But Did It Work - Ep 8 Loop

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0:00:00.0 Son: And in our ability to continue to put ourselves in everyone's shoes and just trying to find value add, right. We're not here to be the only person that comes out on top or the single entity that comes out on top, right. We're here to especially with all the partners that help us to get to the stage where we are. Right. Such as Kajeet, but you get to continue to find like long term arrangement we're all winning. If we're not winning together when one succeeds, then that's not a viable partnership to have.

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0:00:40.5 Dominic: Hello and welcome to the 'But Did It Work' podcast. Once again I'm your host, Dominic Marcelino in this conversation today, I speak with Son Dang of Loop EV. And we hear about how the company has worked to make EV charging more accessible through market differentiation, their smart pivots that they've engaged in, and the partnerships which include working with Kajeet. It's a fascinating discussion. And I can't wait for you to listen to it. If you like this podcast, be sure to follow us on your favorite listening platform, and on social media, we are @Kajeet everywhere, so you never miss an episode. I hope you enjoy the conversation.

0:01:18.9 Dominic: Son, thanks for for joining me today. The easiest thing to do, and whenever we do this is to just launch right in and for me to ask you a little bit about yourself, how did your career start and what led you eventually in your journey to Loop?

0:01:34.9 Son: Yeah. Glad to be here. Glad to support you guys in this podcast. I guess I always wanted to be part of, some type of renewable energy company. When I was in college, one of my very first job, I was a battery test engineer and then I wanted to just better understand a bunch of things, so I short thereafter looked into manufacturing for insulated panels and how that other side of things go together. And then roughly 2012, I joined this company called Solar City. Right. And so at that point in time it was sort of new tech, it's old kind of technology now but it... Very, very new technology. No one knew how that works, let alone how to deploy it, let alone how to deploy that scale. Right.

0:02:26.8 Dominic: Right.

0:02:27.7 Son: Because one of the really good things that the founders Lyndon and Pete Rive did those are cousins of Elon Musk, which is part of the board of solar city, did, was they created this financial product that allowed the company to provide services to customers, residential customers, commercial customers at literally no money down and creating a financial product that actually made it work worth of people. So that was one of the immediate thing that led to pretty much [chuckle] a fire in sales. Everyone just blew up and scale. Right. I was part of the design engineering team there and was really trying to make that deployment of that as effective as possible. Because obviously, it's very challenging because there's different HAs, not just, within a certain city but we're doing stuff nationally right. And there's city jurisdictions, there's utility requirements. There's the fact that utilities became more and more adverse to how that was impacting them. Right?

0:03:37.2 Dominic: Right.

0:03:39.5 Son: And being part of the... More or less helping out the policy style up, being able to

just help them be able to communicate effectively, otherwise work on solutions to remove gridlocks that are being unnecessary introduced in the whole department process. And then just doing my best to support what I could throughout the nation both the engineering side, operational side, sales side. Then sometime, I believe it was 2017 or I think it was roughly 2017, Tesla made the official request to acquire Solar City, which is great. We all were operating with the same mindset anyways. Same leadership for the most part. So that threw a lot of... I guess that threw a lot of money at Solar city in a way. Not that, Solar City didn't have that money, but coming from Tesla, they already have different financial backers that are more or less waiting to just throw money at Tesla if you will. [chuckle] That helped, that definitely helped.

0:04:42.1 Son: But I think part of the challenge there as well, I mean, this is not a story about Tesla story getting that, but part of the challenges there as well is that, the approach is slightly different, right? The way that we're doing things there prior to Teslas acquisition was just to create a financial tool and do a lot of sales to get that going right. But is totally depth, totally backwards, where the product sold itself. And we had to continue to work with that, which as I knew it was great, we all focused on products and anyway, we focus on the deployment. We focus on what's actually a reality that people can actually touch, feel, see what's going on, right?

0:05:23.1 Dominic: Right.

0:05:23.5 Son: Yeah. I was part of the new product integration team, working with the roll out of products, such as solar roof and power walls and, even EV charging at that time. And it was... That gave me a lot of good insights on how to sort of deploy stuff, bring stuff to market, and what of the challenge of doing so, because the thing about Tesla is everything's with a multiplier of scale. Talking to the millionth unit, right? [laughter]

0:05:49.7 Dominic: Right.

