

Q2 2017 Earnings Call

Company Participants

- Deepak Ahuja, Chief Financial Officer
- Elon Reeve Musk, Chairman, Product Architect and Chief Executive Officer
- Jeffrey B. Straubel, Chief Technical Officer
- Jeffrey K. Evanson, Vice President-Investor Relations
- Jonathan McNeill, President-Global Sales & Service

Other Participants

- Adam Michael Jonas, Analyst, Morgan Stanley & Co. LLC
- Alexander Eugene Potter, Analyst, Piper Jaffray & Co.
- Antonio M. Sacconaghi, Analyst, Sanford C. Bernstein & Co. LLC
- Brian A. Johnson, Analyst, Barclays Capital, Inc.
- Colin Langan, Analyst, UBS Securities LLC
- Colin Rusch, Analyst, Oppenheimer & Co., Inc.
- David Tamberrino, Analyst, Goldman Sachs & Co. LLC
- James J. Albertine, Analyst, Consumer Edge Research LLC
- Martin Viecha, Analyst, Redburn (Europe) Ltd.
- Robert Cihra, Analyst, Guggenheim Securities LLC
- Rod Lache, Analyst, Deutsche Bank Securities, Inc.
- Ryan Brinkman, Analyst, JPMorgan Securities LLC

MANAGEMENT DISCUSSION SECTION

Operator

Good day, ladies and gentlemen, and welcome to the Tesla Second Quarter 2017 Financial Results Q&A Conference Call. At this time, all participants are in a listen-only mode. Later, we will conduct a question-and-answer session, and instructions will follow at that time. As a reminder, this conference is being recorded.

I would now like to introduce your host for today's conference, Mr. Jeff Evanson. Mr. Evanson, you may now begin.

Jeffrey K. Evanson {BIO 1535168 <GO>}

Thank you, Shree, and good afternoon, everyone. Welcome to Tesla's Second Quarter 2017 Q&A Webcast. I'm joined today by Elon Musk; JB Straubel; Deepak

Ahuja; and Jon McNeill. Our Q2 results were announced 80 minutes ago in the update letter we published at the same link as this webcast.

During this call, we will discuss our business outlook and make forward-looking statements. These comments are based on our predictions and expectations as of today. Actual events or results could differ materially due to a number of risks and uncertainties including those mentioned in our most recent filings with the SEC.

During the question-and-answer portion of today's call, please limit yourselves to one question and one follow-up.

But before we jump into the Q&A, Elon has some opening remarks. Elon?

Elon Reeve Musk {BIO 1954518 <GO>}

[Technical Difficulty] (1:35 - 10:41)

Jeffrey K. Evanson {BIO 1535168 <GO>}

All right. Thank you. All right. We apologize, everyone. Elon, over to you.

Elon Reeve Musk {BIO 1954518 <GO>}

All right. Thank you. My apologies. We actually tried a new audio system with a bunch of individual mics that seems to have malfunctioned, so we went back to our standard conference call object. Anyway, I just want to confirm people can hear what I'm saying? Okay. Great.

So first of all, I want to say that Friday night was an amazing time for Tesla. It was one of the most important days in the history of the company. It's something we've been striving for, for 14 years. It's the car that we - the Model 3 having with us steady production of Model 3s (11:36) was an incredible milestone in the company's history. We wanted to make a great, affordable electric car which is a fundamental thing that is missing. We wanted to make that from day one, and if we could only have done it sooner, we would have. And I'm glad that this day has come.

What we have ahead of us, of course, is an incredibly difficult production ramp. Nonetheless, I think we've got a great team, and I'm very confident that we will be able to reach a production rate of 10,000 vehicles per week towards the end of next year. And we remain - we believe on track to achieve a 5,000 unit week by the end of this year.

So, I would simply urge people to not get too caught up in what exactly falls within the exact calendar boundaries of a quarter, one quarter or the next, because when you have an exponentially growing production ramp, slight changes of a few weeks here or there can appear to have dramatic changes, but that is simply because of the arbitrary nature of when a quarter ends.

But what people should absolutely have zero concern about is that Tesla will achieve a 10,000 unit production week by the end of next year.

So, if you can sort of see where we came from, the Roadster - we were making only 600 units a week where the non-powertrain portion of the car was made by Lotus. And we did the powertrain and final assembly of the car, and then we went from that to 20,000 units a year of the Model S, a far more complex car, where we did the whole thing. And then with Model 3, we are more vertically integrated. I think people should really not have any concerns that we will reach that outcome from a production rate.

We're also very confident about costs. We feel we gained a lot of experience. We certainly aspire to learn from the mistakes of the past, and I think we largely have. Deepak will go into some of our margin expectations there. And unlike, say, for example, the Model X, where the mistake that we made, and I obviously take the prime responsibility here, was having far too much advanced technology in version one of our product. Model X is an incredible car, but it was overreaching for the first-generation of the product.

In the case of Model 3, we've strived hard to simplify and make sure that it has everything essentially to be a fantastic car. If you see the reviews, the reviews are - one could not ask for better reviews. And I just thought I'd give you one little anecdote, which was - which I found quite surprising is that when we were giving test drives to - or the journalists were driving the car and doing test drives. About 80% of the journalists said that they would buy the car themselves. Most of the remaining 20% said probably. This is crazy. I've never seen anything like it.

So this is a very good sign. It should also be noted that one of our big concerns was that Model S, particularly, and Model X demand would suffer with the introduction of the Model 3. In fact, this has turned out to be the opposite situation. Model S and Model X demand increased with the release of Model 3.

Jon, would you like to just elaborate on that? We did express this as a concern.

Jonathan McNeill {BIO 4091220 <GO>}

Yes.

Elon Reeve Musk {BIO 1954518 <GO>}

And it was a big concern, but it has turned out to be a pleasant surprise.

Jonathan McNeill {BIO 4091220 <GO>}

Yes. I think that's right. Not only as Elon said, we expressed it is a concern. We had positive comps, both year-over-year and quarter-over-quarter in orders in the second quarter. But since then, orders have accelerated in July as we noted in our

shareholder letter. And they've accelerated further since the hand-over event on Friday for the Model 3.

So, it clearly shows that S and X as our flagship products have a strong position in the market and strong demand. And that's super encouraging that we've got a strong product lineup with three cars that are proving to be very popular in their individual segments.

Elon Reeve Musk {BIO 1954518 <GO>}

Yes. In fact, I don't know - I think we mentioned some of this in the earnings letter, but just some of the key stats on, say, July orders for S and X were...

Jonathan McNeill {BIO 4091220 <GO>}

Yes. July orders were 15% higher than our Q2 average weekly order rate, so we accelerated off of Q2 into July.

Elon Reeve Musk {BIO 1954518 <GO>}

Yes.

Jonathan McNeill {BIO 4091220 <GO>}

And as we noted in the shareholder letter, deliveries grew by 53% compared to the Q2 2016 in a flat luxury vehicle market, so we're gaining share...

Elon Reeve Musk {BIO 1954518 <GO>}

Yes.

Jonathan McNeill {BIO 4091220 <GO>}

In a flat-to-down market, and the order has accelerated.

