaged, other 3PLs can put their loads into Convoy, which creates more density and volume in our network and helps us achieve our mission. It creates density and reduces waste in our network. It helps them find trucks. They don't have a digital network and they don't have the resources to build this technology platform, so they're using Convoy's. It's better for them. They can find a truck that's more attractive and lower cost through the Convoy platform than they could by calling around.

When we do that, we can take a fee or a spread on that transaction with no principal risk and no downstream operating cost, so it's a higher-margin business. Also, our carriers think of us as their provider. We're not just a fin marketplace for them. We are their partner in trucking. They get their freight from Convoy and we pay them, so they'll work with us on things like credit services, fuel services, and the like. There are other interesting businesses that we can start building, and you have to have that trust and relationship to do that.

When I think about all the opportunities to make money, we have our core approach, which we believe will be successful, but we also believe that there are a lot of additional businesses that are operating maybe more like traditional marketplaces that have a fee structure, or like software businesses, that have high margins.

**Parameswaran:** To the extent that you are willing to speak about it in an open forum, give us a sense of the financial or operating scale of your business right now.

**Lewis:** If you look at the revenue run-rate of the business, it's around or over a billion on an annualized basis coming next year. I think revenue grew 45 or 50 percent this year. It depends on exactly when you're looking at the timeframe. We have about a thousand employees.

Most of our business today comes from enterprise customers. We have several hundred customers, but there are 50 to 100 large ones where we have a small percentage of their wallet at the moment, so there's a huge opportunity to grow a lot through our existing customers and build that up. That's probably the right level to share at. I'll also say our margins have expanded significantly in the last six months.

**Parameswaran:** That's exactly what we got excited about. I don't want to correct you, but I will — the 45 to 50 percent is actually on the full annual basis, but if you look at the most recent quarter, it is multiples of that, which is exciting.

**Lewis:** The margin stuff is interesting. People have said, "Well, isn't it really easy because freight is hot?" That's true, but we're trading. We're trading freight. Our cost structure has gone up significantly, and so we are always taking that spread in the market. It's actually hard for us to expand margins when truck rates are going up, and truck rates have gone up in a way that we've never seen before. They've gone up for 16 or 18 months straight, which never happens. If you look over the last 18 to 24 months, in many cases they're up over 100 percent.

When you have those contracts, as I mentioned earlier, and you are part of the RFP process, that can put a lot of strain on the economics because you're effectively setting rates. That's where we had to be innovative in terms of managing our risk and changing our freight portfolio, and creating new programs that de-risk it for us as the market is volatile.

Ultimately, shippers appreciate that because, while they would love to lock a rate in for a year, because it never happens, they end up in a much worse place because people walk away from them. It's about finding the right balance and not being rigid.

**Parameswaran:** Let's look at a case study — I know the case study of Niagara Water, but pick any customer you want. Talk about the journey with the customer. What happens on day one, how do you even procure the customer? We know why they work with you, but once they sign the initial contract, walk us through what the cohorts look like within their customer base.

**Lewis:** Let me walk through some examples. You can imagine that how this works is different today than it was three years ago as well, because the customer views us differently today.

Home Depot is a good example. I'll keep it high level because I'm using a specific customer. When we first started working with Home Depot, they wanted to understand this new digital freight space and digital broker space. They put us in the category with the other new digital players, and they had a small amount of freight available for those players to compete for. It's what the industry would have called the leftovers — parts of the business that other people weren't necessarily serving directly, so they were willing to see if we could help them out with that small portion of freight.

We started doing that, and in the first year of working with them, it was about getting to know them, building trust, building that relationship, and thinking about ways to break out of being part of this spot transactional niche business that they'd carved out to learn a little about us. We did two things.

First, we said that we could start doing their contract freight. We showed them the data in certain markets. We showed them, "Here's what our trucking capacity looks like. Here's how many bids we get per job. We have a lot of reliable capacity in this area, so you can think of us not only as this broker that can do one-off things. We have a lot of reliable and consistent capacity in these markets, so if you work with us, we can come through on that." In many cases, the on-time delivery was better, the tracking was better, and the visibility was better, so that helped.

