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<<Chris Pierce, Analyst, Needham & Company>>

My name is Chris Pierce. I'm with Needham Research team. Welcome to the 25th Annual Needham Growth Conference. It's my pleasure to introduce the team from Lightning eMotors. We have CEO, Tim Reeser; and CFO, David Agatston. They're going to give a presentation for a little bit, and then we're going to have some fireside Q&A. Take it away, guys.

<<Brian Smith, Vice President, Investor Relations>>

Well, thank you, Chris. Before I bring our CEO up here and CFO, my name is Brian Smith and I'm the Vice President of Investor Relations. And I'm going to give you a very quick overview of Lightning eMotors, and then I will turn it over to Tim, who will go into some more detail.

But before I do that, as you may know, our statements will include forward-looking statements that include some risks factors and actual results may differ materially from our forward-looking statements based on those risks, which can be found in our SEC filings. And I would advise you to peruse those.

We're going to give you an introduction to Lightning eMotors, but in summary, from an investment thesis standpoint, we have a significant market opportunity that we will go into in detail that is in the midst of a strong demand inflection, and especially given the momentum from incentives and from mandates to decarbonize commercial vehicle fleets. And that's what we provide at Lightning eMotors.

We are shipping products today, which may not sound very special except that that puts us ahead of most of our peers and competitors. And we are partnering with world-class customers and OEM partners, and we'll go into a list of those as well. We have a capital light structure that has allowed us to ramp our production capacity and build out our factory, which is now done in a very capital light model, and we'll go into that as well.

And then we have robust in-house manufacturing and strong backlog, strong pipeline of business and an inflection in demand that gets us very excited. At a glance, Lightning makes commercial electric zero emission powertrains and complete vehicles that are built generally on existing OEM platforms.

Now, we don't play in the small Class 1 and 2 consumer car and truck space that the big OEMs play in, and we don't play in the big semi-tractor trailer space either, where also the big OEMs play. We participate in the middle, which is some lower volume and more

customization, which is why the big OEMs don't play there. And we think it's a very attractive space with limited competition and high barriers to entry.

We have some specific and special technology built on 13 years of R&D that allows us to address this fairly broad and customizable space with our own offerings and allows us to provide a very broad portfolio of vehicles from ambulances to shuttle buses, to delivery vans, to school buses. And we'll go over our whole portfolio soon.

We have seen strong demand, and we have capacity today to build 3,000 vehicles a year, which may not sound like much, but in the commercial space and in the electric vehicle space, that would provide us capacity for significant revenue growth that will get -- that could get us to gross margin and then EBITDA and ultimately cash flow positive.

To introduce this, McKinsey just last month came out with a report talking about how fleets might decarbonize, and those are our customers. We sell products to commercial fleets, and those fleet owners are faced with a variety of issues and challenges as they attempt to decarbonize and go zero emission on their fleets. And the fact is, most of them have committed to doing that, and yet there have -- it presents some challenges.

Now, the first one according to McKinsey is the vehicles themselves, and we provide those. The second is the infrastructure and the charging, which doesn't just mean buying charging, it means dealing with regulators and dealing with power companies and utilities and incentives. And it's a huge ecosystem that most of these Fleet Managers do not understand, but we do. The third is the economics of sustainability, because these guys cannot sacrifice their business model in the name of clean air and climate change, and they shouldn't be expected to and if they work with us, they don't have to.

And fourth is fleet management, because it is much more challenging in terms of routes, in terms of range, in terms of charging times and optimizing the whole fleet structure and how that works given the fact that you can't just give a driver a gas card now and expect them to go do what they do. And then when they run out of gas, they go to a gas station. So we provide all of these things, and you will see this graphic at the end of our presentation as we show that we have checked the box on all these and provide a full solution to Fleet Managers.

And to describe in more detail how we do that, I will turn the mic over to our CEO, Tim Reeser.