Elon Reeve Musk {BIO 1954518 <GO>}

So July was one of our best months ever.

Jonathan McNeill {BIO 4091220 <GO>}

Yes.

Elon Reeve Musk {BIO 1954518 <GO>}

Again, contrary to our expectations, I want to emphasize. Of course, who knows if this will continue, but all indications are that it will. So that's very exciting.

Jonathan McNeill {BIO 4091220 <GO>}

Yes.

Elon Reeve Musk {BIO 1954518 <GO>}

A side note, we're making great progress on our internal Autopilot software. It's getting better and better. I'm really, really excited. I test drive the latest development release as soon as it comes out, and I'm like this is really getting to be something special. Yes, it's really, and I think it's going to accelerate from here. And the talent that we're seeing join on the technical side for Autopilot is really world-class. I don't think there's - it's unmatched anywhere, I would say.

So, let's see, Model 3 net orders are - there's not that many cancellations - about 1,800 a day. I want to emphasize you can't see the car, unless you want to look at pictures online. You can't test drive a car. You have to put down a \$1,000 deposit.

Jonathan McNeill {BIO 4091220 <GO>}

We're not promoting the car.

Elon Reeve Musk {BIO 1954518 <GO>}

We're not promoting the car. If you go to our stores, we don't even want to talk about it, really, because we want to talk about the thing that we can supply. If somebody orders a Model 3 now, it's probably late next-year before they get it. We want to give people a car where it's, in fact, maybe a one- or two-month wait for an S or an X.

I think the point that we're trying to make is that the S is still a superior sedan. It seems to have come through, and that's true. Things got a little confusing because of the nomenclature of being Model 3 versus Model S and X, which was, I guess, sort of my fault, being too clever for my own good there, because especially the Model E, as you can tell, I have a wonderful sense of humor.

But then people mistook that for generation three, but in fact, if you look at, say, what we're really on right now? I would say is approximately generation four. We're on generation four of S, X and 3. At the risk of really confusing matters. Model 3 is generation four, but so are S and X. We evolve the technology all at the same time.

So overall, looking really good. And then Solar Roof - we have installed and working the Solar Roof tiles. I have it on my house. JB has it on his house. I think we included some of the pictures in the earnings letter.

I want to emphasize that there's no Photoshopping on the roof. That is actually how it looks, and it wasn't taken by some - it was take some pics with your phone and send them over. That's what we're talking about here, not some special lighting

conditions, pro-photographer situation. And this is version one, and I think this roof's going look really knockout as we just keep iterating.

Now it is a very challenging technical task to get this right, get the costs good, streamline the installation process, ramp up the production. Again, this is sort of follows a similar S-curve to vehicles where it starts up very slow, but then it grows exponentially.

Also, our conventional solar is doing quite well and generating significant positive cash flow – just standard flat panel stuff, which, I think, is still the right solution for any kind of flat roof situation, which is most commercial installations in a lot of houses, or some part of the roof where it's really not visible and therefore, doesn't really matter from an aesthetic standpoint.

And then, batteries – also making great progress on the battery front. I'm hoping to do something around the International Astronautical Congress, which is in Adelaide this year. Not promising anything, but we're aspirationally going to have a very substantial portion of the battery pack, already done in about eight weeks, which is hard because we have all the shipping and logistics challenges of getting things across the Pacific.

Not promising anything. It's an aspirational goal. Team's working super hard to make it happen. But I'm excited about the prospect, and I feel, of course, optimistic that that will take place. So, yes, I think and we're really proud of the Tesla team for getting to this point. And I really want to thank the whole Tesla team, and we already have 33,000 people at this point, for working hard to achieve some very difficult things. And I can be prouder to work with such a great team. So, let me go to – anything else you want to add, guys? All right. Let's go to questions.

Jeffrey K. Evanson {BIO 1535168 <GO>}

All right. Shree, let's open it up to Q&A. And everybody in Q&A, we have a lot of people in queue, so Shree's going to be real hard core on the one question, one follow-up.

Elon Reeve Musk {BIO 1954518 <GO>}

Yes. Not the, one question with eight nested questions.

Jeffrey K. Evanson {BIO 1535168 <GO>}

Correct. No nesting.

Elon Reeve Musk {BIO 1954518 <GO>}

Yes. But as one question part A through H.

Q&A

Operator

Thank you. Our first question comes from James Albertine with Consumer Edge Research.

Q - James J. Albertine {BIO 17420845 <GO>}

Very good. Thank you for taking my question. Good afternoon, and congratulations on the first 30 deliveries last week. It was a great event.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Thank you.

Q - James J. Albertine {BIO 17420845 <GO>}

I wanted to ask if I may, my one question on capital expenditures. Wanted to get an idea, what comes next with respect to some of your spending on the Model 3? And I guess, if I can nest one in, related to (25:23).

A - Elon Reeve Musk {BIO 1954518 <GO>}

Oh, God. You know what? Fine. Do it. You know. Fine.

Q - James J. Albertine {BIO 17420845 <GO>}

It's one question on CapEx. But really want to understand what the big next steps are in 3Q and 4Q as we start to kind of build-out our models and figure out from there? Thanks.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Certainly. I mean, I do want to emphasize like but a lot of us is actually very hard for us to know. When we make mistakes is because we're stupid, not because we're trying to mislead anyone. I just want to emphasize - I - we aspire to be less dumb over time. So if I knew it, I would tell you. It's sort of like I've got this, like secret hand of cards that I'm holding close to my vest and I'm not telling you. It's just fundamentally impossible to predict the exponential part of the manufacturing S-curve. It's crazy hard. And S-curve is a simplification because it's really running through a series of constraints that, if you - it's like a really jagged sort of upward growth and it'll plateau and then it'll grow rapidly, and it'll plateau again. And then sometimes it'll go backwards because something broke.

Yes. When I said manufacturing hell and supply-chain hell on Friday. I meant it. I mean, we know this. Signed up for it. Not blaming hell because when we bought the ticket. So but I think at a high level, I don't think we should expect any significant negative surprises. There will be - as usual be the case, there tends to be some cost growth in CapEx for unexpected things. So we've got to expedite this, you've got to

fix that, or this supplier doesn't work out, or this machine we bought doesn't work out. And you've got to be all hands on deck 24/7 to fix it or replace it. But I don't expect any significant - I think that is relatively contained. Deepak, do you want to...

A - Deepak Ahuja {BIO 15935173 <GO>}

Yes, I think maybe the other way, James, to answer your question is.

A - Elon Reeve Musk {BIO 1954518 <GO>}

You need to talk to close with this.

A - Deepak Ahuja {BIO 15935173 <GO>}

Yes. I think you're asking where we are spending the money. I think it's in the completion of the Model 3. We are bidding-off on the equipment.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Right. We are.

A - Deepak Ahuja {BIO 15935173 <GO>}

Yes. And also, we are just continuing with the construction of Gigafactory to continue to scale that. And so that's where the majority of our CapEx...

A - Elon Reeve Musk {BIO 1954518 <GO>}

Overwhelmingly.

