

Q4 2018 Tesla Inc Earnings Call Transcript

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Operator

Good day, ladies and gentlemen, and welcome to the Tesla, Inc. Q4 2018 Financial Results and Q&A Webcast. (Operator Instructions) As a reminder, this conference is being recorded.

I would like to introduce your host for today's call, Mr. Martin Viecha, Senior Director of Investor Relations. Mr. Viecha, you may begin.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Thank you, Sherry, and good afternoon, everyone. Welcome to Tesla's Fourth Quarter 2018 Q&A Webcast. I'm joined today by Elon Musk, J.B. Straubel, Deepak Ahuja and a number of other executives. Our Q4 results were announced at about 1 p.m. Pacific Time 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. (Operator Instructions)

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

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Thanks, Martin. Last year was definitely the most challenging year in Tesla history, but also the most successful. Thanks to the incredible work of the Tesla team, Model 3 became the best-selling premium vehicle in the U.S. for 2018. And in fact, when considering battery electric vehicles, Tesla achieved an 80% market share of U.S. sales in the last year. I think this point is perhaps not well appreciated. All other electric vehicles combined were 20% of sales in the U.S. in last year. So I think that's not bad.

We also delivered -- also made vehicles last year as we did in all prior years combined, which is a tremendous achievement by the Tesla team. The -- if you track Tesla vehicle production year-over-year, cumulative sales deliveries year-over-year, it is about the cleanest exponential I've ever seen. We've basically almost doubled our fleet every year. Every year, we make as many cars as we did in all prior years. So this is a very unusual thing to see for -- especially for a large complex manufactured object. I think it may be the fastest that a complex manufactured object like a car has grown in history, or at least I'm not aware of anything that is faster. Martin, are you -- do you...?

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

I'm not sure. I think Model T was a little bit slower, but I'm not 100% sure.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Okay. And we expect that exponential to continue. So with the deliveries this year being -- even in the face of -- if there's a global recession -- even if there's a global recession, we're expecting deliveries this year to be about 50% higher than last year. And this -- it could be a lot more than that. But even with tough economic times, to receive 50% growth is pretty nutty.

Over Q4, we achieved GAAP profitability for the second quarter for the first time in the company history, and we increased our cash on hand by more than \$700 million, even after paying debt, ending the year with a total of \$3.7 billion of cash. This means we have enough cash to settle our convertible bond that will mature in March.

In addition, our operating margin remains strong at 5.7%. Operating margins in the fourth quarter are usually lower in the automotive industry, but this was not the case for Tesla.

2019 is going to be an amazing year for Tesla. As I mentioned, we're expecting to increase sales by 50%. Perhaps it could be a lot more than 50%, but I think 50% is a very reasonable number. But that's crazy growth for the automotive industry.

I want to note that one of our major priorities this quarter is improving service operations. So really, from my standpoint, when I think about what my priorities are this quarter, it's improving service in North America. That's #1. And I think there are some very exciting initiatives we're going to roll out with regard to that. We're going to get cars to China and Europe and make sure that we have good logistics for the whole delivery process, from factory gate to the customer. That's obviously pretty far from California to get to Europe and China and then get to -- get product to our customers. So we're working every aspect of that logistics chain. And I think we've -- I think it's going to be good.

I'd say at this point, I'm optimistic about being profitable in Q1. Not by a lot, but I'm optimistic about being profitable in Q1 and for all quarters going forward.

So let's see, we've opened 27 new store and service locations, bringing our total locations worldwide to 378. And we increased our Mobile Service fleet to 411 vehicles. The Mobile Service fleet is something we can scale up very rapidly, because we don't need bricks and mortar. We can get more vehicles, hire people and deploy rapidly. It also actually results in higher customer satisfaction, because we can actually send one of our service vans to your work or home and fix the car without you having to bring it into a service center or do any paperwork or anything like that. It's really seamless, invisible, the customers love it.

And we're also increasing the functionality of the Tesla App for service, so that instead of having to make an appointment, to call and make an appointment, you can just open your Tesla App, say you want to make a service appointment, and it lists the top 10 most frequently requested service items, and you can, with a couple of taps, you've made your service appointment. And we're going to make it easier for the car to be picked up and dropped off as well. So if you want -- if you prefer not coming to the service center at all, you can just request that the car be picked up and delivered. That's something that we'll be -- so that's already been rolled out and have a big improvement to customer satisfaction. That rolled out 2 or 3 weeks ago.

But the next thing we're going to add is, if your car detects something wrong, like a flat tire or a drive unit failure, that before the car has even come to a halt, there is a tow truck and a service loaner on the way. So the car has already notified Tesla emergency services, and a service loaner, a tow truck, are on their way before your car has even come to a stop. Now this will be immense in improving customer happiness. Basically, it'll just call it and you'll have to tap the center screen to cancel it. So you can cancel it if you want. We just have to -- it's like automatically going to happen, you just press cancel.

We're also improving product distribution. So I think we made a strategic error in the past about not having service parts located at our service centers. We had them in product distribution warehouses, which basically meant it was impossible to have a fast turnaround on servicing a car, because the car would come in, then the parts will be requested, they come to the service center, this would basically -- even for a very simple repair, could take days. So we're going to be able to stock in all common parts at the service centers, so that it's possible to -- and first of all, have -- get your car serviced in 20 minutes or 15 minutes, even, if it's a simple matter. I mean, it should be like Jiffy Lube, like 8 minutes or whatever, not 8 minutes, that's -- it should be like lightning fast. But in order to do that, we have to have the parts located at our service centers.

