

Company Name: Tesla  
 Company Ticker: TSLA US  
 Date: 2019-01-30  
 Event Description: Q4 2018 Earnings Call

Market Cap: 53,025.93  
 Current PX: 308.77  
 YTD Change(\$): -24.03  
 YTD Change(%): -7.221

Bloomberg Estimates - EPS  
 Current Quarter: 1.009  
 Current Year: 5.995  
 Bloomberg Estimates - Sales  
 Current Quarter: 6652.278  
 Current Year: 28575.379

## Q4 2018 Earnings Call

### Company Participants

- Elon Reeve Musk
- Martin Viecha
- Jerome Guillen
- Deepak Ahuja
- Jeffrey B. Straubel
- Zach Kirkhorn

### Other Participants

- Ryan Brinkman
- Gene Charles Munster
- Colin Rusch
- Colin Langan
- Emmanuel Rosner
- Pierre C. Ferragu
- David Tamberrino
- Daniel Ives
- Antonio M. Sacconaghi
- Maynard Um
- Dan Galves
- Benjamin Joseph Kallo

## MANAGEMENT DISCUSSION SECTION

### Elon Reeve Musk

#### *Q4 Review*

#### *Q3 Highlights*

- Last year was definitely the most challenging year in Tesla's 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

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- We also made delivered overseas-made vehicles last year as we did in all prior years combined, which is a tremendous achievement by the Tesla team

### ***Vehicle Production and Deliveries***

- If you track Tesla vehicle production y-over-y, cumulative sales and deliveries y-over-y, it is about the cleanest exponential I've ever seen
- We've basically almost doubled our fleet in 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, 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
- Okay
  - Martin, are you taking it?

### **Martin Viecha**

I'm not sure

I think Model 3 was a little bit slower, but I'm not 100% sure

### **Elon Reeve Musk**

Okay

And we expect that exponential to continue

So with the deliveries this year being – even in the phase of if there is a global recession – even if there is a global recession, we're expecting deliveries this year to be about 50% higher than last year

- And it could be a lot more than that, but even with tough economic times to see 50% growth, is pretty nutty

### ***GAAP Profitability***

- Well, in Q4 we achieved GAAP profitability for Q2, first time in the company history, and we increased our cash on hand by more than \$700mm, even after repaying debt, ending the year with a total of \$3.7B in 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 Q4 are usually lower in the automobile industry, but this was not the case for Tesla
- I think 2019 is going to be an amazing year for Tesla
- As I mentioned, we're expecting to increase sales by 50%
- Perhaps 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

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### ***Improving Service Operations***

- 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, say, what my priorities are this quarter, it's improving service in North America
  - That's number one
- And we've got 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 – get the car to customers
- So we're working every aspect of that logistics chain, and I think it's going to be good
- I would 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

### ***New Store and Service Locations***

- 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
- 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, but 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 the service center or do any paperwork or anything like that
  - It's really seamless and visible and customers love it
- And we're also increasing the functionality of the Tesla app out for service
- So that instead of having 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 with a couple taps, you've made your service appointments
- And we're going to make it easier for the car to be picked up and dropped off as well
- So, if you prefer not to come into service center at all, you can just request that the car be picked up and delivered
- So that's already been rolled out, had a big improvement to customer satisfaction
  - That rolled out two or three weeks ago

### ***Improving Customer Happiness***

- The next thing we're going to add is, if your car detects something wrong, like a flat tire or a driving failure, that before the car has even come to a halt, there is a tow truck and a service loader on the way
- So, 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

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- This will be immense in improving customer happiness. [ph] Virtually you can (00:08:19) call it and you're up tap the service screen to cancel it
  - So, you can cancel it if you want
  - Reset it
  - It's like automatically going to happen unless you press cancel