A - Deepak Ahuja {BIO 15935173 <GO>}

Yes.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Listed there. Overwhelmingly.

A - Deepak Ahuja {BIO 15935173 <GO>}

Overwhelming (28:14).

A - Elon Reeve Musk {BIO 1954518 <GO>}

Overwhelmingly is Model 3. Obviously, there are expenditures associated with the Solar Roof and with our Buffalo factory.

A - Deepak Ahuja {BIO 15935173 <GO>}

Correct.

A - Elon Reeve Musk {BIO 1954518 <GO>}

We're trying to keep those relatively light for the next few months.

A - Deepak Ahuja {BIO 15935173 <GO>}

In the marketing and sales, we're growing our infrastructure there and our Supercharger networks. Those are the other smaller piece.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. Just on the Buffalo front - I really want to emphasize, we expect the Buffalo Gigafactory to be a powerhouse of solar panel and solar glass tile output. It is going to be a kick-ass facility. We have made that commitment to the State of New York. We are going to keep that commitment.

And then, we're also thinking hard about, where do we put Gigafactories three, four, five and six? We expect to keep the majority of our production in the U.S., but it's, obviously, going to make sense to establish a Gigafactory in China and Europe to serve the markets there, because it's not to build cars (29:23) in California and truck them halfway around the world, particularly when you're trying to make things as affordable as possible - that really hurts.

We really want to make our cars as affordable as possible. And so that does require some amount of local market production, particularly for the mass market vehicles in order to make it as accessible as possible.

So we're thinking hard about that. I think we'll have some announcements on at least a few of those locations before the end of the year, but we don't expect to spend significant money on them. It's just identifying the location, doing the long-lead time stuff, the permits, the planning. This doesn't cost a lot of money. It's only when you really start moving dirt and putting up concrete and steel and buying equipment that the big money starts to be required.

Yes. So anything you want to add on that?

A - Deepak Ahuja {BIO 15935173 <GO>}

No. That's good.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. And CapEx on Model S and X, it's not really - it's minor compared to the next.

A - Deepak Ahuja {BIO 15935173 <GO>}

The next.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. There is continued improvement, of course, to keep pace with the Model 3s. So that all of our products are at the same level of technology, but it's more painless

(30:42) compared to the Model 3.

A - Deepak Ahuja {BIO 15935173 <GO>}

And we're continuing to achieve cost reductions on S and X, so there's a bit of investment, but negligible.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. Exactly. Absolutely. And in cases where we see cost reductions on S and X – those are the cases where we want to pass along some of those cost reductions to customers. So overall, we're feeling really – this is maybe the best I've ever felt about Tesla, to be frank. Last week, stressed the hell out of me, but I really think that this is probably the best I've ever felt about the company.

Oh, and one thing I wanted to correct. I think in a prior call, we publicly had said that Model Y, or our compact SUV – it's called Model Y. It may or may not be – would be a totally new architecture. Upon the council of my executive team – thank you. Thanks, guys – who reeled me back from the cliffs of insanity – much appreciated – the Model Y will in fact be using a substantial carryover from Model 3 in order to bring its market faster.

Yes. So that will really accelerate our ability to get to Model Y to market faster, because fundamentally people prefer a sedan, people prefer an SUV. And in fact, the SUV market is larger. It's the biggest single product (32:35) I believe in the world.

So, I'd like to thank my executive team for stopping me from being a fool, and yes. The Model Y or whatever the hell will have relatively low technical and production risk as a result. I still think we want to do the crazy thing in the future, but we will punt that until after the compact SUV.

Anything else you think I should add?

A - Deepak Ahuja {BIO 15935173 <GO>}

No. That's great. (33:06)

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. We'll probably have as much time for questions as we can. We had a lot of operational issues to get back to, like to work on that manufacturing ramp, and I'm always incredibly grateful for anyone who is an investor in Tesla, and you put your faith in us. We will do whatever is necessary to reward that faith.

A - Jeffrey K. Evanson {BIO 1535168 <GO>}

All right. Shree. Why don't we go to the next question, please?

Operator

Thank you. Our next question comes from Rod Lache with Deutsche Bank.

Q - Rod Lache {BIO 1528384 <GO>}

Thanks. I was going to ask you which is harder, AI or AV, but I think at this point we may not know the answer.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Well, as you know, I'm terrified of AI.

Q - Rod Lache {BIO 1528384 <GO>}

I've read that.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. You may have read that off a few places. And it's just something we - anyway, I definitely don't want to derail the conversation on that front.

Q - Rod Lache {BIO 1528384 <GO>}

Right.

A - Elon Reeve Musk {BIO 1954518 <GO>}

It's just something that I think, anything that represents - that is a risk to the public at least insight from the government, because one of the mandates of the government is the public well-being. And that insight is different from oversight, so at least the government gained insight to understand what's going on, and then decide what rules are appropriate to ensure public safety. That is what I'm advocating for. I'm not advocating for that we stop the development of AI, or any of the sort of straw man, hyperbole things that have been written. I do think there are great benefits to AI. We just need to make sure that they're indeed benefits, and we don't do something really dumb.

Q - Rod Lache {BIO 1528384 <GO>}

Okay. Well, I hope that doesn't count against my Tesla questions. But the two things I was going to ask you were you mentioned in the letter this confidence in getting the 25% margin on Model 3. Could you just mention what the level of production is that you feel you need to get to in order to get there? What run rate? And, secondly, there've been a fair number of battery announcements, solid-state battery technology, Toyota, and a few others.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Oh, man.

Q - Rod Lache {BIO 1528384 <GO>}

What's your general assessment? Are we getting close to some kind of breakthroughs here?

A - Elon Reeve Musk {BIO 1954518 <GO>}

Oh, god.

Q - Rod Lache {BIO 1528384 <GO>}

Or what's your thoughts?

A - Elon Reeve Musk {BIO 1954518 <GO>}

Okay. Here's my opinion. The battery breakthrough of the week, battery breakthrough du jour. When somebody has like some great claim that they've got this awesome battery, you know what, send us a sample. Or if you don't trust us, send it to an independent lab, where the parameters can be verified. Otherwise, STF.

Yes. So everything works on PowerPoint. You know, I could give you a PowerPoint presentation about teleportation to the Andromeda Galaxy. That doesn't mean it works. So Tesla is the biggest buyer of lithium ion batteries on earth. You know who people come to first when they've got a lithium ion battery? Us, because we're their biggest customer.

I would love it if we could have some breakthrough. It'd be awesome. I think there are some interesting things on the horizon. But then the time it takes from something working in the lab to working at moderate production levels to working at higher production levels to optimizing the cost is several years. So it's not like it suddenly pops out of nowhere. JB, do you want to add to that?

A - Jeffrey B. Straubel {BIO 16619298 <GO>}

No. I totally agree with the sort of cautious skepticism on all these announcements. And just more specifically on the solid-state batteries, Rod. I mean, we've talked to a number of different groups that are researching this. We actually have tested a number of those different prototype, very early prototype, single cells, but we don't yet see anything that changes our strategy, and we don't see anything there that's ...