Also, it's going to make sense for our service centers to do basic body work or essentially, if all you need to do to is replace a front or rear fascia, it makes sense to just pre-stock the front and rear fascia in the common colors. So unless you have an unusual color, we can literally replace your fascia in 15, 20 minutes, and there's none of this, like, weeks at a body shop stuff.

Let's see, in terms of the new products, with Model Y, we've completed [ensuring] of and design of Model Y, and the products are -- the tooling that's going out for production of Model Y, 3/4 of the Model Y is common with the Model 3, so it's a much lower CapEx per vehicle than Model 3. And the risk is also quite low. This is in contrast to Model S versus Model X, where the theory was -- I think Model X, we just -- it's like sort of Model X to be like sort of the Fabergé egg of cars. It's a -- it's an incredible vehicle and probably one -- probably nothing like it will ever be made again, and maybe it shouldn't. But it is a work of art. It's a special work of art. But the commonality with the Model S is limited. It was only about maybe 30% in common with the Model S, whereas Model Y is, I think, 76% or something like that, in common with the Model 3. And we're most likely going to put Model Y production right next to -- in fact, as part of our main Gigafactory in Nevada. So it will just be right there, batteries and powertrains will come out and go straight into the vehicle. So that also reduces our risk of execution and reduces the cost of having to transfer parts from California to Nevada. It's not a for-sure thing, but it's quite likely, and it's our default plan.

I would expect Model Y will probably be -- the demand for Model Y will be maybe 50% higher than Model 3, could be even double. The -- as I understand it, the mid-sized SUV segment is the, worldwide, is the most popular type of vehicle. So we'll probably see a higher volume of Y than 3.

And earlier this month, we started construction of Gigafactory Shanghai, and by the end of this year, we expect to be producing Model 3s using a complete vehicle production line. That's body, paint, final assembly, general assembly and module production. So it basically would be -- this should be extremely fast. I get like daily updates of progress of the Shanghai Gigafactory, and those factories are going to go up like lightning. So we do feel quite confident at this point, at least for the factories that are in our control, that we can achieve volume production in Shanghai by the end of the year. And that should allow us to get to the 10,000 vehicles a week rate, or very close to it, by the end of the year.

And yes, I think that's it.

Questions and Answers:

Martin Viecha - *Tesla, Inc.* - *Senior Director for IR*

Okay, great. So we're going to take the first questions from our retail investors who have been submitting their questions on say.com. So the question that has been submitted has been about service, which I think you already spoke at length about. So let's go to the second question.

The second question would be, how are you feeling about demand right now across the product line? Is 500,000 to 700,000 units at \$42,000 ASP still a realistic annual target for Model 3, even considering Model Y and its impact on demand? And do you continue to see S and X demand of 100,000 annually?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

I mean, my best guess, this is just a guess, my best guess for demand of Model 3 worldwide is something -- in a strong economy, is something on the order of 700,000 or 800,000 units a year. That's my best guess for demand of Model 3 in a strong economy. If the economy goes into a recession, then I think that could be something on the -- 40% less. But I think even in a recession, worldwide demand is still something in the order of 500,000 for Model 3. For S and X, we did eliminate the 75 kilowatt hour version of S and X and to provide more differentiation relative to 3 and then Y that's coming out. I think we could see a slight decline in total vehicles, but I think the net cash flow from S and X is likely to be very similar. So probably no major change in net cash flow for S and X.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Okay. The next question from Alex is, can you please share an update on full self-driving and Tesla Network development? When will customers start to see full self driving features? What's the best case time line for Tesla Network to go live?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Sure. We -- we already have full self-driving capability on highway. So from highway on-ramp to highway exit, including passing cars and going from one highway interchange to another, full self driving capability is there. In a few weeks, we'll be pushing an update that will allow the option of removing stalk confirm in markets where regulators approve it, which we believe that will be the case in the U.S., for example. And over time, we think probably all regulators will approve it. But we kept stalk confirm there just to make sure that we took care of like -- of any strange corner cases. And it's really quite sublime, if you have stalk confirm off and like the car goes from highway on-ramp, passes slower cars, change -- takes an interchange and then takes the exit and then comes to a stop after the exit. So it's really quite profound to have that experience. Then the next part of full self-driving would really be to -- is traffic lights. So it's hard. So stop streets are pretty easy because you can essentially geocode those and it's easier to recognize stop signs. Traffic lights and intersections will be the next really tricky one. And then navigating complex parking lots and like -- so like if you're underground in a mall parking lot with a lot of traffic and pedestrians and it's on multiple levels, that kind of thing is what gets tricky. With the release of enhanced or advanced Summon, you'll see the first indications of the car being able to navigate complex parking lots, and that's also coming out fairly soon, probably next month. And in development mode, the car does all of the things that I just mentioned in development mode. It recognizes traffic lights and stop signs and basically has all the functionality in development mode. It's really just a question of getting the reliability of recognizing traffic lights to several 9s, like -- so maybe it's like, I don't know, 98% good right now, but we need it to be like 99.999%, really extremely reliable. So in a nutshell, when the capability will be there for -- when will we think it's safe for full self-driving, it's probably towards the end of this year, and then it's up to regulators to decide when they want to approve that.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Okay. Let's go to the next question, which is, if and when will Tesla switch Model S and X to 2170 battery cells? What percent range improvement do you expect?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

We have no plans to switch S and X to 2170 and can't comment on future product developments.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Okay. So maybe we'll take the last question from retail investors, which was, where will Tesla Semi and Model Y be produced? Can you share a time line on expected production ramp of these products?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

I was mentioning earlier, the Model Y, we think, most likely will be produced at Gigafactory, but that's -- unless we encounter some obstacle -- that's the default plan that we're proceeding towards. And it's fast, lower risk and relatively low CapEx. In terms of the -- I mean, probably there's like initial production of Model Y, very low volume, early next year. But then it always takes time to ramp up any production system, and it's difficult to predict the shape of that S-curve. So we feel confident in saying there will be production volume of Model Y by the end of next year. But in between beginning of next year with low volume, it always starts with very low, and then it grows exponentially, from beginning of last year to end of next year, it's difficult to predict that ramp. So that's our expectation for Y. For Semi, we're -- I don't know if you want to comment on that, Jerome?