### ***Improving Parts Distribution***

- We're also improving our parts 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 parts distribution warehouses, which basically meant it was impossible to have a fast turnaround on servicing your car because the car would come in then the parts would be requested, they come to the service center
- This would basically – even for a very simple repair, it could take days
  - So, we're going to be able to stocking all common products at the service centers, so that it's possible to, in principle, 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 eight minutes or whatever, eight-minute max, lightning fast
- But in order to do that, we have to have the parts located at our service centers
- And also it's going to make sense for our service centers to do basic bodywork, or essentially if all you do is replace a front or rear fascia, it makes sense to just pre-stock the front rear fascia in the common colors
- So, unless you have an unusual color, we can therefore replace your fascia in 15, 20 minutes
  - And there's none of this like weeks at a body shop stuff

### ***New Products***

#### ***Model Y***

- In terms of the new products, with Model Y we've completed engineering and design of Model Y, and the parts are – the tooling is going out for production of Model Y
- Three quarters of the Model Y is common with the Model 3
- So, it's a much lower CapEx per vehicle than the Model 3, and the risk is also quite low
- This is in contrast to Model S vs. Model X where the theory was – Model X – I would consider Model X to be like the sort of like the Fabergé egg of cars
- In fact, it's an incredible vehicle, and 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

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### *Production*

- 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'll 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 that's our default plan
- I would expect the [indiscernible] (00:11:51) Model Y will be probably maybe 50% higher than Model 3, could be even double
- As I understand it, the midsize SUV segment worldwide is the most popular type of vehicle
- So, we'll probably see higher volume of Model Y than Model 3

### *Gigafactory Construction*

- 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 a body, paint, final assembly, general assembly and module production
- So that it basically would be very extremely fast, I get like daily updates of progress of the Shanghai Gigafactory and this factory's going to go up like lightning
- So, we do feel quite confident at this point, at least for the factors 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

## QUESTION AND ANSWER SECTION

**<A - Martin Viecha>:** 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 first 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 at 100,000 units annually?

**<A - Elon Reeve Musk>:** My best guess – this is just a guess. My best guess for demand of Model 3 worldwide, in this 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 under 40% less. But I think even in a recession, worldwide demand is still something in the order of 500,000 units for Model 3.

For S and X, we did eliminate the 75-kilowatt version of S and X. And to provide more differentiation relative to Model 3 and then Model 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.

**<A - Martin Viecha>:** Okay. The next question from [ph] Alex (00:15:21) is, can you please share an update on full self-driving in Tesla network development? When will customers start to see full self-driving features? What's the best

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case timeline for Tesla network to go live?

**<A - Elon Reeve Musk>**: Sure. We already have full self-driving capability on highways. So, from highway on-ramp to highway exit including passing cars and going from one highway interchange to another, the full self-driving capability is there. In a few weeks, we'll be pushing an update that will allow the option of removing [ph] stop confirm (00:16:02) in markets where regulators approve it, which we bet 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 talking from there just to make sure that we took care of like any strange corner cases. And it's really quite sublime if you have [indiscernible] (00:16:28) and like the car goes from highway on-ramp, passes slower cars, 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 is traffic lights is hard. Stop streets are pretty easy, because you can essentially geocode those. And it's easy to recognize stop signs. Traffic lights and intersections will be the next really tricky one. And then navigating complex parking lots, and 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 where things get tricky. With the release of enhanced or advanced Summon, you'll see the first indications of the car being able to navigate to 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 your liability of recognizing traffic lights to the several nines. Maybe it's like 98% good right now, but we need it to be like 99.999%, really extremely reliable.

So, in a nutshell, when do we, I think with the capability we'll 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.

**<A - Martin Viecha>**: 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?

**<A - Elon Reeve Musk>**: We have no plans to switch S and X to 2170 and can't comment on future product developments.

**<A - Martin Viecha>**: 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 timeline on expected production ramp of these products?

**<A - Elon Reeve Musk>**: As mentioned earlier, the Model Y we think most likely will produce at Gigafactory. Unless we encounter some obstacle, that's the default time that we're proceeding towards. And it's fast, low risk and relatively low CapEx.