A - Elon Reeve Musk {BIO 1954518 <GO>}

Although we'd love it if it did. Please. Please. If someone please come up with a battery (37:43) breakthrough, we'd love it.

A - Jeffrey B. Straubel {BIO 16619298 <GO>}

We would be the first ones to want to implement it.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. Totally. I mean, there are some breakthroughs that I think are achievable. They're confidential, so I can't talk about them on this call, but there's one particular avenue

that I'm confident could be made to work. That would be fairly - the most significant one breakthrough in a while.

But, again, you got to make it work in the lab. It doesn't yet work in the lab, it's promising in the lab, a year from the lab to small production. Then you go to large production then you get to cost optimization, these are several years, okay? I wish it were shorter. That's the way it goes. Sorry about that. Yes. So was there -

A - Deepak Ahuja {BIO 15935173 <GO>}

The 25% Model 3 gross margin target, when will we get there?

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes, so, Deepak want to elaborate on this, but I feel like the point which we are at steady-state 5,000 units a week for Model 3 is about when we reach the 25% gross margin level. So it wouldn't be right when we get to 5,000, because initially when you get to 5,000 a week there's still a lot of overtime. We're still expediting parts from all around the world. So you've got a lot of expedited fees, you've got a lot overtime, and so it takes probably from the point at which you get to the 5,000 a week, it's probably another three or four months before you hit the 25% gross margin. Would you agree Deepak?

A - Deepak Ahuja {BIO 15935173 <GO>}

I agree. Yes, I was just going to be more cautious...

A - Elon Reeve Musk {BIO 1954518 <GO>}

It's something like that. It's certainly...

A - Deepak Ahuja {BIO 15935173 <GO>}

Yes.

A - Elon Reeve Musk {BIO 1954518 <GO>}

You need to reach a production level and then optimize at that production level.

A - Deepak Ahuja {BIO 15935173 <GO>}

Yes, I think ultimately it's a variety of factors including material cost and sell and the efficiencies to achieve at the Gigafactory on ourselves. And we are very confident we will achieve the 25% target, seriously on Model 3.

A - Elon Reeve Musk {BIO 1954518 <GO>}

For sure, next year. 100%.

A - Deepak Ahuja {BIO 15935173 <GO>}

That's right. It's a question exactly when.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. Again. I'd say 100% probability achieving that at some point next year

A - Deepak Ahuja {BIO 15935173 <GO>}

Yes, and I feel really good about it because the bill of material that we have is so well defined and so clear in our...

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes.

A - Deepak Ahuja {BIO 15935173 <GO>}

The premiums that we have on prototypes is...

A - Elon Reeve Musk {BIO 1954518 <GO>}

Another way of saying, we're significantly less dumb this time, we think.

A - Deepak Ahuja {BIO 15935173 <GO>}

Yes. Yes. The labor hours required are significantly lower. The way we have structured the manufactured...

A - Elon Reeve Musk {BIO 1954518 <GO>}

It's designed for manufacturing.

A - Deepak Ahuja {BIO 15935173 <GO>}

Exactly. So all of those gives me much more confidence in this target. And exactly when we'll achieve? I think we'll give you more clarity over time.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes, and I'd like to give some credit to our suppliers here.

A - Deepak Ahuja {BIO 15935173 <GO>}

Yes.

A - Elon Reeve Musk {BIO 1954518 <GO>}

With Roadster and certainly with Model S and to a slight less degree with Model X, we often could not get the top suppliers, and we certainly couldn't get the A-team at the top suppliers.

A - Deepak Ahuja {BIO 15935173 <GO>}

Right.

A - Elon Reeve Musk {BIO 1954518 <GO>}

What's great about the Model 3 is we have the A supplier, and we have the A supplier and we have the A-team at the A supplier. I can't tell you how important this is. It makes a massive difference.

A - Deepak Ahuja {BIO 15935173 <GO>}

Right.

A - Elon Reeve Musk {BIO 1954518 <GO>}

So just a thank you to all the suppliers that work so hard to get us to this point. There is a lot of credit for any success that we have.

A - Deepak Ahuja {BIO 15935173 <GO>}

Yes.

A - Jeffrey K. Evanson {BIO 1535168 <GO>}

Next question. Shree.

Operator

Thank you. Our next question comes from Ryan Brinkman with JPMorgan.

Q - Ryan Brinkman {BIO 16417954 <GO>}

Great. Thanks for taking my question. Just thinking about your liquidity position, while you're operating with more cash than you historically have, \$3 billion, I see you're also guiding the \$2 billion CapEx in the back half, and you've previously said \$1 billion of gross cash is as low as you're comfortable operating at. So are you guiding to positive cash from operations in the back half, presumably on the Model 3 ramp in 4Q. But if it's only a little positive, then I guess you would be close to your target at cash level.

So the question is, can you help us size up how positive do you expect the cash from operations to be in the back half? And if that level of cash from operations plus whatever remains available to draw on your asset backed line, if that's sufficient cushion for you relative to your \$1 billion target? Or whether it might make sense to do another equity raise?

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. Deepak, do you want to...

A - Deepak Ahuja {BIO 15935173 <GO>}

Sure. Sure, Elon. So we expect our operating cash flows to be significantly better in the second half compared to the first half.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes.

A - Deepak Ahuja {BIO 15935173 <GO>}

At the highest level, scaling generates cash.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yeah. Absolutely, it does.

A - Deepak Ahuja {BIO 15935173 <GO>}

And it's a better situation than S and X. And our cash conversion cycle, particularly for the next four quarters, is going to be really great while we're shipping Model 3s in North America. And...

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. And one thing perhaps we're trying to get to it is, is that with Model 3, with our suppliers we've been able to get - negotiate much better terms, payment terms. But the payment terms are significantly longer. So I think we're close to...

A - Deepak Ahuja {BIO 15935173 <GO>}

Close to 60, exactly.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Close to 60 days.

A - Deepak Ahuja {BIO 15935173 <GO>}

Right.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Payments to those of our suppliers (43:21). And we were also able to make the car a lot faster. So obviously, the Nirvana is that we can make the car and get paid for the car before we have to pay our suppliers, which then the faster you grow, the faster your cash position grows. Obviously, that's like the - that's the promised land right there. And that's how - it's what we've aimed for. And I think we'll achieve that maybe not immediately but pretty quickly.

And now that said, there may be some wisdom in having a cash cushion for unexpected events. You just never know if there's going to be some significant force majeure events in the world. It could be an earthquake in California, for example. But we're not at this point considering an equity raise. We are thinking about debt, but we're not thinking about an equity raise.

Q - Ryan Brinkman {BIO 16417954 <GO>}

Okay. That's very helpful. And then just the follow-up is about the \$1 billion of desired minimum gross cash. Does that go up when the Model 3 launches because you're a bigger company or does it go down because of what you just said about the ability to generate cash and working capital while production's ramping?

A - Deepak Ahuja {BIO 15935173 <GO>}

In the long run as we go up as our balance sheet grows. And just to finish off on your question, we also have liquidity through the lines of credit, our ABL line.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes.