Jerome Guillen - *Tesla, Inc. - President of Automotive Division*

Going to start next year as well.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Yes.

Jerome Guillen - *Tesla, Inc. - President of Automotive Division*

But the first units will be -- this is Jerome -- well, first units will be for our own usage. So depends how many trucks we'll use for our own usage to move the parts and the vehicles to different locations, and then we'll start delivering to outside customers.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Yes, sounds good. And then the Tesla pickup truck, we might be ready to unveil that this summer. It will be something quite unique, unlike anything else.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Okay, fantastic. So operator, we can start taking questions from participants on the call.

Operator

Our first question comes from Ryan Brinkman with JPMorgan.

Ryan J. Brinkman - *JP Morgan Chase & Co, Research Division - Senior Equity Research Analyst*

I see in the letter the amount that you have spent on land for Gigafactory Shanghai in the classification operating cash flows. Is there any guidance you can provide us in terms of how to think about CapEx for this facility going forward? And can you discuss the source of funds for the

project? I think you've spoken in the past about the potential to raise debt locally in China. Is that still your thinking? And what kind of terms might you be able to raise that capital?

Deepak Ahuja - *Tesla, Inc. - Former CFO*

Yes, Deepak here. You're right. The purchase of the land is a 50-year lease with the government of China. So it's not CapEx, but it's operating lease that shows up as cash flow from operations. However, the CapEx that we will invest is our equipment, and we fully own it. So that will show up as capital expenditures. The plan, as we have indicated in the letter, is still to get funding for a majority of debt capital spending from local China banks. And we expect pretty attractive rates based on the dialogue we've had. And there's a lot of interest. And we hope to finalize that and then share the details at that point.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Yes, I mean, as a ballpark figure, probably it's something about -- something in the order of \$0.5 billion in CapEx to get to the 3,000 vehicle rate in Shanghai, ballpark figure. And as Deepak was saying, we've been offered very competitive debt financing in China, really extremely compelling interest rates, so we do not expect that to be a capital drain on the company.

Deepak Ahuja - *Tesla, Inc. - Former CFO*

Yes, these are the biggest banks in the world, and for them, \$500 million is not a large amount of money in the scheme of things.

Operator

Our next question comes from Gene Munster with Loup Ventures.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

One thing is -- sorry, I just wanted to -- something that's perhaps, if you're in the automotive industry, you'll understand how significant this is, but maybe it's not as obvious to everyone, is Tesla has the first wholly-owned manufacturing facility in China for any -- of any automotive company. So this is profound, and we're very appreciative of the Chinese government allowing us to do this. I think it is symbolic of them wanting to open the market and apply fair rules for everyone, and I want to extend, like, a note of appreciation for the Chinese government in allowing us to do that. It's a very significant thing.

Charles Eugene Munster - *Loup Ventures, LLC - Managing Partner, Co-Founder & Head of Research*

This question I have is relative to Waymo and the autonomous driving opportunity. Morgan Stanley recently valued Waymo at \$175 billion. And my question is, what do they have that you don't have? And separately -- so what do they have that you don't have, and then separately, how important is autonomy to the Tesla story longer term? Is this nice to have? Is it really about EVs and renewable energy? Or is the autonomy kind of one of the foundational parts of the story longer term?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

To find out the goodness of Tesla, so like sort of the why of Tesla, the relevance, what's the point of Tesla, comes down to 2 things: acceleration of sustainable energy and autonomy. The acceleration of sustainable energy is absolutely fundamental because this is the next potential risk for humanity. So obviously, that is, by far and away, the most important thing. But also, very important is

autonomy. This has the potential to save millions of lives, tens of millions of serious highway injuries and give people their time back so that they don't have to drive, they can -- if you're on the road, you can spend time doing things that you enjoy instead of being in terrible traffic. So it's extremely important. We feel confident about our technical strategy, and I think we have an advantage that no one else has, which is that we have, at this point, somewhere in the order of 300,000 vehicles on the road, with a 360-degree camera sensor suite, radar, ultrasonics, always connected, uploads, especially video clips with [customer information], when there's an intervention. So effectively, we have a massive, massive training fleet. Our -- the miles of training that we have, if you added everyone else up combined, they're probably 5%, I'm being generous, of the miles that Tesla has. And this difference is increasing. A year from now, we'll probably go -- and if you go, certainly, if you go 18 months from now, we'll probably have 1 million vehicles on the road with -- and every time the customers drive the car, they're training the systems to be better. I'm just not sure how anyone competes with that.

Operator

Our next question...

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Sorry, Gene, do you have a follow-up question? Okay, no follow-up question. Okay, let's go to the next participant.

Operator

Our next question is from Colin Rusch with Oppenheimer.

Colin William Rusch - *Oppenheimer & Co. Inc., Research Division - MD and Senior Analyst*

Can you talk a little bit about the geographic dispersion for the guidance for 2019, where you're expecting the Model 3s to sell through as well as the other models?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Well, I think we did, actually. Yes, it's clear in our letter.