The second thing we did to accelerate the process of them growing us within their businesses was we started doing analytics on our data. No other trucking companies were capturing data for every job. We had hundreds of data points because we would capture everything, from when they tendered the freight to us, all the things that happened since then, how many bids we got finding a truck, the rate, geofencing every location check-in along the way, the final outcomes, et cetera. We could correlate all that and say to them, "If you tendered the freight to us this many hours in advance, or in the morning and add the appointment time here, the rates go down by this much." You can see how the marketplace is working. We can show our customers this and say, "Here's how the marketplace works. Here's where you're doing as well as or worse than your competitors. There are ten other warehouses in your neighborhood that we work with, and you guys are number four out of the ten. Here's why. If you did these things, your costs would go down to here because that's what everybody else gets because they do that."

We were able to do these comparative analyses. They'd never seen that. We were able to show them that not only could we have reliable capacity, but we could learn and help them improve in their business. Then we graduated from niche to where they said, "We're going to let you start competing with our other providers that you're not talking about."

Year two was about demonstrating we could provide consistent capacity for them in a contracted scenario. Then it tipped and they said, "Now we trust what you're doing. You now have a trailer pool that's flexible — we've never had this flexible trailer pool. We are now going to open 100 percent of our freight to you, and you're now in your own category. We used to compare you with brokers or asset carriers, but now we don't even put you in that category. We'll work with you on a dedicated basis or on a trailer basis or whatever."

This is a flavor of the discussion over time with our customers. It would take a couple of years — even three years in some cases — to get to the point where you would prove to them through experience that what you're doing is different and better. They have to see it.

Trucking works differently from a lot of businesses. Let's say you're selling Salesforce to somebody. That person is looking at their option set and effectively adopting Salesforce as their one solution for all their employees, and rolling it out. They do a lot of upfront work to make sure it's the right decision, but once they've made the decision, they're committed, and it's embedded in their business.

Trucking is completely different. They work with dozens or sometimes even a hundred trucking providers. Getting in the door and getting that first business is not that hard. It's about getting them to choose to grow with you and make you a strategic partner. The key is not the upfront sales and getting in the door. It's more about the next year or two of proving yourself and then getting them to adopt you as a strategic partner.

Now that we've done this with ten companies, we expect to be able to accelerate this significantly, via references and word of mouth. Someone leaves one company and goes to another company and tells everyone what it's like to work with us. We don't have to go through that proving ground as much now, but it still is a cycle of getting someone to change how they thought about the world, going from "I always thought brokers were over here in this little category," to "Now I'm going to let you compete for the whole pie." That journey has just started — we've seen that change in the last year. That's why I'm so optimistic that we can significantly grow a lot of our existing customers, because we're now being put into a different category.

**Parameswaran:** That's the entire point. It's the multiple compounding effect. You have the product development finally bursting forth, and then you have what I call building a reputation also now bursting forth. It didn't happen overnight. I know that it's been a painful journey.

Let's look at the competitive set. Amazon is the biggest shipper in America (maybe the world), and then we have Uber making a fair bit of noise on their freight business, and then there are all the publicly listed freight brokers like C.H. Robinson. First, in terms of the old industry, talk about what you think of them and why they may or may not succeed, and then, talk about what Amazon and Uber are doing specifically. Does that keep you awake at night?

**Lewis:** This is a great question. Let's frame it up. The largest provider of truckload services in the United States has a few percent of the market. I was recently interviewing somebody who was at Azure, and I realized that the way they approached the interview was they think

about competition every day. They spend half their day thinking about what Google and Amazon are doing.

That's an orientation that happens when you're in a highly concentrated market where there are only a few players and everything you do is sized and compared to those other one or two players. You end up developing a competition-focused culture.