0:05:51.0 Son: So, yeah, long story short. I wanted to find something a little more local to where I was at. Being at Tesla, I was actually flying up every week to to Fremont. So that was from El Segundo where I'm at. So that was quite, quite intensive. So, I made a decision to make the switch, but also just to wanna take a lot of the things I learned and try to build something that continued to provide value for everyone and still within the, how do we live sustainably and just thinking about a better future for tomorrow. And working on companies that help pave that way and create that change. And so, yeah, I met the founders of what was known at that point in time, it still is RenewAge. Right. Which is an energy service company, ESCO and they gave me keys to wheels like, "Hey man, we have this need to provide solution for EV charging to our customers." Right.

0:06:47.6 Dominic: Right.

0:06:48.3 Son: And so we're entering, at that point in time, we're doing purely, you know, energy efficiency, upgrades, like water, like lighting, and so.

0:07:00.4 Dominic: Yep.

0:07:00.4 Son: And so, yeah. They wanted me to take over what was at that point in time, like what was believed to be like something really big, which is EV charging. Right. So.

0:07:06.3 Dominic: Right.

0:07:06.6 Son: They asked me like, "Hey man, let's just... Can you help us figure out deployment?" We'll figure out the entire process from sales to deployment, all of them. I'm like, "Yeah, let's do it. Let's, let's build this from scratch. Let's build this the way that best leverage, what is out there to make it... To make... Ultimately, to make EV charging more accessible for everyone, right?

0:07:27.4 Dominic: Sure.

0:07:27.7 Son: And a lot of the customers that were really just working on, was multi-unit dwellings, municipalities, large commercial based companies where it was not an immediate need, for them to solve that problem. Everyone's just doing what the minimum was, or 10 to 24, which just, just put in the circuits. I worry about the actual charging stations. And from my background, it was both the deployment because I specialize in, in repair and transmission, and the whole deployment of that. But it wasn't just about how do we actually get charging stations there, it was more of like, "How do we do that?" So, it is very compelling for building owners and then ultimately drivers to want to engage, right?

0:08:16.8 Dominic: Right.

0:08:17.0 Son: Because like there's one thing of just trying to make charging station available. So you satisfy city code, right?

0:08:21.1 Dominic: Sure.

0:08:21.3 Son: And there's another thing where you're doing it in a way where you're making that process as streamlined as... Cost effective to ultimately the building owners as possible while making, so that drivers also benefit. So what does that mean? Like, "We're figuring that out," right? Lucky with me, I was an EV driver at that point for a few years. So I sort of already know what the pros and cons are, and I know how I would like to interact with the charging stations. But even helping with the full deployment process, I had a better understanding more and more of what commercial customers wanted for their solution. Because at the end of the day, people who are making decisions don't really know how to frame the problem.

0:09:04.1 Dominic: Right.

0:09:04.1 Son: Other than like, "Hey, I have a need for it." But you know, there's, obviously a lot of different, small problems that have to be addressed to order to understand or recognize what that problem really is. Not just like, "Hey, immediately I need to, [chuckle] make this work." But's like long term wise, what does that look like? And you already have X now, how is that gonna pan out three, five, ten years now. And being able to frame the problem so that it wouldn't be like let's put in a minimum amount of charging stations and then we'll circle back when there's a need.

0:09:32.9 Dominic: Yeah.

0:09:33.2 Son: It's like, "Hey, you have an opportunity now to really solve this problem." And with... I think with anything, especially commercials applications, if you want to fully maximize something, you have to put something in at scale, right? So.

0:09:46.2 Dominic: Right.

0:09:46.6 Son: And the technicalities would be like, let's say, for example, if you want to put in 10 charging stations versus 40 versus a good amount, of stations. There are some costs to that that's always gonna be the same. So you're always gonna have to worry about electric connections to the grid. Ultimately you always have to worry about permitting, crews always have to go on site. There's always some baseline costs that will have to be there. Right. And so why not leverage those costs? That would it be very expensive for a small amount of charging station and, and be very marginal for a larger amount of charging stations, right?