Deepak Ahuja - *Tesla, Inc. - Former CFO*

Correct. We indicated in Q1, we will start delivering Model 3s in Europe and China. And we also shared a chart showing the potential market size for mid-sized premium sedans in North America, Europe and Asia, suggesting those markets can be even bigger. So I think that gives a good sense of where we'll be. And we'll launch the right-hand drive version at some point to go to the other markets.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Yes, it's maybe on the order of 350,000 to 500,000 Model 3s, something like that this year.

Colin William Rusch - *Oppenheimer & Co. Inc., Research Division - MD and Senior Analyst*

Okay. And then just in terms of the cost reduction road map and rework, post-factory, can you talk a little bit about your expectation for reducing that in the next couple of quarters and what the order of magnitude is on that in your model internally?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Jerome, do you want to answer that?

Jerome Guillen - *Tesla, Inc. - President of Automotive Division*

This is Jerome. Well, our manufacturing keeps improving quarter-over-quarter, actually, week-over-week. We take fewer hours, both here in Fremont or at the Gigafactory, to assemble the Model 3 and S and X as well. And then we track the quality very closely. We review that carefully with the engineers and the supply chain and the manufacturing teams. And the quality in the field and the number of incidents is also improving week-over-week, every week. So there are fewer and fewer need for cars to be in service, yes. So we'll keep going. There's no end in sight. And we'll try to make sure that the car never breaks down.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Yes, I think there's like some confusion about rectification. Like I said -- like for us, regarding the Model 3s that come off the line, all that happens is like some slight adjustment of drawer gaps and panel gaps and that kind of thing, and that's all that's done. There's nothing more than that.

Operator

Our next question comes from Colin Langan with UBS.

Colin Langan - *UBS Investment Bank, Research Division - Director in the General Industrials Group and Analyst*

Just a follow-up on the comments around you said about 700,000 to 800,000, you think, is the normal demand. I mean, any color on what price you're expecting that to be? Because I think there's a lot of chatter that demand is already weak in -- of the midrange, at least, already in January. I don't know if that's true as well.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Yes, I mean, the -- it's more like there are multiple factors at play here. First of all, there's a lot of seasonality to automotive purchases. Most people do not buy a new car in the middle of a blizzard. So January and February tend to be seasonally low and then it picks up significantly around the early to mid-March time frame. In the U.S., we obviously have a pull forward of demand from the tax credit. And yes, there's -- so there's those factors. But I feel very confident about Model 3 demand. The customer happiness level with the car is incredible, I mean, I think probably the highest of any car in the world right now, I think. And so you can tell, like, basically, nobody wants to sell a car, so...

Colin Langan - *UBS Investment Bank, Research Division - Director in the General Industrials Group and Analyst*

But the target price point is, I think, in the past, you mentioned mid-\$40,000. Is that where we're thinking? Or is that a long-term range?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Yes, this is really just a guess. So it's not like I've got some huge crystal ball or something. But at high -- at volume, I would expect, this is totally a guess, I just want to be clear, probably an average of \$42,000, probably at that volume level. I'm not certain, but that's my guess.

Colin Langan - *UBS Investment Bank, Research Division - Director in the General Industrials Group and Analyst*

And just as a follow-up, you commented that you expect China to be online by the end of the year, but there's a lot of articles that the battery supplier -- is you're looking at different battery suppliers still. I mean, do you have a battery supplier? Because it seems kind of close to when production is supposed to start.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Well, there's really 3 things. There's the cell, the module and the pack. We will be making the module and the pack. So it's really just a question of cell supply. And we can essentially use any high energy density 2170 chemistry. And we expect it to be a combination of cells produced at our Gigafactory in Nevada, cells produced in Japan and cells produced locally in China. And we feel confident of there's sufficient supply to hit the 3,000 units a week.

Operator

Our next question comes from Emmanuel Rosner with Deutsche Bank.

Emmanuel Rosner - *Deutsche Bank AG, Research Division - Director & Research Analyst*

First, I wanted to ask you about the short-range Model 3. What are your latest thoughts in terms of timing of introduction? I think at some point, you had in mind to do it in the -- maybe the first half of this year. And just to clarify, when you're sort of talking about the outlook for 2019, the number of deliveries up 50% and then the margin target for Model 3 to get to 25%, does that assume that you're introducing a lower range, the short-range Model 3 at some point during the year?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Well, we call it the standard range, but it's maybe short by Tesla's standards, but it's long range by other manufacturers' standards. So -- but yes, we expect to introduce the standard range Model 3 sometime, probably the middle of this year is a rough -- rough guess. And we're working hard to improve our costs of production, our overhead costs, our fixed costs, just costs in general. I think this past year, while extremely difficult, has driven us to a high level of financial discipline. I think we're way smarter about how we spend money, and we're getting better with each passing week. Yes.

Emmanuel Rosner - *Deutsche Bank AG, Research Division - Director & Research Analyst*

And so to be clear, the -- you expect to reach at some point this year, or you're targeting at some point this year, 25% gross margin on Model 3, and that's despite introducing the lower-end, or I guess, the standard range Model 3. Is that correct?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Yes.