That also happens in new categories that are created. Uber and Lyft in a sense created this new category, which became the Uber and Lyft show. Maybe there were one or two others but it was a small set of competitors, and everything would go to those set of competitors from a share perspective.

Trucking is completely different. There is no behemoth. There are some companies that have significant volume, but they're small in the overall market. Because of that dynamic, and because there is so much spend in this industry, almost all of our energy goes into thinking about what the customer needs. How do I serve my customer? What am I doing for my customer today? How can I make their life better? If we do all that, then we're going to get more business from them. It's rare that we end up being limited based on other digital providers.

I don't think I've ever had a conversation with a customer where they said, "I'm not sure. I'm looking at Amazon and I'm wondering how I'm going to divide the pie between you and Amazon." Maybe once, but I can't remember that ever happening. Sometimes, they'll say something like, "C.H. Robinson is on this lane, JB's on this lane, or TQL or Coyote or Schneider or XPO or NFI or this other broker — I'm working with these guys, I want to see how I fit in and I'm trying to figure it out." Those were the conversations with the traditional folks, but it's such a big market and it's so fragmented. It's about customer value — creating clear customer value in the way you innovate, think, and move the industry forward, versus obsessing over how you position against other competitors, because they don't ask that much. They're just trying to solve their problems.

I found that situation to be unique to industries like this, versus industries that are oligopolies of a few leaders, or new industries with a couple of new players that are inventing an entirely new category. It becomes zero sum. Trucking is not that.

Within that, the companies that I compete with on a daily basis are the ones that I just mentioned — other big freight brokers and asset-based carriers. That is 98 percent of the conversations with my customers and what they're thinking about. Then there are the new companies. There are some new digital providers and then there are the bigger ones like Amazon Freight and Uber Freight. (I won't get into the legacy and history there — I have deep legacy ties with both of those projects and I have some interesting stories to tell over a beer some time.)

They're very different. For a long time, I was thinking more of Uber as an innovative competitor. They're still doing some interesting things. They're doing a lot of positioning now which you can see from their announcements.

Let me step back for a moment. If our customers are working with Uber — that is one I do see — that's better. That means they're going to do a lot of work with Convoy because it shows that they're willing to try, and then we can prove that we're better or we can prove that it works, but there's so much share that they're giving everybody else, it's not like Convoy and Uber are vying over some small portion of share. We're both taking share within their

business, and they're excited about the new way. The customer doesn't typically think of it as a choice between Uber or Convoy. They might balance it a little, but especially once you're in there, it's not like that.

Uber's approach has been a bit different. When they were starting, they didn't start from the idea that every carrier needs to use their technology, and that they were going to create a completely robust carrier marketplace on an app and on a technology platform. That came later for them. That was not their founding story and that was not the first few years.

The founding story was how they could grow top-line revenue of the freight business within Uber as fast as humanly possible before the Uber IPO under Travis in 2018, which never happened. That was the origin of the freight business. It was a third pillar to show growth with no tech, but nobody would have ever checked if there was tech or not.

Later, they built a bunch of tech. They've now done that, and that's great, but it's a business that had a different origin story and a different growth story. I guess I think of them as a complementary partner in the ecosystem that drives a lot of interest. I like customers that are excited about them because it means they're going to be excited about Convoy and it gives us a foot in the door, and vice versa probably, but it's not something I feel like I need to position against constantly with my customers.

Over time, we'll need to take a look at it. They made a pretty big move to close the EBITDA gap by acquiring a company like Transplace and effectively their burn was, I think, Transplace's EBITDA. That makes sense. That will be a challenging operational integration to work on if you're trying to be an innovative, fast-moving tech company, because I believe that the number of employees that the other company has is greater, so it's a big challenge. It gives them more volume. We're keeping an eye on it, but I don't think it made any strategic differences. No customer has ever asked me about how that's going to change anything. It's never come up in a customer discussion.

When it comes to Amazon, I think I was asked the question first in 2016, about whether Amazon would do this someday. The answer is always yes to that question. Of course Amazon is going to do it someday. Ask any business that question, and the answer should be yes, because they probably will do it someday. That's the culture of the company.