<<Timothy Reeser, Chief Executive Officer and Director>>

Thank you, Brian. So Brian does a great job of talking much slower. So now I get to talk fast, with our remaining time and then introduce David, who also talks fast, so that we'll keep you entertained for a bit here. As you think about a portfolio, as Brian pointed out what McKinsey said, we have to do to solve the fleet challenge, we look at that across five areas. One of them is we have to provide the vehicle. And Brian went over that quickly and just said, we do that. But I think it's important to note this is one of the

hardest parts and the reason why to date commercial vehicles don't have more electric vehicle traction, because as it turns out, it's a very, very disjointed market with a lot of complexity. And you see two pictures here, a school bus and an ambulance. Those are two examples of two very different vehicles that have different requirements. It may not be obvious, but you compare it to a passenger vehicle where maybe you have a two door or four door and SUV.

In this world, the difference between a school bus and an ambulance is dramatic, both under the vehicle, around the vehicle, in the vehicle, and under the hood, ranging from, for example, the ambulance has a gurney lift out back and it has different kinds of doors and it has a water tank underneath it, and it has high voltage power requirements, and it has many, even a gasoline ambulance has to stay plugged into run all the electric vehicle equipment and all the medical equipment. That turns out to be a real complex challenge in electrification. It's already solved, long solved in a gasoline vehicle. It's a new challenge in electrification.

And yet a totally different challenge than a school bus where we have, again, a lot of extracurricular equipment on board, both under it and around it that make adding batteries and dealing with wire harness and high voltage and the computer system onboard highly complex. That's what Lightning does, and that's where we built the business.

In addition to building complete vehicles, we build powertrains. So people like Winnebago buy powertrains from us today, Blue Bird, they buy powertrains from us today and install it at their factory. So in choice number one, we often install those at our factory. We build the powertrain and install it. And choice number two, they buy just a powertrain from us and they install it at their factory. Again, many of these factories of commercial vehicles are multi-stage manufacturing. They buy a chassis, they buy a powertrain. And historically, they might buy a diesel from Cummins or a gasoline from General Motors, and they put it on their custom chassis, and then they put a body on top. So we feed right into that ecosystem that's already there as a powertrain provider.

Third, we also provide repowering. So this is important when you think about the market, you'll see in a moment there's about 250,000 new commercial vehicles sold in North America today every year. But you look back and say, what about the vehicles that are on the road? And I'll give you one application, school buses alone. School buses alone there's half a million of them on the roads today, every day driving students back and forth to school, half a million of them are on the road today. So in addition to the 30,000, well, 40,000 sold a year, there's half a million already on the road today. So our ability to not only put a new powertrain in a new Blue Bird, but also provide a Blue Bird customer with a repowered powertrain so that when their diesel wears out, they can make it electric, is highly compelling and a big opportunity in the space.

Another one that everybody talks about a lot, I've seen recently people say, hey, we're going to run out of electricity, or hey, there's no charging. It's important to note that fleet charging is different than residential or commercial -- than public charging or residential

charging. It's also different than semi-truck charging, over the road charging. These are depots. Think about people like DHL here in town. We got a chance, we were walking to an appointment in Manhattan yesterday, saw one of the DHL vehicles we've built live. So that was very satisfying to see something that came out of our factory running around the streets here. That vehicle at DHL drives 12 miles a day. So they have a hundred of them here in Manhattan. They drive 12 miles a day.

So it's a very unique use case, but these kind of unique cases exist all over commercial vehicles. So again, our specialty is really catering to this kind of customer. And DHL buys this small battery unit for Manhattan, so it only needs to go 12 miles. They buy a 120 mile unit battery system, so three more battery modules to put it, Palo Alto, California, that's our business. No one else provides that level of customization, that level of customization, just the difference in price between those two identically packaged vehicles, just different batteries is an additional \$50,000. So DHL wants to be efficient and wants to choose the right battery, and we allow them to do that.

So the other part of that is charging it. They charge here at their Manhattan facility all on Level 2 chargers. They have plenty of time at night. It's a very easy charging situation. We've got customers with motor coaches though that need to charge that coach in an hour and they have a very large 640 kilowatt hour battery. Again, we provide a full solution for that customer to buy charging in vehicles and have them interact and interface from us. And as we like to say, one throat to choke, if anything doesn't work, they're calling us and that's what a fleet wants.

So, little bit about what else we do in terms of our portfolio. And again, I like pictures because this isn't as common as say a passenger vehicle ranging from a Class 3 which is a -- those of you see, if you see a van that's got four wheels on the back and two on each side, a dually set, then that's a Class 3 van. And you'll see vans and trucks like that all the way up to a Class 7, 8 motor coach. We electrify all the products in this picture today. It's not speculative, it's not a future product portfolio. These vehicles are on the road today.