Emmanuel Rosner - *Deutsche Bank AG, Research Division - Director & Research Analyst*

Okay. And I guess, my follow-up would be on the demand side. So you're talking about 50% increase this year. You said a few times that it could be higher than this. I think you just mentioned in the previous question 350,000 to 500,000, if I understood well. So what is sort of like what drives

the cautious outlook that's in your letter? Because it feels like it's the -- it's just basically 4x the fourth quarter run rate, which would imply sort of 50% for the full year, but not really a lot of growth versus what you just accomplished. So I guess, how do we think about the total demand for 2019, especially if you introduce this -- the cheaper version?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Well, we need to bring the Shanghai factory online. I think that's the biggest variable for getting to 500k-plus a year. Our car is just very expensive going into China. We've got import duties. We've got transport costs. We've got higher-cost labor here. And we've never been eligible for any of the EV tax credits. A lot of people (inaudible) being so dependent on incentives. In fact, we are, for a company making EVs, we have the least access to incentives. It's pretty crazy, because there's so many companies that, that -- countries that have put price caps on the EV incentive, which differentially affect Tesla. And in China, which is the biggest market for EVs, we've never had any subsidies or tax incentives for vehicles. So it's difficult. Once a car is made there, it is eligible for that. But it sounds like that's going to be reducing in China in the coming years. But really, bottom line is, we need the Shanghai factory to achieve that 10k rate and have the cars be affordable. The demand for -- it's important to appreciate, the demand for Model 3 is insanely high. The inhibitor is affordability. It's just like people literally don't have the money to buy the car. It's got nothing to do with desire. They just don't have enough money in their bank account. If the car can be made more affordable, the demand is extraordinary.

Operator

Our next question comes from Pierre Ferragu with New Street Research.

Pierre C. Ferragu - *New Street Research LLP - Global Team Head of Technology Infrastructure*

So Deepak, I was wondering, so as you get to 2019, we're all concerned about a potential recession, and I was wondering how you think about it and what you would tell us about what we should expect -- how we should expect Tesla to react to a recession in 2019. How do you manage your volume [LAM]? How do you manage your pricing? How do you possess cash? How do you manage your CapEx if things turn south in 2019? And then I have a follow-up on gross margin for Jerome.

Deepak Ahuja - *Tesla, Inc. - Former CFO*

Yes, it's a very broad question, which is not really just for me to answer. But I think at the highest level, the way we are trying to be prepared for any kind of contingency is to just continue focusing on cost. And the theme of our conversations here is, how do we reduce cost all the time? And how do we run our business with a very high level of financial discipline? And Elon alluded to that and so did Jerome, I think. That if we do that, we believe that even in some of the scenarios of lower volumes and pricing, tight pricing, we do have a good chance and a good shot of being profitable and generate free cash flow. So that's the best way to manage the business, be frugal.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Yes, I don't want to be a broken record about this, it's costs, costs, costs, cost, because reducing our costs -- by the way, while making modest improvements to Model 3, I want to emphasize, the product is getting better by slight degrees despite lower cost, in hundreds of small ways, that you actually wouldn't -- most people wouldn't notice explicitly, but they would appreciate subconsciously. And getting those costs down, variable costs and fixed costs, is what allows us to lower the price and be financially sustainable and achieve our mission of environmental sustainability. So we have to be absolute zealots about this, there's no question.

Deepak Ahuja - *Tesla, Inc. - Former CFO*

The other aspect of this, Elon, which we've been doing extremely well, is capital efficiency. We have dramatically cut back on capital expense, and we are spending it in a very efficient manner. We talk about it in the letter on Model 3 and Gigafactory Shanghai. We talk about it for Model Y. There are just so many learnings that we are incorporating. And we just want to beat what we did with Model 3 and the kind of spending we had for the returns we got.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Absolutely. I mean, like, we're confident that our CapEx per unit of production for Shanghai factory and for Model Y will be less than half of what we did for Model 3. Internally, we think it might be a quarter, but that's probably too good to believe, but it's definitely less than half.

Operator

Our next question comes from David Tamberrino with Goldman Sachs.

David J. Tamberrino - *Goldman Sachs Group Inc., Research Division - Equity Analyst*

First thing I want to just understand is on what you're seeing from European orders and China orders so far. There are some numbers that get thrown around, but you guys are obviously taking a look at it. How is that order profile shaping up relative to what you saw in the U.S. with the launch of the 3?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

I think it seems good. I mean, our issue actually with Europe and China is how do we get the cars made and on a boat as such that it reaches customers before end of quarter and we don't have a massive number of cars on the water. That's our biggest challenge. It's not demand. It's how do we get the cars there fast enough.

David J. Tamberrino - *Goldman Sachs Group Inc., Research Division - Equity Analyst*

So like orders above, I think I've seen like 20,000 order levels for Europe and single-digit thousands for China, it's better than that, Elon?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Yes, absolutely. The -- I mean, we're not even really trying, I should point out. I guess, it's -- we -- our factory is like, right now, only making cars for China and Europe. That's all it's doing for -- with respect to Model 3. And our whole focus is, okay, how do we get those cars made, get them on a ship as fast as possible, get the ship as fast as possible to Zeebrugge in Belgium, then get them over to Drammen in Norway and get those cars to customers as fast as possible. We get them to China as fast as possible. And China, we're also -- yes, we don't what's going to happen with the trade negotiations. So it's very important to get those cars, especially to China, as soon as possible. We hope the trade negotiations go well, but it's not clear. But we need to get them there while there's sort of a de facto -- sort of a truce on the tariff war. And the demand gen is really not one of the things we're thinking about.

David J. Tamberrino - *Goldman Sachs Group Inc., Research Division - Equity Analyst*

Okay. Then just lastly on this demand thread, customer deposits came in again over \$100 million. Is

it possible to give us an update? I know you don't think it's really a relevant number, but I do and I'll explain why. On the reservation count, where you were at 450,000, you started delivering. And I ask this because I think we're just all trying to understand how much incremental demand you think there is based on what you see at that lower price point if, say, there's over half of those people that are still waiting for that 75k base model to come out. That would be interesting, and I think that's what you're seeing, but I just want to confirm that.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

So Deepak, do you want to...?