They certainly have gotten the freight space. Again, it's not something that comes up in conversations with our customers. I know that they're building a business around this. Fundamentally, it started because they wanted to have a way to have additional capacity for their own business. They wanted their carriers to be on an app. They tried to build an app and asked their large carriers to use that app, and for a long time, the large carriers were not interested in using the app. I knew that going in, that they wouldn't use it, because the large carriers don't want an app on their drivers' phones.

When they realized that wasn't working, they decided to build an app and put it on a bunch of smaller carriers. Now, they're building a business around that. It's a smart move. It will give them flexibility. They need to have their own supply chain to deliver their own goods in a highly reliable way with visibility. They couldn't get visibility from their providers. The big trucking companies and brokers they work with don't have a great data-driven visibility platform for Amazon. Amazon's standards are high, and they want that.

They want the world to look like Convoy, if they could get that. That's what they want. They want that experience. They're trying to find driver pools that will use a piece of technology on

their phone, so they can have visibility into what's going on, and operate their business better. One of the ways you do that in a viable way is you have that group of carriers also do work for others to balance things out throughout the year and make sure that carrier group's available for your surge times.

I'm getting a bit long-winded on this answer, but neither one of them is a company we spend a lot of time worrying about. We watch what they do and we pay attention, but it's not something our customers are asking us about, and it's not the thing that's going to make it or break it for Convoy in the next five to ten years. What will make it or break it for us is if we execute well and we build value for customers against the traditional incumbents.

**Parameswaran:** Let's talk about the next five years for Convoy. What are your personal goals and what are your goals for the company, and — a question that's on everybody's mind in this forum — will you go public one day?

**Lewis:** I've never run a publicly traded company. I don't know exactly what will happen, but when I think about it, I do think there are a bunch of good reasons why Convoy should be public, despite a lot of my friends saying it's a painful place to be. There are a lot of reasons in this industry to do it. There are a lot of reasons for our employees, and it's healthy from a compensation, incentive, and alignment perspective.

Our customers are traditional businesses, and they look at that. They ask us that as well. It is something they're curious about. They believe that it's a sign of stability and long-term viability. In our business, it does make a difference in terms of how our customers think about and view us and our carrier partners.

It provides access to capital for deals. We've never done an acquisition, but as I look at the industry evolving, I can see the future more clearly in terms of where I want to take this, and I can see pieces of other companies coming together around that or other deals. It provides that currency and opportunity.

We have the leadership team to do it now if we want to go do it. I mentioned that Mark Okerstrom has a lot of experience running and operating publicly traded companies. Our general counsel has done this several times. We have a mature senior leadership team at this point, and we've built a lot of things that make our systems much more rigorous internally.

It's probably the right path. I want to realize the potential and opportunity of the company, and that is probably one of the ways to do that. Becoming publicly traded is probably part of the formula for achieving the potential of what Convoy can be.

**Parameswaran:** I know a lot of your friends are a little gun-shy about going public, but going public is a wonderful idea for a variety of reasons, and you understand that. It gives you flexibility and credibility. It makes you one of the big boys. Despite what a lot of private investors may tell you, the public markets are forward-looking and will give you stretched valuations — maybe a bit of correction here and there, but if you execute, the technology public markets are willing to give you three or four years of runway and valuation ahead of what you deserve.

**Lewis:** We're doing some stuff internally to make sure that when the time is right, we are in a position where we can do that.

**Parameswaran:** Outside of going public, if we were to talk again in 2025, what do you think

the scale and the position of Convoy would be at that point within the trucking ecosystem?

**Lewis:** The way our customers think about procuring and managing freight, the flexibility that they have, and the level of confidence they have in their partners will be unrecognizable from where it was a couple of years ago or even today.