An interesting point, you'll see that's kind of new to everybody. The Inflation Reduction Act came out and said there's a \$7,500 rebate and a \$40,000 rebate and on this picture you get kind of where it is the \$7,500 rebate is Class 3. The \$40,000 rebate is everything bigger than that Class 4, 5, 6, and 7. So the majority of our portfolio picks up the \$40,000 rebate.

It's also important to note, people ask us all the time, what about Ford? What about Stellantis? What about GM? Everything they build, what about Rivian? Everything they build is on the left side of this picture. It doesn't exist on this picture. Rivian's product is a Class 2, Ford's E-Transit product is a Class 1, 2, BrightDrop product is a Class 1, 2. So they're way off the side of the picture, they don't. We don't compete with them. They don't compete with us, but also they are a long ways from getting the \$40,000 rebate that we get playing in the bigger vehicles that we're playing in here.

A few of the customers, again, were already in the road. I talked about DHL, but Spin for example, is a Ford Spin out that does scooters. You have a variety of everything from Amazon and fluid trucks to people like RideCo in Los Angeles and others. So very nice set of customers on the OEM partners. So these are people we sell a powertrain to. ABC is the number one coach builder. So if you've seen Google's campus in Northern California, they run 500 motor coaches for employee transportation. That's an ABC customer. We're working with them on electrifying those motor coaches. They look like the picture you see in our Class 7, 8 here.

But other OEM partners GM that we've been very public about Winnebago, REV Group does both Collins school buses and Leader Ambulance with us, and Forest River does white school buses, and Blue Bird of course that we've talked about, or I'm sorry, white shuttle buses. But we're not done today with a product portfolio. And again, back to the McKinsey report, a customer is not buying the product if you don't have the product for them. And this is important in commercial vehicles, different again than passenger vehicle.

A passenger vehicle customer might be willing to buy an SUV instead of a passenger vehicle or a Crossover instead of an SUV. They might be flexible and they might have one of both. If a customer needs an electric refrigerated delivery truck, they're not going to buy a school bus. Not going to happen. And they aren't the same. The powertrains aren't the same, the products not the same. So you need the various products we have and the more products we build frankly, the more revenue we have. In many of these spaces, you'll see in a moment there's a lot of white space. We have very few to no competitors.

For example, where you see there a Class 3 passenger van, we have no competitors today. There's nobody in the United States other than us building a Class 3 electric 15-passenger wagon today for the Altoona tested and ready to go into transit agencies. So we are excited about our product portfolio. We are in many cases a significant amount of white space and a lot of grant and subsidy space that we've purposely chosen as we've made the investments in our portfolio.

Few accomplishments brief to date here, one of them is we've been doing this a long time. Started the company in 2008. I Co-Founded the company then we've been in commercial vehicles since then. It was hybrids at the beginning. It's electric vehicles since 2017 and on, it means we have a lot of experience with customers, with go-to-market, with dealers, a lot of experience with products. Many of our products are on Generation 2, 3, 4. We're not just coming out with a new product that's got to go through a tough time.

We even have our second generation of our mobile battery vehicle charger a product that again, is enabling to people who may not be able to get charging right away and use a trailer charger to make it happen. Over 3 million, I saw yesterday, I get an update on this every week about almost 4 million customer mile, customer zero emission miles driven. It doesn't sound like a lot, but in the commercial vehicle space, we are the leaders in that space.

Our second generation of leading telematics, when you walk into our network operations center, we collect every second on every vehicle in the field 250 data points. So we see what's going on in the field, we're able to call our customer and say, hey, we noticed your water pump has lower voltage. We believe you have a leak. Please ground the vehicle tonight and we'll send a wrap over. So very significant opportunity we have that you can't historically, hasn't historically been done with gasoline or diesel vehicles.

And finally, a mature product around Lightning Energy where we're providing integrated charging. So our chargers know what the vehicles doing. Our vehicles know what the charging doing. When that school bus comes off route, we know when it shows up at the charger how many miles it needs to charge for to a mile. It's a very unique opportunity that again, doesn't exist with our customers and didn't exist previously with gasoline or diesel vehicles.