Deepak Ahuja - *Tesla, Inc. - Former CFO*

Yes, I mean, I think reservations are not relevant for us. We are really focused on orders. Now we do have a large reservations backlog still, which tells us that a lot of customers are still waiting for those cars, but I don't think it's appropriate to share the reservations number.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Reservations are just like preorders. It's like you have like some video game come out and it's like a preorder number, then that's like -- stops being important once you start shipping the game or product. So yes, as I said earlier, I think -- my guess is demand is somewhere on the order -- in a strong economy, is on the order of 700,000 or 800,000 units a year for Model 3 and even in a recession is probably on the order of 0.5 million.

Operator

Our next question comes from Daniel Ives with Wedbush Securities.

Daniel Harlan Ives - *Wedbush Securities Inc., Research Division - MD of Equity Research*

So my question is around Europe. Obviously, with deliveries coming onboard in the first quarter, maybe what surprised you in terms of -- demand looks strong, but in terms of what you're seeing out of the region, is it stronger than you expected in certain countries? What do you think is driving that? And maybe you can just talk about the opportunities and challenges in Europe, especially from a delivery logistics perspective.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Well, like I said, we're thinking about demand almost 0 right now. It's really getting the product there in time and not having a ton of cars on the water end of the quarter and then for China, getting cars there before there's a potential rise in tariffs. That's really -- put really at front of mind, that cost reduction and then improving service in North America, yes.

Daniel Harlan Ives - *Wedbush Securities Inc., Research Division - MD of Equity Research*

And just maybe a quick follow-up. Can you just talk about, when we look at the Gigafactory build-out in China and obviously how important that is, maybe just fast forward, let's say, 18, 24 months, I mean, how do you envision that as just a competitive advantage versus maybe some other automakers that will be trying to go in your tracks?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

I think it will be quite a significant advantage. I really view it as quite fundamental to the future of

Tesla, and I expect to make several trips to China this year. And I'm working very closely with the team building the factory. I literally get daily updates. So it's a super big deal and we're only just talking about Phase 1 here. Phase 1 is about 10% of what we think the Gigafactory will ultimately be. So it's a major, major, major deal. And we're getting a lot of support from the Shanghai government, which we're very appreciative of, and the national government.

Operator

Our next question comes from Toni Sacconaghi with Bernstein.

A.M. Sacconaghi - *Sanford C. Bernstein & Co., LLC., Research Division - Senior Analyst*

You've talked repeatedly about the need to drive down costs, which in turn drives elasticity of demand for cars. And I'm wondering if you can talk about how much of the price differential between the \$50,000 Model 3 and the \$35,000 Model 3 is structural, meaning that powertrain costs for EVs are just structurally higher than they are for internal combustion engine cars? And where you think that difference is today and when that is no longer a factor? So is -- or maybe said another way, is the bigger driver in getting to lower costs and lower -- and more affordability on the Model 3, is it really around the powertrain and getting that at parity? Or is it everything else about Tesla not being as efficient as other manufacturers that is causing the higher price right now? And have I follow-up, please.

Jerome Guillen - *Tesla, Inc. - President of Automotive Division*

It's both, it's both the vehicle and both the powertrain. So I split my time half and half between the Gigafactory and here, and there is opportunities in both, yes.

Deepak Ahuja - *Tesla, Inc. - Former CFO*

But I think the bigger point is that, yes, there is cost reduction opportunities out, but the bigger point is not that our cost is higher than a gas-powered or an internal combustion engine.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

I think what Toni meant is with a battery pack, as in battery pack as well as the powertrain together, are more expensive than an engine.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

That's true.

A.M. Sacconaghi - *Sanford C. Bernstein & Co., LLC., Research Division - Senior Analyst*

And how big do you think that delta is today? And when it's -- do you think of it as being kind of \$10,000, \$11,000 for that pack plus powertrain for an electric vehicle and maybe \$5,000 or \$6,000 for an internal combustion engine car? And is that sort of the order of magnitude? And where do you see those getting much more aligned, just sort of given the laws of where you think cell and pack costs are going?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Well, the biggest part to bear in mind is the cost of electricity is quite a bit less than the cost of gasoline, especially in Europe or in California or China, basically almost everywhere except, say, the middle of the United States, the cost of gasoline is very expensive and electricity is far cheaper.

The -- so that factors into the cost of ownership pretty significantly. It's on -- sort of on the order of \$50 to \$100 a month, depending upon how much somebody drives. So that's a very important thing to consider for an electric car versus a gasoline car. The -- that said, in terms of initial cost of acquisition, I think it's probably -- this is just off the top of my head, not a calculated number, probably on the order of 7k, but trending towards 4k or 5k. Just off the top of my head.

A.M. Sacconaghi - *Sanford C. Bernstein & Co., LLC., Research Division - Senior Analyst*

Okay. And as you think about 2019, you talked about sort of scenarios for demand and how you plan to roll out the intermediate range and then ultimately the standard range. What is -- if you do have to make a trade-off on volume or profitability during the course of the year, meaning to get the volume you need or you think you can deliver, you have to go to lower margins or vice versa, where's the trade-off? Is -- are units produced most important to you? Or is delivering the 25% gross margin more important? So if you have a chance to deliver 450,000 or 500,000 cars, but they'll be more standard editions and gross margins will end the year at 20%, is that -- are you willing to make that trade-off?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Yes, my guess is it ends up being sort of about the six in one, half dozen the other, where if there's a given amount of free cash flow, you sort of decide -- you decide to achieve that with a smaller production or smaller volume of cars at a higher margin or large volume cars at a smaller margin. I think we're already towards the second. We're going to make more cars at a lower margin, but I think it's more or less a flat rate.