0:10:22.6 Dominic: Right.

0:10:23.9 Son: And especially now you have all these, incentives being given to everyone, even...

0:10:29.4 Dominic: Yeah.

0:10:29.5 Son: Back when I first started, there was a lot of incentives being provided, and then people were hesitant to put in the more amount of charging stations. Not because it was expensive because that's obviously not the case, right?

0:10:39.5 Dominic: Yeah.

0:10:39.9 Son: But it's just like, they're afraid to put in infrastructure that they don't see the need for right away.

0:10:44.8 Dominic: Yeah.

0:10:45.2 Son: Right. And educating them, framing the problem that helped people get to it.

0:10:50.2 Dominic: Yeah, definitely. I had the unique experience to be able to chat with you and several of the people, at your team over the last year plus, as we've been working together. And one of the fascinating things that I hadn't really thought of deeply was the number of challenges that you have to solve in order to be able to deploy EV charging at scale. And it's different for where a residential solution versus a commercial solution, and a commercial solution where the users of the fleet might come from the company that's engaging with you as opposed to the company that might be offering the land or working with you, where the users are kind of unknown to them or it would be numbers that they could work through, but it's not clear is it gonna be this driver or that driver.

0:11:30.2 Dominic: And the complexity of some of the elements you just mentioned around the permitting around the construction, and around that particular, those questions of scale. I'm particularly interested in how solving all of those problems, led to innovation where you guys have become really good at stuff that has in some ways isn't EV charging, but those are like the necessary elements of being able to do EV charging at scale, you've got all these sort of commercial problems, and then you have a bunch of implementation problems that you've solved. Any kind of highlights that really stand out there that maybe have changed over time or that you realized in doing this work, "Wow, you've gotta get really good at A before you can do any of the rest of this at scale."

0:12:15.4 Son: Yeah, that's a really good question. I guess when we first decided on how to make this happen, it was just obviously leveraging my experience, my expertise, but like ultimately just modeling it. Oh, well, I guess like what I always do is just start with what are the objectives? What are we trying to do? And then figure out a route to get there. And obviously one of the things we wanted to do was create accessible EV charging. And then, so the question is how do we do that? And it's a very broad stroke.

0:12:48.8 Dominic: Sure.

0:12:52.0 Son: And then so, even then it was like we really didn't even know what equipment we're gonna use at that point in time. And then the question that goes to it also, "So like how do we do this?" And then more to that becomes like, "How do we do this in a way where it's scalable, and it's a win, win, win," right?

0:13:05.5 Dominic: Sure.

0:13:05.6 Son: It's a win for, us win for the building owner, win for the drivers, right?

0:13:09.6 Dominic: Right.

0:13:10.0 Son: And having just continue to keep that win-win win philosophy in my mind, it was trying to figure out at that point, what are the overlaps? And what are interesting to people? Broad strokes would be like, "Hey, cost." If we could keep cost down to the minimum, it will win for everyone. And to win for RenewAge at that time, and then Loop now, which is more a... Just a company that's spun up where we had to solve that problem. And that problem that we're trying to solve is how do we provide EV charging services that has the cost effectiveness, as well as the functionality that supports the scenario that we want to create. And at that point in time, there was really nothing in the market that really serves our needs. There was a lot of network providers, a lot of existing charging stations out there that came at at a premium, because there was new technology, because they didn't have the scale. But also it was kind of cumbersome at how you can deploy it in terms of like, "Hey, you're sort of limited because of the cost where we can put the charging station as well as, because of networking where we can put the charging station." But also because of the cost, how many you can put in.

0:14:29.1 Dominic: Sure.

0:14:31.1 Son: And yeah. So we had to really figure out a way to build something that is worthwhile for our customer, that allow us to deploy and make charging stations more accessible. And like I mentioned, one of the things they came out from that problem is... Or at least the objective of the problems like, "Hey, what is the material? What is the actual units we want to deploy charging station-wide." And we define how that's gonna work, how is it gonna be beneficial to everyone, to get this deployed and then layering that on top of it like, "How do we support the network to make this easier for drivers, for cycles, because of billing because of access restriction to the charging station." To make more profit, so Loop had to come into fruition at that point to materialize and realize what those things are.