So kind of to that point, gasoline vehicles versus electric vehicles. There's a whole new set of complexity with electric vehicles that doesn't exist with gasoline vehicles. And so we specialize in that. It's that, it's our business. One of the key questions I get all the time is, why doesn't Ford just do it? And part of it is they don't want this complexity. Ford wants to build a million F-150s a year, no customization, crank them out, high volume, low customization, make it happen. That's what they do. They spent \$2.5 billion to build their little van, their E-Transit van, \$2.5 billion to get ready to build it.

When you get into our space, that school bus has a total market of 10,000 units a year. They aren't going to go spend \$2.5 billion to take on a 10,000 unit per year product. It's not their model. It is our model. So same thing with an ambulance. And ambulance is just 5,000 units per year. Not going to be a Ford product. Not going to be a GM product. This is our space and our world to take on.

One of the things you'll see, Ford's come out and said, the CEO came out and said three months ago they were laying off 3,500 people because they didn't have the software skills and they had to start over. They've said over and over, they don't have the software skills. Volkswagen came out and said, we underestimated the software skills required. That's again what Lightning does. We build software for these vehicles, over a 100 software engineers on the team. Some of the companies we're working with today, we have more software engineers than the major in these vehicles, the major OEMs working on these vehicles.

And software is about how do you control the powertrain and the regen and the feel and look and feel of that product. How do you integrate it to specific chassis and applications? And thirdly, our own proprietary analytics Telematics software that goes with it.

So a lot of people then say, okay, you've got a factory and this is real pictures of our factory. Not speculative, not what it's going to look like, not vaporware. This is our factory building, real powertrains on the left side there and real vehicles on the right side.

People ask me what it is we build, and we'll talk about this a bit. We build powertrain and powertrain components. We test them, we integrate them into a vehicle and we design, build, and own all the software that makes all of this work.

Again, to dig a little bit deeper, I won't dig into specific ones of these, but the things on the left are things we buy, things on the right, things we build and we do both. We buy and build. And some of the stuff you can imagine that we buy, we buy in a custom way or we customize it after we get it. So we have a -- both the software side, a great barrier to entry to this. It is complicated. It's not as easy. We get this, I get people saying all the time, it's just a battery motor. How hard can it be? There's over 1,500 components in each powertrain, proprietary components in each powertrain. So the supply chain lift, the complexity is there. It's a great barrier to entry, but it's also taken us a while to get passed it.

So we've made the excuse supply chain is hard. It's absolutely hampered our progress in the last year as we've built it. But we've gotten better and we're continuing to get better. Our supply chain team before we went public was three people. Now it's a little over 12 people and growing. So we've added people, we've added process, NetSuite, DemandCaster, all the process it takes to be good at supply chain. And then we've leveraged the capital we got from going public to build real.

We are the largest Proterra battery customer. We're the second largest CATL customer, one of the largest motor customers. So we've leveraged our capital and in fact that we have vehicles on the road to have, build a much better supply chain with more optionality and more robustness. We still have a bit to go, but we've made real progress in this area.

I like to talk a bit because dealerships and the go-to-market is very different with commercial vehicles. Commercial vehicles, unlike when, I'm a Tesla owner, so I like to use it because many of us think about that. Tesla's early adopters, many of them bought a vehicle sight unseen, certainly never even took a test drive. They just bought a vehicle. I'm one of those. I bought a vehicle, having a Tesla vehicle, never driven it. That doesn't happen in commercial vehicles. These customers not only want to drive it, many of our commercial vehicles want to drive it a year before they decide to buy one or buy more, many more rent a vehicle from us for six months before they decide to buy more or buy additional ones.

So it's a long sales cycle, but the great part is once you're through that sales cycle, you start getting repeat orders and those happen faster. So I'm proud to say, happy to say we're starting to get those repeat orders after this long sales cycle. That's why we have such an optimism around the future and a very significant growth curve, because we've already done this step. We've already gone through the long sales cycle and now we're on the flip side where things can really accelerate and take off.

So I'm not going to go through everything on this slide, but I think what you see in the middle there on the right side, 50% of fleets plan to fully, plan to be fully carbon free by 2027. This isn't a long time in an industry where many of these vehicles UPS by the way,

keeps their trucks 25 years. The transit agencies have a minimum -- they have to commit when they get funding from the Federal Transit Authority to keep the bus for 12 years.