Right now, the reason that these companies have 100 trucking providers and have 90 levels of redundancy is because they don't have confidence that their partners will come through and have the flexibility to deliver for them, because every partner has one specialty thing that they do in one area, and they can't flex, and they can't operate at the same scale. It's hard to operate that way with offline systems and traditional processes.

When you use technology and you have a network of trucks that are plugged in, you can do things faster and at scale more reliably. You can offer better visibility and planning to your customers, and you can give them data to help them improve. It's going to be a partnership-based experience where they don't have to have 50 to 100 trucking partners. They can have a few, and we will be able to offer them flexibility through a range of market scenarios and freight scenarios that will make it so that they don't have to worry about managing all of their providers to make sure they're covered. This fear of not being able to get trucking capacity and not being able to manage it is real, because it's an inconsistent business.

I think it will be unrecognizable. I think Convoy will be by far the strongest, most healthy, most viable trucking option in the country. That's my goal. There will be others. There are going to be lots of other trucking companies, but people will look at Convoy as the solution that lets them set it and forget it more than ever before.

Part of that is the transparency, the visibility, and the reporting we're offering that will build confidence and trust. Our customers will see that we're not going to jerk them around. We're not going to try to screw them for that extra margin today, which is how most of the compensation structures work. We're going to build a partnership that is flexible to our customers' needs and has clarity around what we're charging. That's where we're going with it, and our customers are so excited about that. They want to not have to stress about this all the time.

One of the investors I was talking to was saying, "Don't shippers never give their carriers more than five or ten percent of their business?" That's true, but you need to think about why that's true. It's not good for them. It's not easier to have 50 vendors in the same category. That's a lot of work. It's because they don't have confidence, so we're fixing that.

**Parameswaran:** That makes total sense. I want to talk about a topic you tweeted about recently, which is your view on how self-driving and automated trucks come into this. You had a proposal for team tagging which I thought was interesting. Tell us about that little tweet you put out — what prompted that and what was on your mind there.

**Lewis:** The prompt is that I get asked all the time about self-driving. I've thought about it for years. There was a period four or five years ago where it was a much hotter topic than it is today.

What I've realized is that a lot of folks in the technology world — or maybe in worlds that don't understand the day-to-day operations of trucking and how it works — tend to have these models in their heads of how self-driving should roll out that I think are theoretically great and that provide a lot of benefits, but that aren't practical. They won't work.

If regulators are sitting around thinking about how we are going to make laws for different states for self-driving, if we don't include certain scenarios and we don't solve for certain scenarios, we could end up in a situation where the theorists were able to drive some regulatory outcomes that result in a suboptimal operating environment for self-driving, and you won't see the benefits because it'll be too hard to make it happen.

I'll give a couple of examples. Assume that self-driving trucks can operate on the highway but not on back roads and city streets. That's pretty much a given at this point — that safe highway driving would happen successfully first. Take a 1,000-mile job. There are two models.

One approach is a local driver brings the trailer to a transfer station. The self-driving truck picks up that trailer, runs it on the highway portion with no driver in it, gets to another local hub outside of the destination region or metro, where a local driver picks it up and delivers it. That's the one that gets talked about all the time — at least in my experience. I'm constantly told that's how this is going to happen.

I think that is a hard way to do it first. Offline, I've gotten a lot of messages from people in trucking who agree with me on this. That model that I described will happen someday, but it's hard to do that one first. Theoretically, it sounds right because it's self-driving, which surely means you shouldn't have a driver in there. If you have a driver in there, you have to pay them, and that defeats the purpose. My feeling is that you incur more cost by not having the driver in there.

The way things already work today is you have this human-to-human tag-team model. It's a two-driver model where one person is driving, then they stop driving and the other person takes over so that the first driver can go in the back and rest, to reset their hours of service. They must have ten hours off to reset their hours of service. They hand off the driving like this, back and forth, and they can run that truck twice as fast because it's always moving. It's a team-driving scenario which already exists and is pretty common. It's two drivers working together.