A - Deepak Ahuja {BIO 15935173 <GO>}

We've just grown it to \$1.9 billion. We have untapped \$800 million there. Of course, how much we can tap there depends on our borrowing base, but that's a source of liquidity. And then for our solar lease assets, we have \$700 million of funding, which is untapped on our tax equity funds and application debt (45:21). So we have significant amounts of liquidity we get from those lines too.

Q - Ryan Brinkman {BIO 16417954 <GO>}

Yes. Very helpful. Thank you.

A - Elon Reeve Musk {BIO 1954518 <GO>}

One side for this (45:29) is this, as far as people look at our finished goods inventory and compare that to other car companies, they compare it in the wrong way. Because Tesla does direct distribution, we are the dealers. You really - to accurately compare Tesla to other car companies, you must include the finished goods inventory, not just at the car companies but at the dealers. And typically that combined time of finished goods from manufacture all the way through to dealer to end customer is, I believe, on the order of 90 days. So maybe 70 to 90 days.

A - Deepak Ahuja {BIO 15935173 <GO>}

For other OEMs.

A - Elon Reeve Musk {BIO 1954518 <GO>}

For the other, OEMs.

A - Deepak Ahuja {BIO 15935173 <GO>}

Yes, yes.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. And for us that same metric would be approximately 30 days. So this is a - in other words, at a systemic level, we're substantially more efficient than other carmakers when you consider the system as a whole.

A - Jeffrey K. Evanson {BIO 1535168 <GO>}

Okay. Shree, let's have the next question, please?

Operator

Thank you. Our next question comes from Adam Jonas with Morgan Stanley.

Q - Adam Michael Jonas {BIO 3339456 <GO>}

Hi. Just a couple quick ones. First on safety. Elon, you're putting a liquid cooled supercomputer in all of your cars. You're obviously ramping up more and more of those. Whether the system is being activated or not, it's collecting data, learning, you're getting better every mile. I imagine you're in a position to kind of share that data with the public or the regulators or Congress, whoever, where it matters. I've even seen an announcement since the 40% reduction in accidents from NHTSA back in January. When could we be in a position to hear some more on this?

A - Elon Reeve Musk {BIO 1954518 <GO>}

It's true that there is an enormous amount of sort of visual data being gathered. It's actually quite a challenge to process that data and then train against that data and have the vehicle learn effectively from data, because it's just a vast quantity of data. I do want to emphasize that this is disaggregated from a specific vehicle. So we're always on the side of the owner of the car and do whatever is possible within bounds of the law to protect privacy. But I don't have a good answer for you. If I have good answer right now. I spend a lot of my week working on Autopilot, with the Autopilot team. Wright down in the trenches, the individual details of how we can improve this or that or enhanced in your math (48:27), enhanced vision and advanced improved control.

And I think the release that should go out soon is, I think people were really pleased with it. And it's going to get better from there. Yes. Yes. Obviously, over time, an autonomous vehicle is going to be far, far safer than a person. Yes. It's really hard for a person to compete. I mean, the car has eight cameras looking 360 degrees all the time. It's got a (49:12) radar. It's got 12 high-precision ultrasonic sonars. It's got initial measurement units, so high-accuracy GPS, and over 10 Teraops of computing capability that never sleeps.

Q - Adam Michael Jonas {BIO 3339456 <GO>}

Okay. Elon, just a follow-up then on space, but not on Mars but more Earth, in Earth (49:39)

A - Elon Reeve Musk {BIO 1954518 <GO>}

Oh, God. Come on, looks like it gets (49:39)

Q - Adam Michael Jonas {BIO 3339456 <GO>}

No. It's actually - it's really relevant. I was just curious if - is there anything that SpaceX is doing that we're enabling that could be advantageous to Tesla's mission to accelerate sustainable transport?

A - Elon Reeve Musk {BIO 1954518 <GO>}

There's a recent anecdote, actually, that Jon just shared with me. And, Jon, maybe you...

A - Jonathan McNeill {BIO 4091220 <GO>}

Yes. There's some really great collaboration continuously between the SpaceX teams on materials and other challenges. And we had a challenge in service over the past - just over the past week.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Just this is X-factor (50:15).

A - Jonathan McNeill {BIO 4091220 <GO>}

Yes.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Just told about this today.

A - Jonathan McNeill {BIO 4091220 <GO>}

Yes. Where we needed to determine the ferocity of an object deep within our structure and that's something that SpaceX...

A - Elon Reeve Musk {BIO 1954518 <GO>}

Aluminum casting?

A - Jonathan McNeill {BIO 4091220 <GO>}

Is an aluminum casting. That's something that SpaceX knows how to do. Our team reached out to the SpaceX team. The SpaceX team helped us to solve that with some ultrasound sensors that we could quickly isolate where the issue was and take corrective action in it.

A - Elon Reeve Musk {BIO 1954518 <GO>}

It saved us eight hours of work per car.

A - Jonathan McNeill {BIO 4091220 <GO>}

Per car. That was kind of – that could potentially experience this issue. And that's just one example of a lot of examples of how the SpaceX team and the Tesla team collaborate, and we get help from them continually on material issues and other issues like that.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. That's cross-fertilization of knowledge from the rocket and space industry to auto back and forth, as I think it's really been quite valuable. It's certainly been very valuable for me in thinking about how do we make mass-optimized vehicles because space – mass optimization (51:25) is extremely important on the space side. It's helpful because what really goes into high-volume manufacturing of something that has to be extremely reliable. So it's been good. And, of course, companies are competing anyway, so it's been quite helpful, actually.

A - Jeffrey K. Evanson {BIO 1535168 <GO>}

Shree, next question, please?

Operator

Thank you. Our next question comes from Colin Langan with UBS.

Q - Colin Langan {BIO 15908877 <GO>}

Oh, great. Thanks for taking my question. How do you come up with your estimate for the number of Supercharges and sealers that you need because you're doubling the number of the base, the number of Supercharges going into the release? But these three is going to have multiple higher in terms of demand. So, I mean, how do you frame that and engage that?

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. First of all, I will actually clarify that the numbers of charges will in fact triple between now and the end of next year. And we're confident that that will address the supercharging needs of S, X and 3. So we'll try to stay ahead of it. There are occasional places where – that are tricky to find a location, like Malibu's really difficult. There are a few places, but the – we're staying ahead of that. I think it's going to be good.

We should see some immediate relief even for S and X customers on some of the key supercharge locations whilst we – experimenting with our first sort of – I don't know what we call it – mega supercharging location, like really big supercharging location with a bunch of amenities. So we're going to unveil the first of those relatively soon. And I think we'll get a sense for just sort of how cool it can be to have a great place to – if you've been driving for three, four hours – stop, have great restrooms, great food, amenities, hang out and for half an hour and then be on your way.

Q - Colin Langan {BIO 15908877 <GO>}

If I could just follow-up with a related question...

A - Jonathan McNeill {BIO 4091220 <GO>}

Maybe just one other point on that and how this can scale pretty effectually. We have Superchargers that serve two major separate needs. There's long distance root enabling between cities, and then there's also within the cities. And while there are definitely some congestion issues which we're expanding out of very quickly in the cities, for the most part the Superchargers that are in between cities have a lot of extra capacity. And we've put those stations in place to serve travel between the cities, but they can absorb a lot more cars.