Operator

Our next question comes from Maynard Um with Macquarie.

Maynard Joseph Um - *Macquarie Research - Analyst*

Can you just update us on where battery costs are now and where you anticipate they'll be by year-end? I'm just trying to gauge how much of a factor this is to lowering costs and sustaining profitability.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

That's a highly proprietary number. We cannot give it out. I'd like to tell you, but no. We do think we have the best costs in the world. We're -- to the best of our knowledge, our costs are better than anyone else right now and they're improving.

Maynard Joseph Um - *Macquarie Research - Analyst*

And maybe talk about your expectations with the Panasonic-Toyota JV and how it might impact you. Was this something that you were made aware of?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

I spoke directly with Tsuga-san about this, the Head of Panasonic, and he has assured me this will have no impact on Tesla.

Operator

Our next question comes from Dan Galves with Wolfe Research.

Daniel V. Galves - *Wolfe Research, LLC - Director of Equity Research & Senior Analyst*

Do you plan to offer a U.S. lease product for Model 3 in the U.S.? When can we expect it? And can you talk about what percentage of S and X have historically been leased in the U.S.?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Well, we've been reluctant to introduce the leasing on Model 3 because of how -- of its effect on GAAP financials. So it is worth noting that demand to date is with 0 leasing. So obviously, leasing is a way to improve demand, but it has -- it makes our financials look worse. So we're like -- we're not wanting to introduce that right away. I mean, we'll introduce it sometime later this year probably. What -- I'm not sure the percentage of lease is for S and X right now.

Deepak Ahuja - *Tesla, Inc. - Former CFO*

It's around 20%, low 20s, and it stayed stable at that level for many, many quarters, which is -- it seems like the natural demand because we don't do subvention or artificially bump up...

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Yes, exactly. Our leases are legit. The -- it usually affects small business tax write-off, is important for the -- for leasing, so.

Daniel V. Galves - *Wolfe Research, LLC - Director of Equity Research & Senior Analyst*

Okay. And then I have just, like, 2 quick housekeeping questions. One, is there a restructuring charge that you expect in the first quarter? How much is it? And is it included in your expectation of a small profit?

Deepak Ahuja - *Tesla, Inc. - Former CFO*

Yes, it is included in that. It's difficult to say exactly what that is. At this point, it's, let's say, roughly around \$40 million, but that number can vary slightly.

Daniel V. Galves - *Wolfe Research, LLC - Director of Equity Research & Senior Analyst*

Okay. And then just the last one is...

Deepak Ahuja - *Tesla, Inc. - Former CFO*

Sorry, go ahead.

Daniel V. Galves - *Wolfe Research, LLC - Director of Equity Research & Senior Analyst*

Yes, the last one is, this change in your service parts structure to make things more distributed rather than in the parts warehouses, would that be like a meaningful working capital drag? What's the cash impact of that?

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

No, it's actually -- we've just been very silly about where we store our parts. So it's actually going to be no change in sort of working capital or not something you would even notice in the financials. It's just being smarter about sending parts directly to service centers, in fact, either directly from our

factory here or from our suppliers, and just ship them direct to the service center. Right now -- actually, our costs will improve, I think, actually quite a lot, because there's been actually quite -- the current system is quite boneheaded, actually, speaking self-referentially. So just being -- so stopping doing the foolish things will massively improve our service costs, will massively improve customer happiness around the world, and it's just fundamentally better all around. I mean, there are some pretty -- like we've been just like super dumb in some of the things we've done, where -- like, on one of the trips to China last year, I always ask, "Okay, what are we doing wrong? What can we fix?" And like our China team is great, by the way. They're like, "Well, do you think we could have spare parts that are made in China just sent directly to our China service centers? Because currently, there's a bunch of parts that are made in China, then sent to a warehouse in New Jersey and then sent back to China." Literally, what was happening. It's super nuts stuff. So it's going to get way better. And yes, it's very clear.

Operator

Our next question comes from Ben Kallo with Baird.

Benjamin Joseph Kallo - *Robert W. Baird & Co. Incorporated, Research Division - Senior Research Analyst*

I have 1 question and it's got 4 parts to it. Happy new year, Elon. So the first part is, so our Street numbers, like consensus, we've gotten everything wrong for 6 years or 7 years since you went public, and there are about \$6 in earnings. Talk to us about that if you can. Number two, Elon, could you talk to us about -- can you talk about -- I hear you cut some workforce at SpaceX and there at Tesla and I feel that you have a worry about global economy. Can you talk to us about how you feel about that with your guidance in order -- in the same order? And then can we talk about, maybe for the third thing, for JV, no one's ever going to talk about stationary storage, but we got a whole page on that, which looked pretty good to me, and what should we be focusing on that? And what can that add to the bottom line on top of that \$6 this next year?

Deepak Ahuja - *Tesla, Inc. - Former CFO*

I mean, we can't really, Ben, talk about consensus and what that means. I think we are -- maybe the better approach is we are providing certain guidance here and you and the other analysts need to reflect that in your modeling. And that's the best indication from the company of our projections. In all fairness, that's the best way I can think of answering your question here.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Yes, J.B., is there anything you want to say?