So when you think about these people are going to be totally carbon free by 2027, they're making these decisions now. This isn't something we got to wait for, it's happening now. And this is another reason we're very excited about it. Obviously, many of the other things that we'll go through, one of them is look at the incentives. And I hear a lot of people say, when Congress changes and whenever the incentives are going away they aren't. These incentives are tied up in a lot of other jobs, bills and a lot of what's happening. So it's Infrastructure Bill, it's Inflation Reduction Act. These are done. The Inflation Reduction Act is a 10-year bill. The Infrastructure Act is already one year in, already a billion dollars of EPA and a billion dollars of FTA going in the Street now and just beginning to hit.

Yes, it actually stalled us in the last couple quarters, because customers wanted to wait for these to be available before they place their next orders. Because if you can get a free vehicle or a largely free vehicle, you're going to wait to place your order. So it's been a stall for us and many of us in the industry for the last year, but now we're really seeing it this takeoff. And the neat part is you look at these check marks, they are additive. So if you can get, when you look across that sheet and you see a Class 4 school bus and you see that it can get Inflation Reduction Act money of \$40,000, EPA money of 85% funding and state province money that fills in the rest, they are getting a free school bus. This has never been there in the history. This is a huge inflection point that is new in fresh and happening.

So you kind of see it late across the screen. Old incentives, not much there. You basically had California and largely that was it, that was being deployed. You look in the middle of the screen, a lot of new money and you see there, there's a little over \$20 billion in the last really that are just hitting the street now. So this is fresh money, exciting money. But even beyond the incentives, as Brian pointed out, there's an awful lot of people, Amazon, UPS, IKEA, FedEx, bp saying they will be carbon free, they are going to do this. So the - - all the momentum is here and it's an exciting place to be from the corporate sustainability commitments, the mandates in California and other states and of course what we call the CARES [ph], which is all the stuff.

But I like to point out our business was not entirely dependent on that. If you said all these subsidies are gone, there's no subsidies. You said there's no mandates, Tim, as anybody going to buy an electric commercial vehicle? And the answer is hell, yes. And here's why it's extremely compelling from a dollar today. This wasn't true two or three years ago. So this is another thing driving inflection. Gasoline prices have gone up. Electric prices have stabilized, the prices of our vehicles have come down. And now you see even without a grant. So if you look at the far right line there, no grants. You leave out grants and subsidies there, it's still \$846 per month cheaper for this vehicle, for an electric vehicle than the equivalent gasoline vehicle all in. Very compelling, even without grants and subsidies, and this is something I'm passionate about.

You can see the majority of that savings comes in fuel savings. And the reason why is this vehicle right here is a gasoline vehicle, gets 13 miles per gallon as an electric vehicle, the equivalent energy use 66 miles per gallon, nearly 5x more efficient. That's true across our entire product line, 5x more efficient. And that's why this works. It's not about where did the energy come from or how much was the energy 5x more efficient. When you start there, you've got a real opportunity to make a difference.

Brian mentioned it, very limited competition in the middle of this chart medium-duty space. Yes, I talked about earlier Ford, GM, Rivian, Lordstown, Tesla all on the left side, Arrival, Chryslers all of that left side, not our war. On the right side, you have not our war, it's PACCAR, it's Mercedes, it's Daimler, it's Tesla again announced their products. Volkswagen highly not our war. And the middles are war and we're winning that war and we are the leader in that space.

Why are we the leader in the space over 3 million miles on the road no one else has 3 million miles of medium-duty, limited competition in most of those spaces. No one else has the products. We're much further along in generation and product, much better software. It does ultimately come down to a better product. The customers like the product. And finally you get to kind of the bottom where we talk about a CapEx light model and the other things that really make this go, what does it lead to?

This is one of my favorite customer, Richard Tree. I was there when his City Council in California decided to make this decision to buy our vehicles. And they -- the city he's in one of our competing -- one of our competitors in the city and they chose us over the competitors in his own town. And he said for these reasons, competitive pricing, ability to configure the vehicle to meet our needs and their superior maintenance and support. So he's checking all four of these boxes as you see that Brian brought up, the vehicles met its needs, supporting infrastructures there. We've made those investments, economic stability and sustainability big part to him and he knows we've got the fleet management.