In terms of the, I mean, probably there's like initial production of Model Y in very low volume early next year. But then it always takes time to ramp up any production system, and that's difficult to predict the shape of that S curve. And so, we feel confident in saying there'll be volume production of Model Y by the end of next year. But in between the beginning of next year with low volume, it always starts with very low and it grows exponentially. From beginning of last year to end of next year is difficult to predict that ramp. So that's our expectation for Model Y.

For Semi, I don't know if you want to comment on that, Jerome?

**<A - Jerome Guillen>**: I want to start next year as well. But the first units will be – this is Jerome. The first units will be for our own usage.

**<A - Elon Reeve Musk>**: Yeah.

**<A - Jerome Guillen>**: 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.



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**<A - Elon Reeve Musk>**: Yeah. Sounds good. And then the Tesla pickup truck, we might be ready to unveil that this summer. It'll be something quite unique, unlike anything else.

**<A - Martin Viecha>**: Okay. Fantastic. So, operator, we can start taking questions from participants on the call.

**<Q - Ryan Brinkman>**: I've seen the letter, the amount that you've spent on lands for Gigafactory Shanghai and the classification to 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? Thanks.

**<A - Deepak Ahuja>**: 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, and that shows up as the 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 CapExs. The plan, as we have indicated in the letter, is still to get funding for majority of that capital spending from local China banks. And we expect very 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.

**<A - Elon Reeve Musk>**: Yeah. I mean, as a ballpark figure, probably something in the order of \$500mm in CapEx to get to the 3,000-vehicle rate in Shanghai, ballpark figure. And as Deepak was saying, hooking up a very competitive debt financing in China really extremely compelling interest rates and so we do not expect that to be a capital drain on the company.

**<A - Deepak Ahuja>**: Yeah. These are the biggest banks in the world. And for them \$500mm is not a large amount of money in the scheme of things.

**<A - Elon Reeve Musk>**: Sorry, something that's perhaps – if you're in the automotive industry you understand how significant this is, but maybe it's not as obvious to everyone. Tesla has the first wholly-owned manufacturing facility in China 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 and it farewells to everyone. I'd just say like an order of appreciation for the Chinese government in allowing us to do that. It's a very significant thing.

**<Q - Gene Charles Munster>**: Good afternoon. The question I have is related to Waymo and the autonomous driving opportunity. Morgan Stanley recently valued Waymo at \$175B. And my question is, what does 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 the timing of 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?

**<A - Elon Reeve Musk>**: The fundamental goodness of Tesla, sort of like the why of Tesla the relevance, what's the point of Tesla comes down to two things: acceleration of sustainable energy and autonomy. Acceleration of sustainable energy is absolutely fundamental because this is an existential risk for humanity. So, obviously, that is by far and away the most important thing, but also very important is autonomy. This has both potential to save millions of lives, tens of millions of serious, permanent injuries, and give people their time back so that they don't have to drive. If you're on the roads, you can spend time doing things that you enjoy instead of 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, something in the order of 300,000 vehicles on the roads with a 360-degree camera sensor suite, radar, ultrasonics, always connected, uploads, especially video clips with a customer submission when there's an intervention. So, effectively, we have a massive, massive training fleet. 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, certainly if you go 18 months from now, we'll probably have 1mm vehicles on the road. 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

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that.

**<Q - Colin Rusch>**: Can you talk a little about on the geographic dispersion for the guidance for 2019, where you're expecting the Model 3s to sell through as well as the other models?

**<A - Elon Reeve Musk>**: Well, I think we did, actually. Yeah, it's clear in our letter.

**<A - Deepak Ahuja>**: Correct. And 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 midsize premium sedans in North America, Europe and Asia, suggesting those markets could 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.

**<A - Elon Reeve Musk>**: Yeah, maybe on the order of 350,000 to 500,000 Model 3s, something like that this year.

**<Q - Colin Rusch>**: Okay. Thanks, guys. And then, just in terms of the cost reduction roadmap and rework post factory, can you talk a little 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?