0:15:22.2 Son: So that point in time we created our own... Set up our own contract manufacturer to build charging station to our specs. And being able to understand, at least from my background, sort

of the limitations on available electricity at a certain site. So load management was crucial with Kajeet, how do we network the units to get them, to communicate to our server so we can solve the... Be able to solve the building aspect of things, being able to solve the control access part of things being able to provide useful data to our site post and leverage some other stuff by having the data to report, right?

0:16:05.2 Dominic: Yep.

0:16:05.9 Son: And so we had to create that, because nothing was there that was at least at the price value that we're able to make it prudent of site health to try to put in more charging stations now, leverage those programs that are available now such as the local rebate programs, other state water utility based city that are prevalent and still prevalent now. Yeah. One of the companies I was used to when I was in my previous job was, used to working for data was Verizon. That was our go to service provider, right?

0:16:43.8 Dominic: Sure.

0:16:44.0 Son: So at that point in time like, "Hey guys, what can you guys do to help me out here? Here's a problem that I have." And Verizon, with support from Verizon, they were able to help me sort of help introduce us to Kajeet. And then that's where I first met Kajeet. [chuckle] It's like, "Hey, Kajeet, this is what we're trying to do. We're looking at potentially, networking on the charging station or large complexes where the charging station is a little more spread apart," because I was one of the reasons why that was one of the problems we were trying to solve and trying to make the charging station more accessible versus just putting in a certain place, and calling that a day.

0:17:17.5 Dominic: Yeah.

0:17:19.5 Son: How do we get these, how do we get these stations network in a way where it's not too costly to do so while still having the ability to have reliable coverages as well as, you know, providing Loop with understanding how do we scale with Kajeet. I think that was very powerful what Kajeet did for us was just give us sort of a map of like, "Hey, if we grow this together, here's how we can grow this together, it would be very beneficial for each other." Which is really great I think that's kinda hard to get out of people sometimes it's like... Me and understand what the long term partnership looks like. And how we sort of benefit from each other after we scale the numbers. That that was really good.

0:18:06.6 Son: And then one of the other things we're setting up at that point in time was just the ability to create a very redundant and reliable charging station. Because one of the pain points that as a driver I experienced myself as well as talking to cycles and just understand the pain points of what they're used to seeing was when the charging stations or somehow lose internet connectivity, the charging stations are down, otherwise the charging stations just down indefinitely for good amount of time, at least. And then knowing that we wanted to circumvent that right away. So one of the things we did, immediately just make sure the charging stations are always accessible regardless of the internet connection or not because data gets saved directly to the charging station SD card, right?

0:18:52.1 Dominic: Sure.

0:18:52.2 Son: And then when the internet come back on, it just sends it, but also how do we get to a charging station and have that direct links to [0:19:00.5] ____. And so partnering with you guys, Kajeet, being in a combo up with that NNI solution. And that was quite useful for us as well. Sure. That saved us a lot of money, not having to go back on site and it's just a business model from a user perspective that made it easier for us to scale. And obviously at that point in time, we didn't really have the resource to try to build that out ourselves. And so partnering with you guys enabled us to realize that technology sooner, take advantage of it sooner and then just really test out how that's gonna work in the field. Yeah. And how that's gonna look like once we scale this out international, which we are right now, which is really great to see how that came from where I started to how it is now.

0:19:40.7 Dominic: Yeah, absolutely. And I appreciate the words and certainly as you know, we think about our customer relationships as partnerships, and it's awesome to be working with you as you expand this, not just from a Kajeet point of view, but personally, because we have similar backgrounds that I'm just realizing in this conversation, but I'd say one of the cool things that I learned in chatting with you has been some of these additional challenges, right? You talked about the product challenge. Realizing that you needed to go build them yourselves, or at least define the specs that you needed them to go find a partner to build them. You have network and data access challenges, and interfacing with customers in a way that got over some of those pain points. But something that I never really appreciated until I chatted with you guys was just how difficult finding the funding is, and that the financing of energy efficiency and renewable energy and EV charging, it always has the upfront cost that gets a lot of people worked out and potentially disinterested in it.