So with that, turn it over to David.

<<David Agatston, Senior Vice President and Chief Financial Officer>>

Thanks, Tim. I'd like to follow-up as always. So I'll finish up pretty quickly so we leave some time for Q&A at the end. So as Tim and Brian highlighted, we're really excited about the opportunity in this market. We think it's a great space. We've carved out, some blue ocean there to go after this medium-duty Class 3 to Class 7 vehicles. What's it going to take for us to grow? Well, there's a few things, right? And we think the path is, is really clear. We got to scale, we got to scale both organically and inorganically, potentially. We need to continue to build out a resilient supply chain, right? Including eventually building and sourcing our own proprietary eChassis.

We need to streamline production to help lower our costs. And then we need to make the purchase process easier for our customers. Today there's -- we've talked about some of

the barriers we've got charging, route management. How do they navigate all these incentive programs? How do they get financing?

And so, we we're putting in place, although the infrastructure to help -- make it an easier buying process for customers. Because it is not an easier, easy decision today. Just like many of you may not have gone to an electric vehicle yet. I have not. For that same reason you have to figure out what are the things you need to navigate? What's my driving? What do I -- how do I drive? Where am I going to charge? If I go to the mountains or if I go out to the Hamptons from New York City, am I going to be able to make it? Fleet managers have those same issues and so we've got to put the infrastructure in place to make it an easier buying decision for them.

We also -- as I think Tim and Brian alluded to, we really believe we're at an inflection point in the business, right? So there's a bunch of things that are tailwinds moving in our favor, right? We've got the incentives that that Tim alluded to. And I think they've been out there for a couple of years. People we heard about the Inflation Reduction Act starting in the middle of last year. There's been some lack of clarity about what that means. How are customers going to go, get those incentives that's starting to firm up and become clearer for people.

We know that the cost premium for electric vehicles is pretty steep, especially in passenger vehicles. There's also an increase for electric vehicles. The incentives help produce that, that reduction also helps improve the total cost of ownership equation for vehicle fleet managers. And then we have the charging infrastructure, right? That's starting to improve. It's not perfect. There's still work to be done. We're trying to help with that in our business, but that's still one of the impediments. But again, it's -- we think this is the year where that really starts to take off and makes it easier for customers to make that decision.

The supply chain is maturing. We all know at 2021 and 2022 we're like with COVID, we're seeing that get improved. It doesn't mean it's perfect. There's still, we still run into issues. Tim likes to talk about the golden screw. There's -- we can have every part that we need to make the vehicle except for the one golden screw. If you don't have that, you can't finish the vehicle. So every now and then, we still run into those issues, but we do believe it's starting to ease.

And then, we think costs are starting to, especially around batteries are starting to level out and even go down a little bit. We know it's really important to get to gross margin positive. We said on our Q3 call that we expect to be there in the second half of this year. We showed in Q3 the impact of volume on our gross margin. Our gross margin improved several points between Q2 and Q3. And a lot of that was just -- was selling volume. We have the factory, Tim talked about, there's overhead there. We need to get volume through that factory, which gets back to the path to our success, which is about scaling. As we scale, we'll see our gross margin improve, as we reduce costs, our gross margins improve.

We have a little more pricing flexibility with our customers now that they have these incentives, especially if they can get the 40,000 Inflation Reduction Act incentive. And so we feel really strongly that we'll be able to achieve it in the second half of the year as long as we continue to see the volumes come and we can close these deals.

So that's all a lot of positive stuff. The elephant in the room as 2022 has been a tough year for many, including us. The EV space has been pummeled. Our stock has been hit hard. We recognize that. We acknowledge that. We don't like where we are right now. We know it's important to turn that around for our investors. And we also know that, and we've said publicly that in order to continue to grow, we need to raise capital and we're planning to do that by the end of this quarter, early second quarter, because we need the cash to get us to allow us to the runway to get to EBITDA positive and cash positive. So we're planning to go after that and aggressively, we know it's a tough market. We know it won't be easy. We know it's going to be expensive, but we have no choice and we're committed to doing it.