**<A - Elon Reeve Musk>**: Jerome, do you want to answer that?

**<A - Jerome Guillen>**: This is Jerome. Our manufacturing keeps improving q-over-q, actually week-over-week. We take fewer hours, both here in Fremont or 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 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 here. So, we'll keep going that way. There's no end in sight. And we'll try to make sure that the car never breaks down.

**<A - Elon Reeve Musk>**: Yeah. I think there's like some confusion about electrification. Like I said, for a vast majority of Model 3s that come off the line, like, all that happens is, like, some slight adjustment of door gaps, panel gaps and that kind of thing. And that's all that's done. There's nothing more than that.

**<Q - Colin Langan>**: Just a follow-up on the comments around you said about 700,000 to 800,000 units 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 weakened of the mid-range at least, already in January. I don't know if that's true as well.

**<A - Elon Reeve Musk>**: Yeah, I mean, 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 timeframe. In the U.S., we also had a pull forward of demand from the tax credit, and so there's those factors. But I feel very confident about Model 3 demand. The customer happiness level with the car is incredible. I think probably the highest of any car in the world right now, I think. You can tell like basically nobody wants to sell their car.

**<A - Deepak Ahuja>**: Yeah.

**<Q - Colin Langan>**: The target price point is, I think, in the past you mentioned mid \$40,000. Is that where we're thinking, or is that the long-term range?

**<A - Elon Reeve Musk>**: Yeah. This is really just a guess. So, it's not like, I have some huge crystal ball or something. But at volume, I would expect, this is totally a guess. I want to be clear. Probably an average of \$42,000, probably, at that volume level. I'm not certain on that.

**<Q - Colin Langan>**: 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, as you're looking at different battery suppliers still. I mean, do you have a battery supplier? It seems kind of close to when production is supposed to start.

**<A - Elon Reeve Musk>**: Well, there's really three things. There's the cell, the module and the pack. We'll be making the module and the pack. So, it's really just production of cell supply. And you can essentially use any high-energy



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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 sufficient supply to hit the 3,000 units a week.

**<Q - Emmanuel Rosner>**: 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, maybe, H1 this year. And just to clarify, when you're sort of talking about the outlook for 2019 at 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 or the short-range Model 3 at some point during the year?

**<A - Elon Reeve Musk>**: Well, we call it the standard range, but it's maybe short by Tesla's standards, but it's long range by other manufacturer standards. So, yeah, we expect to introduce the standard-range Model 3 sometime probably in the middle of this year is a rough guess. And we're working hard to improve our costs of production, our overhead costs or fixed costs. Just costs in general. I think this past year, while it was 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. Yeah.

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

**<A - Elon Reeve Musk>**: Yes.

**<Q - Emmanuel Rosner>**: Okay. And I guess, my follow up would be on the demand side. So, you're talking about a 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 just basically four times Q4 run rate, which would imply sort of 50% for the full year, but not really a lot of growth vs. what you just accomplished. So, I guess, how do we think about the total demand for 2019, especially if you introduce the cheaper version?

**<A - Elon Reeve Musk>**: We need to bring the Shanghai factory online. I think that's the biggest variable for getting to 500,000 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 costs of labor here. And we've never been eligible for any of the EV tax credits. A lot of people criticize Tesla for being so dependent on incentives. In fact, for a company making EVs, we have the least access to incentives. It's pretty crazy. Because there's so many 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. That 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 10,000 rate and have the cars be affordable. It's important to appreciate, the demand for Model 3 is insanely high. The inhibitor is affordability. It's just that 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 the bank account. If the car can – if we made it more affordable, the demand is extraordinary.

**<Q - Pierre C. Ferragu>**: So, Deepak, I was wondering, so as you look at 2019, we are 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 ramp? How do you manage your pricing? How do you create cash? How do you manage your CapEx if things turn south in 2019? And then I'll have a follow-up on gross margin for Elon.

**<A - Deepak Ahuja>**: Yeah. 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 here 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.

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And if we do that, we believe that even in some of these scenarios of lower volumes and pricing, tight pricing, we do have a good chance and a good shot of being profitable and generate FCF. So that's the best way to manage the business, be frugal.