So even if we double fleet size, it doesn't mean that we need to double the entire Supercharger network. We have to address the few urban sites that are currently in high use, but that can be done much more effectually with less CapEx. So that's kind of what you're seeing.

Q - Colin Langan {BIO 15908877 <GO>}

And what about, just as a follow-up, the charge time? I know Porsche has said that they could charge in 15 minutes. Do you think that's possible in the future? And is the charge time on the 3 the same as the S? I wasn't sure in some of the release.

A - Elon Reeve Musk {BIO 1954518 <GO>}

It's about the same. It's comparable to the high-end S. The recharge rate of how many miles per hour you recharge is sort of a function of the battery pack size. So, like a 100 kilowatt-hour pack, because charge rate is a function of percentage of pack - think of 3 and a high end S as being similar in charge rates.

And over time, we want to keep moving that rate up, but one thing I want to correct from Friday - I don't think it really has much materiality, but I did misspeak at the Journalist Review on Friday. I had said that there were 500,000 net reservations. I did also say that I wasn't sure because I don't follow this number, and this was just a guess. And so we did check to get some precision on this.

So to be more accurate, there have been 518,000 gross reservations for 3, and we have 455,000 net reservations. But those cancellations occurred over the course of more than a year. The net gain since Friday, net of cancellations, has been over 1,800 per day.

But I just didn't want to leave people with the wrong impression. I think this is inconsequential because with a small amount of effort we could easily drive the Model 3 reservation number to something much higher, but there's no point. It's like if you're a restaurant and you're serving hamburgers and there's an hour and a half wait for the hamburger, do you really want to encourage more people to come order hamburgers? It doesn't make sense. So I think it's neither here nor there, but I wanted to make sure there was not a misunderstanding.

A - Jonathan McNeill {BIO 4091220 <GO>}

And maybe just one quick point on your very fast charge time comment or question. We've actually tested cells and even full battery packs that can do something like a 15 minute recharge, but to date the tradeoffs to achieve that we don't feel are the right ones for the customer overall.

You end up sacrificing on overall cost per kilowatt-hour and also sacrificing on energy density in the product, and for something that's used not every single day, not every single charge, we feel that we've hit the sweet spot in terms of the value to the customer and the best product. And that's kind of what's guided our philosophy, but obviously there's ongoing work to reduce those tradeoffs and make it better still, but yes.

A - Elon Reeve Musk {BIO 1954518 <GO>}

And particularly (58:07) 310-mile range for Model 3, let me tell you, the amount of times you will have range anxiety is zero. You don't even think about it.

A - Jeffrey K. Evanson {BIO 1535168 <GO>}

All right. Shree, next question?

Operator

Your next question comes from Toni Sacconaghi from Bernstein.

Q - Antonio M. Sacconaghi {BIO 21226758 <GO>}

Yes. Thank you. I have one question and one follow-up as well, please. In terms of the Model 3, at the delivery event, 20 of the units were for engineering validation. And the first several thousand it appears are going to be going to employees prior to going to the general public. So I guess the question is, what are you hoping to learn or what might you learn from these engineering validation units that have come out from your employees? And then, realistically, what's (59:04)?

A - Elon Reeve Musk {BIO 1954518 <GO>}

They're not engineering validation. They're fully-certified, fully-DOT-approved, EPA-approved production cars. These are not prototypes in any way. They're not validation anything. They're full-production cars. The reason they are initially going to employees, and some cases, investors, or anyone has been a long-time investor is that for the first several thousand vehicles, there are problems that crop up that are rare.

On a percentage basis, they might be like 0.1% likely to occur. But then there are a whole bunch of these things that only show up 1 in 1,000 cases. And it's good to iron out these things with a (59:59) than to with customers. It also (60:05) reward for those who work on the underlying development and creation of the vehicle. Yes. Yes.

A - Jonathan McNeill {BIO 4091220 <GO>}

I mean, it's important to note too that all those people paid full price for their car.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. Full price. There was no discount internally at all.

A - Jonathan McNeill {BIO 4091220 <GO>}

Exactly.

Q - Antonio M. Sacconaghi {BIO 21226758 <GO>}

Right. No. I mean, the root of the question is if you realistically uncover something and even if it's 1 in 1,000, what flexibility do you think you have to actually be able to rectify that concern in a way that won't impact your ramp? And if this is being done arguably later in the process than a traditional OEM, that's not trying to ramp necessarily as aggressively as you need to, I'm, again, just trying to understand realistically what can be done and what kinds of things, like perhaps you can give an example of what you might uncover and what the rectification might be?

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. These are not (61:13), obviously. These are - what we're talking about here are inconsistencies in the production process or in the quality control from a supplier. So they're relatively easy to correct. They tend to be quite a large number of them. But, again, only rarely occurring. Usually, it involves like a tolerance stack up, or some combination of factors that we didn't anticipate, but they're almost always very easy to correct, but there's just a bunch of them. It's a lot of work.

A - Jonathan McNeill {BIO 4091220 <GO>}

Yes. And these may be software issues, as well.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. Exactly.

A - Jonathan McNeill {BIO 4091220 <GO>}

Not necessarily supplier or hardware issues.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. It's software-hardware interaction as well. Yes.

A - Jonathan McNeill {BIO 4091220 <GO>}

And I think the main benefit is that we can learn about them faster and therefore we can fix them faster. That simply is the benefit.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Right. Exactly. The people driving them are the same ones who actually fix the problem. It's a great feedback loop.

A - Deepak Ahuja {BIO 15935173 <GO>}

And what we're doing is above and beyond others. We've done a lot of testing like the other OEMs. So this is just helping us get above and beyond by selling it to our employees and getting feedback from them.

A - Elon Reeve Musk {BIO 1954518 <GO>}

And investors.

A - Deepak Ahuja {BIO 15935173 <GO>}

Yes. Yes.

A - Jeffrey K. Evanson {BIO 1535168 <GO>}

All right. Shree. Next question, please?

Operator

Our next question is from David Tamberrino with Goldman Sachs.

Q - David Tamberrino {BIO 18631663 <GO>}

Hey. Thank you. Thanks for updating with the net reservation number. Actually, I want to follow along those lines on your order rates. You've given us additional color based off of 2Q trends and average weekly orders. Can you share a little bit more maybe what the 1Q and 2Q order rate trends look like for the Model S and the X?

A - Deepak Ahuja {BIO 15935173 <GO>}

Not relevant.

A - Jonathan McNeill {BIO 4091220 <GO>}

I don't think that those numbers would be helpful for producing things in the future. And like once you get into the granularity, people read things into numbers that really don't have a lot of relevance. There's for sure seasonality in vehicle orders. Fewer people order cars in the dead of winter than order them in spring or summer. So just like other retailers really.