0:20:40.0 Dominic: They see it as an obstacle and they don't know how to overcome it. And talking with you about how you bring together both incentives, the incentives that exist and access to them as well as financing to get started and making that obstacle go away, I think probably opens up space for you guys to then also have this conversation around. Since we're doing it anyway, how are we going to make this installation as big as we can and reasonably make it so that in the future, as you just said, maybe if you know that in two years you want 20, but you're only gonna build 10 now, then why don't we go ahead and see if we can build 20 stations and make that work?

0:21:14.1 Dominic: And I think that the options that you give your customers are really important, but I think you also have to have the teams that you've put together to access those incentives, as well as your distribution and construction cost like partners in order to do that. What were some of the challenges in setting up those pieces of your success tools? Particularly those partners... On the ground partners, right? The internet of things always feels like it's just the data stuff, but really without the physical things, none of it ends up happening. And when you're talking about things of that you guys are involved in where there's substantially large capital equipment and somewhat dangerous potential construction and people don't do their job correctly, you have to have really good partners in order to do that. Tell us a little bit about that.

0:22:00.7 Son: Yeah. I think what you're looking to is Loop's network partners and just I guess being able to find the solution that is most worthwhile for customers, especially commercial customers that are usually a bottom line focus.

[laughter]

0:22:16.5 Dominic: Yeah.

0:22:18.2 Son: But yeah, the advent of Loop network partner came to be just part of the founder's conversations and just, being able to think early on even before I joined, right?

0:22:31.0 Dominic: Yeah.

0:22:31.8 Son: Both Dustin and Frank. It just came down to, if we just create the products and software and network and just software as a... I'm sorry... Services and software tools, is that enough? Because coming from the ESPO background, there were people already doing that. There were people already training one thing and some other doing another thing, and some companies were providing multiple solutions, right?

0:23:01.5 Son: So the Loop network partner program, the intent was to make the deployment process as a streamlined as it can be to not just make the installation or just the entire sales to get the transition online as smoothly as possible, for renew age, being able to use RenewAge or a sister company in a way that we learn from all that. We know what the roadblocks are, we know what the challenges are still and having the Loop network partner program be able to solve that at a scale where we're essentially just providing a platform using our knowledge, using our experience, using the products that we provide to package it in a way where it just makes that so much easier for people, contractors, developers, building owners to know what that process looks like. To know how if you want to let's say, deploy charging stations, DC level two, whatever you want in a specific state, how do you go about doing that as quickly as possible?

0:24:11.3 Dominic: Yeah.

0:24:11.3 Son: So, we're actually coming up with a SAS that is gonna short package this all in a very clean way. We're gonna host it on our website. In short, it just creates this platform that just makes it easier for our network partners to be able to use all the tools that we have and at a single place to immediately generate quotes and being able to procure equipment immediately from our distribution partners throughout the nation, as well as throughout the world. But yeah, the network partner program is just trying to make that... The whole... One of Loop's goals, to make charging stations more accessible, but how do you do that? And so that program's supposed to solve that. And I think it is, right? It just being able to bring on those who are committed to really trying to deploy charging stations for their customer, because there's a need, or they know it's a need, in a way where we... They're provided proper training, they're just given the right tools and they're just allow Loop an opportunity to help them frame the problem for what they're trying to do as well with what their customer's trying to do, so that as a partner, they could be able to leverage Loop and Loop services, and our personnel of resources to solve that problem for us as well, but for their particular customer.

0:25:31.7 Son: So that's a good thing about what the RenewAge and Loop does together, and being able to be use RenewAge, all the different things we learn about providing solution for a Loop or just any customer, leveraging the tools, equipment products from RenewAge, sorry, from Loop to then use all those learning experiences to provide that platform for others. I think bringing out Loop network partners is actually a very easy thing to do.

0:26:02.4 Dominic: Right.

0:26:03.5 Son: And we've grown to a 100 plus network partners now, throughout the country, a handful throughout the nation, sorry, throughout the international right now, where we just started... We actually just formalized our product, our actual official [laughter] company in Greece, I think a couple weeks ago, right?