I think you should leave a driver in the cab and then that driver should tag-team with the truck. The driver can drive, and the truck can take over while the driver resets their hours of service. Obviously, the technology has to be ready for that to happen. Once the technology is ready for a truck to drive by itself, it certainly is ready for it to drive with somebody in that cab because it's obviously safe enough at that point where the risk of something happening is no greater than with a human driver. That's the model that I think is the right model.

It seems that it's hard for people to see that because they think into the future and they imagine that we can get to this other model that could have other benefits, but it's so logistically difficult to create those transport hubs. It's so hard. If you're interested, you can look at what I wrote about this. There are so many issues with handoffs. You have such limited flexibility in your driving. If there's no driver in the truck, there will be tons of times the truck can't actually operate on its own as we're getting started, and it'll take forever. I think it's important that we have a system where the driver stays in the truck for a long time, and we'll be able to have deliveries done in half the time. It'll be a huge advantage for the supply chain. It'll accelerate everything and you can roll it out much faster than if you have a leg where there's no driver at all on the truck.

**Parameswaran:** We've got two more minutes, so do you have some closing remarks? What's on your mind these days?

**Lewis:** I'll end off by saying that this is definitely where the industry is headed: networks of trucks connected to technology platforms from a visibility data reporting perspective, better matching, combinations of jobs, reducing empty miles, optimization of appointment times, insights and analytics based on the data that help the operators, flexible procurement, flexible trailer pools — that is the future, and it's going to happen.

I hope Convoy is the one that carries this through. I'm fired up. I believe we're going to do it. We're a leader in the space right now. If you're looking at where you want to make bets, you can bet that this is going to happen over the long term, so it's a smart bet.

As you mentioned, the last couple of years were tough for Convoy. The market was volatile, but instead of looking to just weather the storm, we went and invented a bunch of stuff. We created new solutions that are in high demand now. We used this as an opportunity to have more strategic conversations with customers, invent flexible solutions, and roll those flexible solutions out.

We've never been in a position where we've had the kind of control over our margin in our business that we have today. It's hard. When you're buying and selling a spread with principal risk, it's hard in a volatile market. We're now at a point where we have a much stronger operational system to do that — controls, tools, teams, et cetera. We now have six months of data that have shown the consistent and expanding margins around that.

I've never been more fired up. We have systems in place now, our customers like what we're doing, the industry is going in this direction, supply chain is more important than ever — there are a lot of tailwinds around where we take this. We've got to execute. It's still hard. It's hard sometimes to explain this business because it's a complicated business, but that's where I am. I'm super fired up, and I think we're going to take it.

**Parameswaran:** I agree, and I'm happy to be part of your cap table and your journey. I think you guys are going to be incredible over the next many years. I've observed you and Convoy for five years now, and I want to reiterate that for me, what has us so excited investing in you is how those compounding effects of both product creation and now scale and customer love, are taking on a life of their own. Thank you so much, Dan, for your time.

*About the session host:*

Ram Parameswaran is the founder of Octahedron Capital, a global, growth-oriented investment firm that seeks to make concentrated investments in leading public and private companies that drive the world's internet economy. Prior to Octahedron, Ram was a partner and portfolio manager at Altimeter Capital, a multi-billion dollar investment firm in Menlo Park, where he helped lead the firm's investments in the internet and payments sectors, across both the hedge fund and private growth funds. Prior to Altimeter, Ram was the technology analyst at Falcon Edge Capital, co-founded the Internet research team at Sanford Bernstein, and started his career as a senior engineer at Qualcomm. Ram has an MBA in finance from the University of Chicago Booth School of Business and a Masters in EE from Virginia Tech.

*About the featured guest:*

Dan Lewis is the Chief Executive Officer at Convoy. Before Convoy, Dan served as General Manager of New Shopping Experiences at Amazon, as well as Vice President of Product and

Operations at Wavii (acquired by Google), and Group Product Manager at Microsoft. Dan started his career in technology and supply-chain consulting for Oliver Wyman, after studying cognitive science at Yale University.