And then we do batch cars, so that we'll make typically at the beginning of the quarter, we'll make cars for Europe and Asia. And then we'll make cars for the East Coast of North America then the West Coast of North America. And that's generally sequence within a quarter. Then you'll see someone, right, something where they think they've uncovered some gotcha where there were very few Tesla's registered in

the given country in a particular month, I guess because none of them arrived. So this is meaningless extrapolation.

Q - David Tamberrino {BIO 18631663 <GO>}

Okay. Then I guess my follow-up question will just be on your 3Q gross margin guidance of a dip below 20%. How far below – to phrase correctly, how dependent upon production and hitting an S curve or ramping up do you think that below 20% is? Could it be a couple hundred basis points below 20%, or is it just you think you're going to be around that area based on what the curve that you've laid out so far is going to look like?

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. This is just because of Model 3 is fundamentally negative gross margin in the very beginning. Because you got a gigantic machine producing – meant for 5,000 vehicles a week. And it's producing a few hundred vehicles a week.

A - Deepak Ahuja {BIO 15935173 <GO>}

Exactly, that's the short explanation.

A - Jonathan McNeill {BIO 4091220 <GO>}

I mean, it's a denominator problem.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. Yes. Looking back, probably something fundamentally wrong with the...

A - Deepak Ahuja {BIO 15935173 <GO>}

Yes. It's a temporary situation, and it's a dip which corrects itself.

A - Elon Reeve Musk {BIO 1954518 <GO>}

This is true for anything. If you had like a soap factory, let me tell you, your first bar of soap would be like millions of dollars. Okay. But then you get to volume production, and then it's like \$2. Okay? So true for any manufacturing situation. Yes.

Q - David Tamberrino {BIO 18631663 <GO>}

Okay.

A - Jeffrey K. Evanson {BIO 1535168 <GO>}

Next question, Shree.

Operator

Our next question is from Brian Johnson with Barclays.

A - Jeffrey K. Evanson {BIO 1535168 <GO>}

Brian, are you there?

Q - Brian A. Johnson {BIO 7256455 <GO>}

Yes. Hi. I have you on muted and then...

A - Jonathan McNeill {BIO 4091220 <GO>}

It may be he had a mic problem too.

Q - Brian A. Johnson {BIO 7256455 <GO>}

Hello?

A - Jonathan McNeill {BIO 4091220 <GO>}

Yes. We can hear you. Go ahead.

You're a bit soft but go ahead.

Q - Brian A. Johnson {BIO 7256455 <GO>}

Yes. Just wanted to ask about - a couple questions around the pace of spend in the second half...

A - Jonathan McNeill {BIO 4091220 <GO>}

Please speak up. You're a bit soft. Yes.

Q - Brian A. Johnson {BIO 7256455 <GO>}

Yes. The pace of OpEx through second half you guided through flat. With the Model 3 going out, are you basically saying you have the operating infrastructure to handle that but then does that ramp in 2018? And similarly for CapEx to go from 30 Model 3s up to the exit rate, you're talking \$2 billion. How do we think about, A, that run rate and given how do we tie it to your exponential ramp? And, B, what does that imply for CapEx going into 2018?

A - Deepak Ahuja {BIO 15935173 <GO>}

Yes. So, your first question was operating expenses?

A - Jonathan McNeill {BIO 4091220 <GO>}

And do we have enough infrastructure in place to service the Model 3. And I think, yes, we're finding actually leverage in our own infrastructure and that's helping us. So I'll give you an example of that. In service, as we've talked about, we discovered that 80% of the cars that we repair don't require lift. And so we're deploying a mobile service strategy to take 80% of the cars and fix them where it's convenient to the customer. Not at our location but their location. Make it invisible to them.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Exactly. The – the nice thing – you – like the ideal service is it's invisible. You don't even notice it, and when it's done, you love it. So what we're talking about here the mobile service tracks. As Jon was saying, really most of the time we don't really need a lift. Is that your car could be parked and it could be at your office parking lot or at your house. But let's say it's at work. Tesla will come there, fix your car and by the time you need to leave for work, it's done.

A - Jonathan McNeill {BIO 4091220 <GO>}

That's right. And so what that does for us is it takes 80% of the volume out of our existing footprint and allows us to leverage that footprint to grow with Model 3. And we'll give you similar examples in stores. So that's why we've guided to the OpEx. We've guided for the second half. We feel like we've got leverage there, and we've got plans in place to further lever that in 2018.

A - Elon Reeve Musk {BIO 1954518 <GO>}

I think it's been really great for customers. I mean this is what you want.

A - Jonathan McNeill {BIO 4091220 <GO>}

Totally.

A - Elon Reeve Musk {BIO 1954518 <GO>}

I mean, you don't want to bring your cars at your service center. You just want your car to be magically fixed in the parking lot and that's what we're going to do.

A - Jonathan McNeill {BIO 4091220 <GO>}

Yes. So we're going to provide really great customer happiness at increasing OpEx levels of leverage.

Q - Brian A. Johnson {BIO 7256455 <GO>}

And second question was similarly around CapEx leverage. So you put in \$2 billion second half to get to that exit rate. One, is that affected by the timing of Elon's production ramp? And then, two, keeping the ramp from 5,000 to 10,000 in 2018, what's your preliminary view of CapEx for 2018?

A - Deepak Ahuja {BIO 15935173 <GO>}

So I want to put a pin on 2018. We'll talk about that when we get to that time. But in 2017, our CapEx expense is a continuum. There are long-lead items of different kinds likely the Gigafactory. And for the Model 3 and the equipment we are buying, our CapEx spend is at historical highs. We're spending \$100 million a week. So a week or two here or there is a couple of hundred million. So what we are spending now is the completion of all of our Model 3 equipment and tooling, as that gets signed off. And it's taking us to 5,000 and beyond. So I can't necessarily break it out for you, but it just allows us to hit our operating plan that we have at a high level.

A - Jeffrey K. Evanson {BIO 1535168 <GO>}

I want to do a quick time check here. So some of us have some other things scheduled in 20 minutes. So we've gotten some good thorough answers here, so we'll probably take a few more questions.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. Few questions, and yes.

A - Jeffrey K. Evanson {BIO 1535168 <GO>}

And then wrap it up.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes.

A - Jeffrey K. Evanson {BIO 1535168 <GO>}

So, Shree, next question.

Operator

Thank you. Our next question is from Colin Rusch with Oppenheimer.

Q - Colin Rusch {BIO 15823117 <GO>}

Thanks so much. Can you talk a little bit about the conversion rate of customers coming into stores and actually ordering cars? And then, similar question on what's happening with solar and energy storage in terms of how many customer impressions you've got, and the conversion rate into actual sales?

A - Jonathan McNeill {BIO 4091220 <GO>}

The conversion rates have continued to improve quarter-over-quarter and month after month, our conversion rates get stronger. And we don't obviously publicize specifics on those, but they're improving with every week and every month. On the solar side, one of the interesting things that we're seeing is we've put a solar display and an energy display into our stores in North America. And we've got energy experts that are on staff. And what we're finding is it's a really natural transition in conversation from somebody is buying a car and talking about where they're going to charge the car to then where their energy comes from.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. Totally. I mean, we talked about the importance of integrating energy, production, storage and electric vehicle transport. And what we said is coming true. It's really working well together. And we're actually able to leverage our existing stores to generate even more sales per square foot. I'm not sure what our - I think our sales per square foot...