0:26:24.9 Dominic: Right.

0:26:24.9 Son: We're going so fast where we had to have to take that leap. But yeah, I mean, that conversation where we set up Loop network partners was actually very easy conversation to have, right?

0:26:35.7 Dominic: Sure.

0:26:36.0 Son: I think at the end of the day, or like if you were given an opportunity to really be empowered to do so, I don't see why we wouldn't have done so, right?

0:26:44.4 Dominic: Right.

0:26:45.5 Son: We have customers, we know what their needs want, we wanted to provide a solution, solution wasn't there, we created our own solution. And we want to continue to do that and continue to add value to people too. So that's what it ultimately is, you join Loop network partner is just a value add to what you can do.

0:27:03.5 Dominic: Yeah. That's that's really cool. And, no, I love the story. And maybe it's sort of a last story to tell, every journey into success has its bumps along the way where an initial idea meets with reality. And it means that you have to go figure something else out in order to be successful. Sometimes it's complete failure, right? Like the best stories of successful people end up being like something that went horribly wrong in terms of what they originally thought or a business failed. But it doesn't sound like that necessarily happened with your company, but there have to have been some really core learning moments that occurred where your initial concept, didn't quite work out in the way that it needed to in order for you to scale like you're doing right now. Is there one or more of those that you could share, because I think those sort of like life, those are the most interesting tidbits to take away where it ends up being like hard work and perseverance and flexibility and openness to change that help a company go from one place to another and be successful. Anything come to mind.

0:28:10.5 Son: I can't think of any big thing that was just like, hey, this sort of stopped for momentum for a while and we have to overcome that. What I will say is that I think maybe that's testament to sort of the way we approach the solution, right? Or just approach how we scaled.

0:28:26.4 Dominic: Sure.

0:28:26.7 Son: One of which is that we just have to stay flexible, as you said, right?

0:28:29.6 Dominic: Right.

0:28:29.9 Son: And only create constructs where it was beneficial, but otherwise allow us to pivot

as much as we want.

0:28:34.9 Dominic: Right.

0:28:35.7 Son: Pivoting pricing, pivoting how we even creating contract agreements with people, right? We don't force anybody, to sort of sign a contract with us to get anything done without giving them the ability to just, "Hey, if you notice anything on there that you just totally completely disagree with we're open to making changes"

0:29:03.4 Dominic: Right.

0:29:03.4 Son: And so that allowed a lot of companies to just really like, "Okay, I wanna change the terms here from 24 months to 12 months" And for us, it's like, "Yeah, that's fine." That's... We believed in our ability to execute, in not just the deployment, right? But also the product itself to speak for herself and all the services behind once the charging station are available and ready to use, we believe in it so much. And we're like, "You're not gonna go anywhere else"

0:29:26.8 Dominic: Right. [laughter]

0:29:27.3 Son: If you were then we would've known what that company is by now, right? That you're gonna go towards. And then what... I guess... Yeah. I think that speaks to that. And in our ability to continue to put ourselves in everyone's shoes.

0:29:42.3 Dominic: Sure.

0:29:42.5 Son: And just trying to find value add, right? We're not here to be the only person that comes out on top or the single entity that comes out on top, right? We're here to... Especially with all the partners that help us to get to the stage where we are, right? Such as PG. We had PG find like long term arrangement and we're all winning, right?

0:30:00.6 Dominic: Right.

0:30:00.9 Son: If we're not winning together when one succeeds, then that's not a viable partnership to have, right?

0:30:07.2 Dominic: Right.

0:30:07.7 Son: And then if you apply that to others as well, they are not necessarily part of the initial conversation when you get stuff done, such as like drivers, right? If you're not allowing those people to really win from the situation, it's like, "Hey, it's always been like with EV vehicles, right? EV vehicles, electric vehicles.

[laughter]

0:30:28.0 Son: It's always been like a game of chicken like "Do I get the car first or do I await for the charging station be available near where I live right? And so if we... There's... In life, there's only so much stuff you should focus on, right? One of the stuff you should focus on is what you have control over. Right.

0:30:41.4 Dominic: Sure.