So reiterating it, look, we're really pumped about the opportunity. There's a significant market opportunity. We make products today, many of our competitors, it's vaporware, it's a CAD diagram. If you came out to Loveland to see our facility, there's 40 or 50 vehicles in some stage of manufacturing, a bunch of powertrains. We are shipping these vehicles. Our customers are driving it. Tim told you about how we saw it. We ran into one of our DHL vehicles yesterday. They're out there on the road. And so we have no doubt that we can succeed here and we will succeed. And we're really excited and look forward to any additional questions.

<<Analyst>>

[Question Inaudible].

<<Timothy Reeser, Chief Executive Officer and Director>>

Yes, so the other one is software. There's also some other differentiation, Shyft Group, their entire business is delivery vehicles, last mile delivery vehicles. They do have some, but in terms of their electrification, they aren't building any electric firetrucks. But Shyft Group does not build passenger vans. Never has, doesn't have that currently they don't. The dealerships by the way they go-to-market for each school bus is totally different. They don't build school buses to go-to-market. The product, the software totally different. The go-to-market product software on, White Shuttle Bus is totally different than what Shyft Group does. So we only overlap with them slightly. We don't mention them as a competitor. We only overlap. They don't make a product today, which is part of the reason they're competitors. They're vaporware. But they will and I think they'll have a good product.

I like Shyft Group. They've been a partner with us. They've built bodies for us for a long time for our products. They build a Step Van product is primarily what they're building and it's a good Step Van product. They'll have a good product. We've chosen, it's a class,

primarily a Class 3 product is the first one we've chosen not to build a Class 3 Step Van. So we aren't overlapping with them in product. So it gets both of them. They're different. We are different. And we in the sense that when a customer says I need Class 3 step van, we don't make one they do, when a customer says I need a school bus, they don't make one we do.

So there's no real, we don't compete in a bid system or pricing or anything else. They've talked to us quite frankly about our help building powertrains and parts for them. We've used them to build to install our powertrain in Class 6 trucks for Isuzu. We've used them, so that's their different group within Shyft Group at same parent company.

We've used them to build bodies for some bigger Step Vans we've built and for our Blue Bird Chassis Step Van. So it's kind of an interesting place in commercial vehicles that there's some co-operations, some competitors and, but by and large you don't see them up here. One because today they don't yet have a product. And two, when they do, it doesn't overlap from a product. But at a software it also, if we were building the same product, that's where a customer would see the difference in software. But then you do get to a case a bit like, do you buy a BMW, Mercedes? The software is different and the name is different. But yes, there's, it becomes much a much smaller delta. But today it's a big delta, because one of them has an SUV and the other one has a passenger car, so to speak. And so you just have a different vehicle.

<<Analyst>>

[Question Inaudible].

<<Brian Smith, Vice President, Investor Relations>>

Battery packs. Back of battery packs.

<<Timothy Reeser, Chief Executive Officer and Director>>

So we took our lumps last night for those of you who read it. So we announced, we've gotten in the habit now of releasing production numbers, because we're excited to point out that we -- every quarter we're scaling significantly. So we pointed out that we're -- what 24%, 25%, 23%. Brian's got the numbers, 23% quarter-over-quarter growth and how many vehicles and powertrains we made, because again as David talked about getting the gross margin positive, that's important to us. We want to scale manufacturing and scale it fast. So we were excited about that.

But in putting that out, we felt we needed to point out that we had run into a revenue recognition challenge and meeting our revenue guidance because one of our key suppliers, although we had plenty of batteries, which we've said for a while, supply chain is getting better, we have batteries. It turns out the batteries we had were defective. And the company in this case, Romeo, that was purchased by Nikola, sent us a letter at the end of December. It was software fixes. It was doable. We really thought it'd get fixed by the

end of December. They sent us a letter late December saying, we're not going to be able to fix these. We don't plan to fix them. So we're in further discussions with them now, but unfortunately we had to put that tough news out last night. And so taking our lumps, but still very excited about the scale and where we're going this year.

<<Analyst>>

Vehicles, customers have ordered these vehicles, you just need new battery supplier [indiscernible].

<<Timothy Reeser, Chief Executive Officer and Director>>

In some case, so we've -- yes, so I'll go into a bit more complexity. The -- we have three battery suppliers today. Romeo is what we call a legacy supplier. We designed them out about a year ago, but the products we designed them in still needed to -- we needed to finish getting those out before the new products with Proterra batteries and CATL batteries came out. So we were hoping to get another month of production out of these Romeo batteries before we had phased them out entirely. And that's why we ended up here.