Jeffrey B. Straubel - *Tesla, Inc. - CTO*

I mean, I think the letter outlines the predicted growth in the battery storage business, the stationary storage business pretty clearly, and that should be included in the projections as well. So I mean, we're excited about it, but I can't say much more detail.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

I mean, our internal projections for stationary storage are closer to 3 gigawatt hours. But some of it is kind of lumpy and may not be completed this year. We would have done more in stationary storage last year except we were cell-starved for vehicle production, so we had to convert a bunch of stationary storage lines, battery lines, to vehicle battery lines. Otherwise, we would have done quite a bit more in stationary storage. I expect that to grow, I mean, probably twice as fast as

automotive for short -- a long time.

Jeffrey B. Straubel - *Tesla, Inc. - CTO*

We continue to set production records basically every month, so that's growing.

Deepak Ahuja - *Tesla, Inc. - Former CFO*

And the profitability of the storage business and the gross margin continue to improve as we keep ramping up production and scale.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

It's going to be a gigantic business down the road.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

And the last question was about economy, global economy.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Sure. I mean, I do think that the economy moves in cycles and there's clearly a significant risk of a recession over the next 12 to 18 months, but I'm confident that Tesla will remain at least slightly profitable, even with -- even if there is a significant recession. And then when -- and be all the stronger for it when the recession ends. And the -- yes, we have to be relentless about cost in order to make affordable cars and not go bankrupt. That's what our headcount reduction is about, yes, yes. I think we have to -- it's -- we have to be super hardcore about it. It's the only way to make affordable cars. The -- on the SpaceX side, the cost reduction was for a different reason unrelated to -- it was -- SpaceX has really -- SpaceX has 2 absolutely insane projects that would normally bankrupt a company, the Starship and Starlink, and so SpaceX has to be incredibly spartan with expenditures until those programs reach fruition.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Okay, great. I think that's all we have time for today. Thank you very much for your questions, and Elon would like to have some closing remarks.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Yes, so let's see -- the -- so Deepak is -- well, I'll let you make the announcement, but Deepak is going to be retiring.

Deepak Ahuja - *Tesla, Inc. - Former CFO*

Again.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Yes, from Tesla.

Deepak Ahuja - *Tesla, Inc. - Former CFO*

Yes.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Deepak, I think it's been -- you first started with Tesla about 11 years ago, right?

Deepak Ahuja - *Tesla, Inc. - Former CFO*

It's been close to that, yes.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Yes, almost 11 years. Thank you for your tremendous contribution to Tesla. And he's announcing retirement but the retirement will not be immediate, but Deepak will continue to be at Tesla for a few more months and will continue to serve as a senior adviser to Tesla for probably years to come, hopefully. And we thought long and hard about who the right person is to take over from Deepak, and that's Zach. And Zach has been with Tesla now for 9 years...

Zach Kirkhorn -

9 years.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Yes, so Zach, management and technology at Wharton undergrad and then worked at Tesla and then spent a couple of years at Harvard Business School, which I actually don't think was necessary, by the way.

Zach Kirkhorn -

You told me that when I came back.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Yes, exactly. So Zach's incredibly talented and has made a huge contribution to Tesla over the years, and obviously, a very well-known quantity to the whole team and has the respect of the whole team. And Zach, I don't know if you'd like to say a few words?

Zach Kirkhorn -

Yes, I will.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Okay. Or do you want, Deepak, do you want to say this?

Zach Kirkhorn -

Deepak?

Deepak Ahuja - *Tesla, Inc. - Former CFO*

Sure, okay. Thank you, yes. Well, first of all, Elon, thank you very much for the opportunity for me to be here and be here again a second time. I've learned a lot from you and I've been always inspired by you, and I've been also very inspired by the team at Tesla, who are incredibly brilliant, very passionate and just amazingly perseverant, the best team I could imagine. So thank you, everybody,

for that. There is no good time to make this change. We felt this was a good time. It's a new chapter, a new year. Tesla has had 2 great quarters of profitability, cash flow, it's on a really solid foundation. And I feel really good about Zach taking over as the CFO. He's proven himself with his many years of experience and many tough challenges that he's worked on and really excited to have Zach take on this role, and I'll be here to support him and make sure we are all successful as a company.

Zach Kirkhorn -

Yes, well, thank you, Deepak. Thank you, Elon. So my name is Zach Kirkhorn. Just a brief background on myself. So I joined Tesla just under 9 years ago, when we were a super small company with a lot of potential ahead of us and I was attracted to the mission and the vision of the company. Throughout that time, I've been deep in the operations of every major program of the company, from the Roadster to Model S and X, Model 3, scaling our energy business and more things to come, which we've talked about on the call. I feel we're starting 2019 with a very strong financial foundation. We have enough cash to continue launching new programs and developing new technologies, and we're able to service upcoming debt obligations with our forecasted cash flows. My focus, alongside the talented and amazingly passionate team at Tesla, is to ensure we continue the terrific momentum on cost management and operational efficiency, which will enable us more -- enable more access to our products around the world, which is key to achieving the mission of the company. On a personal note, Deepak, a huge thank you to you for your leadership, mentorship and support and very much looking forward to discussing our progress on future earnings calls.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Great.

Martin Viecha - *Tesla, Inc. - Senior Director for IR*

Great. Thank you very much. We will speak to you in 3 months.

Elon R. Musk - *Tesla, Inc. - Co-Founder, CEO, Director & Product Architect*

Thanks, guys.

Operator

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

Call participants:

Corporate Participants

Deepak Ahuja, Tesla, Inc. - Former CFO

Elon R. Musk, Tesla, Inc. - Co-Founder, CEO, Director & Product Architect

Jeffrey B. Straubel, Tesla, Inc. - CTO

Jerome Guillen, Tesla

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