0:30:41.7 Son: So what we had control over was, and still do now is just to try to solve the infrastructure game for people right away.

0:30:48.7 Dominic: Right.

0:30:48.8 Son: And then we've seen a lot of success stories, from drivers, themselves talking to us, "Hey, I wouldn't have bought a vehicle until I saw that there's charging stations, that are where I live." Because a lot of studies are nowadays saying that... And I believe it too, it's like 80% charging die at home. Right. So if you live at a certain residential place that you don't own rights to, then it's very hard, like multi-unit dwellings even condominiums, right? Or, mixed use buildings, right? You don't really own the parking that you parked all the time. Hopefully that answers your question.

0:31:19.3 Dominic: Oh yeah, no, absolutely.

0:31:20.7 Son: Yeah.

0:31:21.1 Dominic: It's a fascinating thing to learn just simply how to get from A to B, or maybe A to Z, there's all these steps in between some of which are noble and some of which maybe a prep process and approach helps a company be successful like you just described. One last question that's a little bit outside of... Specifically loop and RenewAge, but more about your expertise and experience in sort of the broader renewables and energy efficiency world you've been in for over a decade plus. Yeah, what's something that you are really excited about that you feel is just around the corner. Something that maybe we in this space have talked about for a long time, but either technological or financial or other impediments have kept it from being realized. But you in your sort of your position now, you're like, "You know what that's really coming and it's gonna be really cool to see how somebody or some company makes that a reality." Anything come to mind?

0:32:21.8 Son: It probably has to be just energy independence, by means of having a microgrid, by means of you specifically EV charging, the ability to use your vehicle to let's say power your home.

0:32:35.0 Dominic: Right.

0:32:35.7 Son: Let's say, use your vehicle to help create more grid stability. Just I think the more recent event in Texas sort of speaks to how crucial infrastructure that is, and what happens especially when it's most relied upon fails. What type of adverse effect it'll have for everyone, and to the extent that people will die or just have very miserable lives.

0:33:01.2 Dominic: Yep.

0:33:01.5 Son: I think having... I guess energy independence is one way of creating a future where we mitigate that from happening before. And obviously there's a lot of challenge, even, what I'm referring specifically is called vehicle to grid. Even that's a challenge to really get implemented, that standard ISO 15118 it has been around for a few years now, right?

0:33:27.8 Dominic: Right.

0:33:28.1 Son: Multiple drafts have been done, but the implementation process has been very slow and I think what is really traveling that is just... Everyone's trying to create, especially vehicle EM, is trying to create their own IP and not really prioritizing how do they then share that standard to then allow everyone else to benefit from it, right?

0:33:51.8 Dominic: Yep.

0:33:51.8 Son: But I still believe that that's, that's the world we're getting to.

0:33:54.8 Dominic: Yeah.

0:33:55.8 Son: Even in addition to that, it's utilities, stepping in... When I was working at Tesla for the city, it was even with like having battery backup, that was like, "Hey, it's working, we can prove that it work." And then the utility step in and just, nothing against utility, but it's just like, there's some regulations that have to really put their hands across 'cause... Likely 'cause they didn't understand the technology of how does it work because there's a safety feature to it as well. You have to properly shut down just in case it's called ality, but just in case you have to... Someone has to work on the lines and it's energized, that's a problem. And so we have to properly shut down stuff and prove it. And it's very slow moving because of the type of people that we have to communicate to and get their buy in to do. It's almost a big... It's almost an add as just... Autonomous driving adult, that's a little more for in advance. But it's the fact they might be there, but adoption might be very, very slow.

0:34:58.3 Dominic: Sure.

0:34:58.4 Son: And we're here to help out as much we can right to make it take control of what we have control, make sure the technology's there, make sure that we have the right partnerships in place for Loop to provide services or product services... Products and services, sorry, to make that solution viable.

0:35:19.2 Dominic: Right.

0:35:19.7 Son: And we're here to have conversations with utilities, have conversations with authorities having jurisdiction, whoever it is to make that reality. We're partnering with OEMs and stuff like that as well to get that technology rolling. And then wherever we can deploy, deploy it. That's the only thing we have control over. So there's a big need for it, I think in California, specifically where Loop is native to as well as anywhere else, big Metro bot metropolitans to start with. That's where the big energy needs are. And being able to shave off peak power middle of the day, if you're not really using your vehicles, 'cause most of the time, 90% of the time or sort of that you're not using your vehicle, right?