A - Jonathan McNeill {BIO 4091220 <GO>}

Our sales per square foot is so high -

A - Elon Reeve Musk {BIO 1954518 <GO>}

- are so high -

A - Jonathan McNeill {BIO 4091220 <GO>}

It actually moves the total number of...

A - Elon Reeve Musk {BIO 1954518 <GO>}

You need a telescope to see who's in second place.

A - Jonathan McNeill {BIO 4091220 <GO>}

Yes. Exactly. Yes. And it actually moves the overall...

A - Elon Reeve Musk {BIO 1954518 <GO>}

It's like stupidly high.

A - Jonathan McNeill {BIO 4091220 <GO>}

Square footage, sales-per-square-foot numbers for some of the larger (71:45).

A - Elon Reeve Musk {BIO 1954518 <GO>}

But, I mean, (71:50) Model 3, because there's no point there, but (71:54) eventually. And I think that the new integrated app, with where you can see the status of your car, your power wall, and your solar, and see at any given time of the day how much energy is coming from the sun, how much from is coming from the power wall, what your house is consuming.

You can also - it tells you when the power wall saved you from utility interruption. People don't realize they're like there are many small utility interruptions in a given month. And that's why you're - you see the blinking 12 on your microwave oven or whatever the case may be, or your computer suddenly went dark or you can even get data corruption and that kind of thing, or your food went bad mysteriously. The power wall saves you from all of that.

And I think it's particularly important in cases where there's like a natural disaster, which could be floods, hurricanes, ice storms, earthquakes, fires, anything that disrupts the utility system. But having an uninterruptible power supply in the form of power wall gives you security in those situations. And it's kind of like insurance, like you only really want it when you really want it. And I think people love that. I just saw the app for the first time today. I'm using it myself and it's like, wow, this is great.

A - Jeffrey K. Evanson {BIO 1535168 <GO>}

All right. Shree, next question, please?

Operator

Thank you. Our next question comes from Martin Viecha with Redburn.

Q - Martin Viecha {BIO 17153377 <GO>}

Hey. This is Martin. I have just two very quick questions. The first one is on the battery production for S and X. Is there any plan to move it to the Gigafactory?

A - Elon Reeve Musk {BIO 1954518 <GO>}

For pack production.

Q - Martin Viecha {BIO 17153377 <GO>}

Yes.

A - Elon Reeve Musk {BIO 1954518 <GO>}

(74:07) production? We do not - in the short term, we will not be moving it. So sometime next year, we may move it sometime next year in order to make space for additional production volume of Model 3. That's one of the things under consideration. But in the short term we're keeping it here in Fremont. But it is going to be tricky to squeeze in all the space for increased Model 3 production. Particularly, if that run rate goes above 10,000 units a week then we're going to have to move more stuff out.

A - Jonathan McNeill {BIO 4091220 <GO>}

Yes. And it may just be worth a reminder also that the cells for S and X are actually still 18-650 lithium-ion and those are coming from a different production pathway in Japan. Very similar technology. Yes. Almost same technology.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. Internal source actually.

A - Jonathan McNeill {BIO 4091220 <GO>}

Yes. But different supply chain. Different set of geography.

Q - Martin Viecha {BIO 17153377 <GO>}

And then the follow-up question is on the Model Y. I think you just mentioned an hour ago that it's going to be made probably on the same platform or very similar platform as the Model 3.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes, 3. Yes. We're really going to have...

Q - Martin Viecha {BIO 17153377 <GO>}

Is it going to have...

A - Elon Reeve Musk {BIO 1954518 <GO>}

We're going to aim for maximum carryover.

Q - Martin Viecha {BIO 17153377 <GO>}

Okay. I mean, just one thing to clarify is this still going to be the 100 meters of cables which you touched upon last time? Or actual it's going to be the next generation of vehicles?

A - Elon Reeve Musk {BIO 1954518 <GO>}

No, that's one of the things that we would include. We would aim to switch out the wiring on this for - the one that coming is wiring on is for a redundant flex circuit. That's on more in the order of 100 meters or so. But then we'd, obviously, aim to do that both for the Y, if it's called a Y and the Model 3 as well.

A - Jeffrey K. Evanson {BIO 1535168 <GO>}

All right. Next question, please?

Operator

Thank you. Our next question is from Alex Potter with Piper Jaffray.

Q - Alexander Eugene Potter {BIO 16150582 <GO>}

Yes. Hi. Thanks. Just one for me. I was wondering the degree to which Tesla would eventually consider maybe charging more for, I guess, what you would call nontraditional product offerings? Things like software, over-the-air updates, but also shared mobility, supercharging, aftermarket. I know in the past you've talked about running a lot of those businesses just to breakeven, but I guess maybe just wondering the circumstances under which you would consider trying to earn a margin on some of these businesses versus situations where you'd prefer to just give them away?

A - Elon Reeve Musk {BIO 1954518 <GO>}

Well, I think we have a major element of that which is the Autopilot. That's a software. That's basically uploading software to the car. Every car made since October last year is capable of full autonomy we believe. And such really just a question of uploading the software for autonomy. There will be some other things I think in the

future. But I - and our focus is in the Model 3 ramp and we don't want to get too distracted. Maybe one more question.

A - Jeffrey K. Evanson {BIO 1535168 <GO>}

All right. Shree, one last question, please.

Operator

Our final question comes from Rob Cihra from Guggenheim Partners.

Q - Robert Cihra {BIO 1541797 <GO>}

Hi. Great. Thanks very much. Just going back to Autopilot development, obviously not talking personal details or anything but you had some personnel changes in the quarter. I'm just wondering if those reflected any kind of change of strategy or scope, or if it was just kind of a personal thing? And I guess just related, are you still hoping to be able to do the autonomous drive L.A. to New York by the end of this year? Thank you.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Yes. I may not comment too much on like individual personnel changes, but Tesla is 33,000-person company. If you actually look at our executive tenure at Tesla, it's extremely good. It's above average. I think we're at least maybe a year or two above average in terms of executive tenure here.

Every now and then something doesn't work out for one reason or another. In the case of Autopilot, it's very centrally about vision and image recognition, neural nets, effectively narrow AI. And so, that's the focus from our recruiting standpoint, and I think we've really got - I think we've got the best team in the world by a long shot on that front, and we are growing it rapidly with world-class talent.

And then, the coast-to-coast drive, autonomous drive by the end of the year, I believe we're still on track for that. It is certainly possible that I may have egg on my face on that front. But if it is not, at the end of the year, it will be very close.

A - Jeffrey K. Evanson {BIO 1535168 <GO>}

Great. Thank you, everybody, for joining us today. Thank you for Shree, for your help, and wish everybody a great day. Bye-bye.

A - Elon Reeve Musk {BIO 1954518 <GO>}

Thank you.

Operator

Ladies and gentlemen, thank you for participating in today's conference. This does conclude the program. You may all disconnect, and have a wonderful day.

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