It's also why we hadn't -- we knew this was a risk, we thought we mitigated it, but we hadn't replaced them yet because we only had one more month of production with this product before we switch products. Today we've switch products entirely to Proterra and CATL batteries. So going forward, we don't have the issue with Romeo. We just -- we didn't quite squeeze out past the end of the product cycle.

<<Analyst>>

[Indiscernible]. So I guess the first question, firstly why would you model them, and secondly how much capital do you need to raise in order to fill that gap, could we talk about that?

<<Timothy Reeser, Chief Executive Officer and Director>>

So I'll let David answer the question, but I want to repeat the question because I think we're webcast and so. I think the question is how much capital do we need? How does this scale? And how does the -- when we look at next year's consensus, how does the profitability scale and cash could scale?

<<David Agatston, Senior Vice President and Chief Financial Officer>>

Yes. I'm not sure exactly what consensus you're looking at there, but I mean, I know the consensus, but for us, we think we need \$75 million to \$100 million depending on how quickly we get the volume. And that's really what drives so much of it. As we can spread those costs and amortize them across more vehicles, the gross margin improves

dramatically. We think to get to gross margin positive, we've said we need to build about a 100 -- build and sell about a 100 vehicles a month.

And then to get the EBITDA positive is an order of magnitude above that. And we feel like with all of the tailwinds we talked about today, that's very feasible. I mean, Tim talked about the market size. So if you know it's about 250,000 vehicles in North America, maybe a little more with Canada, a year that are ICE vehicles in the classes where we compete, McKinsey report suggests 50% of those will be electrified on an annual basis by 2027, that's 125,000 vehicles.

If we got 10% of that that gets us to a really nice business including cash generation. And it's -- that's only 10% market share. There's not nine other players in this market. So we feel really good about how we're positioned.

<<Chris Pierce, Analyst, Needham & Company>>

Constraint on production, is it demand at this point in time or is it due to changes need to be made to the factory?

<<Timothy Reeser, Chief Executive Officer and Director>>

So probably the biggest constraint we've advertised has been supply chain, but I personally find that frustrating to say. So just how we -- the reason why is it's been an excuse for a long time. So let me elaborate a little bit on it. The challenge in our standpoint, and for many others has been, when you look at supply, lining up everything is synchronizing it all.

And what I mean by that is if demand is sitting in a school bus and we have inventory to build a van, then even though I've got big backlog and I've got a factory that can do it, I don't have the right spare part product. I don't have the product in place to build what I have demand for. So we have plenty of demand, but sometimes, quite often the challenge we've had is demand doesn't line up with the product we have an inventory or the product we've managed to buy where the -- so that's been, I call it the synchronization fact. That has been the challenge.

And it does make it hard to explain it, because people think you're just making excuses. If you just categorize it all as supply chain or categorize it all, otherwise we don't see a demand problem. What we see is synchronizing the demand we have with the supply we have. From a factory standpoint, we can build anything. We built a very flexible factory and open invitation to anybody who would like to come to Colorado and see it. It is truly I'll speak, I'm very proud of our factory and I find it very stunning and everybody who comes just is shocked by, it's very, very beautiful. But it's also well put together and clearly something that can scale.

So we don't have a factory scale, but we have a synchronization. We see 2023 as our year to synchronize all that. Many of the components that have been constrained are coming

available. Many -- what the customers are wanting to order, because of the way the grants have all lined up and what the customers need have lined up, that's beginning to synchronize. So as we get through 2023, we believe we'll solve the synchronization problem of demand and what supply we have and really be able to hit our stride.

<<Brian Smith, Vice President, Investor Relations>>

That's aligning and we get incentives and charging infrastructure.

<<Timothy Reeser, Chief Executive Officer and Director>>

Right. Yes, so that's been the other one as customers, DHL will say, we aren't buying more vehicles in California until we have chargers. And so we've had to get through that, help them get chargers, help them get chargers installed, help them go through that process as well. So there is an alignment of charging and infrastructure with vehicles.

I think we're out of time. Excellent. Thank you everyone.