0:36:01.0 Dominic: Right.

0:36:01.3 Son: Why not allow that to work? And so we just had to figure way to incentivize that business case to really take shape sooner or later, it it's a big combination of working with drivers, incentivizing them to allow their vehicles to do that, right?

0:36:17.6 Dominic: Yeah.

0:36:18.3 Son: So they have to be likely be able to monetize from that in some way or another, utilities as well building owners. We need to create a incentive structure to really get that going. But that's really one of the exciting things that I'm expecting the future. There's renewable energy, whatever that may be solar geo when whatever the case may be, tagging on some type of energy storage, whether it be battery, some type of other type of energy storage device, there's just plenty.

0:36:51.4 Dominic: Yeah. Right.

0:36:52.2 Son: And just coupling that together with actual loads that you need, right.

0:36:56.5 Dominic: Sure.

0:36:56.6 Son: Secondary power of storage and what the loads are and having intelligent loads, right. To be able to in this case feedback power, but a minimum curtail power right. Actually needed yeah that's gonna be huge.

0:37:08.9 Dominic: Yeah, absolutely. No. And I think that, I think you're spot on and I... My own career long ago, I used to take Americans who were interested in energy policy to, to Germany in particular, to look at these small little towns that had built their own microgrids in part to experience energy independence, but also to... It created this community beyond the community that already existed because of the fact that everyone had to be involved in it together. And there's certain challenges that they overcame. But I'd say that you're also right about how the hour of this is coming when companies like Ford in the pitch for their F-150 lightning are talking about how the vehicle itself will play some role in providing electricity in the event of emergencies. That's actually just the germ of the beginning of it being fully integrated into a broader energy vision. And if a 100 plus year old industrial giant is now selling part of the vision that you just laid out, I think that we are very close. There's lots of things to do many regulatory and and institutional changes that'll be needed, but, but I think that you're right, that the day is coming and it'll be exciting times for sure.

0:38:23.0 Son: Yeah. Yeah. We're here to put in the hard work. I think part of it is words can't frame the problem, but also to educate. And yeah, it's everyone we need to educate, not just... Not just policy holders in this case. But everyone we interact with on a daily basis, even people who just bought their cars. We'll have customer service calls, and they're like, "How do I charge my vehicles?" "Well, we'll help you with that." I thought someone had already told you how to do that already, but [laughter], we'll help you, we'll help you figure it out, right?

0:38:56.4 Dominic: Right.

0:38:56.7 Son: But yeah, we just have to educate and then ultimately take what we control over and just really focus on that to come up with a product that people will truly believe in because it just works, and it works at a price point that that makes sense for obviously not just Loop, but for people who really trying to get this into their buildings, their schools, their office place, their... Where they live at. And make it a very viable solution with them, partnering with those, to help package it in a way that it just makes it more compelling for people to go with renewable transportation and just getting ahead of where we can. One of the things that I always like to do is I think I like to prepare

for stuff. And so, and then laying out goals ahead and like knowing that, knowing how big of a lift it is to try to move incrementally something forward, just need to get, get ahead of it as much as we possibly can to really make that worthwhile thing.

0:39:58.1 Son: So what I previously did and what we're planning to do now is just make that technology and make it available to those who have authority to give them the ability to play around with it, see how it really works, scrutinize this as much as they want to in its infancy. And then that will allow them to have the confidence when it's actually in production. To them it's like, "Yeah, I know it works. I know it works. I just need to continue to remove the red tape, what is otherwise known as bureaucracy to help speed it along."

0:40:26.4 Dominic: Yeah. Well, absolutely. I think that that's the journey that's coming for for you and the industry in general. I appreciate you joining us today and laying out not only the story of Loop, but also the vision of the future that we just talked about. Thanks a lot for your time today, Son, and I hope you and the team have much success in this year and beyond.

0:40:48.6 Son: Yeah. I appreciate Dominic, anytime.

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