<Q - Pierre C. Ferragu>: Thanks.

<A - Elon Reeve Musk>: Yeah. I want to be a broken record about this. It's cost, cost, cost, cost. Because reducing our costs – by the way, while making nuanced improvements to Model 3, I want to emphasize it, like the price is getting better by slight degrees despite lower cost in hundreds of small ways that most people wouldn't notice explicitly but they would appreciate subconsciously. But 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.

<A - Deepak Ahuja>: The other aspect of this, Elon, which we've been doing extremely well, that is capital efficiency. We have dramatically cut back on...

<A - Elon Reeve Musk>: Yes.

<A - Deepak Ahuja>: ...capital expense. And we're 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's 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.

<A - Elon Reeve Musk>: 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.

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

<A - Elon Reeve Musk>: I mean, it seems good. Our relationship actually with Europe and China is how do we get the cars made and on order such that it reaches customers before end of quarter and we don't have a massive number of cars on the order. That's our biggest challenge. It's not demand. It's how do we get the cars there fast enough.

<Q - David Tamberrino>: So, like orders above the – I think I've seen like 20,000 order levels for Europe and single-digit thousands for China. It's better than that, Elon?

<A - Elon Reeve Musk>: Yeah, absolutely.

<Q - David Tamberrino>: Okay.

<A - Elon Reeve Musk>: I mean, we're not even really trying, I should point out. Like, it's – our factory is like right now only making cars for China and Europe. That's all it's doing 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 those ship as fast as possible to [indiscernible] (00:42:31), then get them to – or 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 also – yeah, we don't know 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 de facto sort of a truce on the tariff war. And demand gen is really not one of the things we're thinking about.

<Q - David Tamberrino>: Okay. Then just lastly, on this demand threat, customer deposits came in again over \$100mm. Is it possible to give us an update? I know you don't think it's really a relevant number, but I do want to know. 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 do you think there is based on what you see at

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that lower price points if, say, there's over a half of those people that are still waiting for that \$35K 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.

**<A - Elon Reeve Musk>**: So, do you want to say?

**<A - Deepak Ahuja>**: Yeah, and 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.

**<A - Elon Reeve Musk>**: Reservations is just like preorders. It's like – you have, like, some video game come out, it's like a preorder number. Then that's like stops being important once you start shipping the game or product. So, yeah.

As I said earlier, I think my guess is demand is somewhere in the order of – in a strong economy is in the order of 700,000 or 800,000 units a year from all three. And even in a recession, it's probably on the order of half a million.

**<Q - Daniel Ives>**: So my question is around Europe. Obviously, with deliveries coming onboard in Q1, maybe what surprised you in terms of – demand looked 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? Thanks.

**<A - Elon Reeve Musk>**: Well, like I said, we're thinking about demand almost zero right now. It's really getting the product there in time and not having a ton of cars on the order at the end of the quarter, and then for China to getting cars there before there's a potential rise in tariffs. That's really on top of mind, that cost reduction and then improving service in North America. Yeah.

**<Q - Daniel Ives>**: Yeah, and just maybe a quick follow up. Can you just talk about when we look at the Gigafactory buildout 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 vs. maybe some other automakers that will be trying to go in your tracks? Thanks.

**<A - Elon Reeve Musk>**: I think it'll be quite a significant advantage. I really feel that's 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 deal. And we're getting a lot of support from the Shanghai government, which we're very appreciative of, and the national government.

**<Q - Antonio M. Sacconaghi>**: You've talked repeatedly about the need to drive down costs, which in turn drives the 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 do 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 cost 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 I have a follow-up, please.

**<A - Jerome Guillen>**: It's both. It's both the vehicle and both the powertrain. Yeah. I just did my time half and half between the Gigafactory and here, and there is opportunities in both.

**<A - Deepak Ahuja>**: But I think the bigger point is that, yeah, there's cost reduction opportunities out, but the bigger point is it's not that our costs are higher than a gas-powered or an internal combustion engine.

**<A - Jeffrey B. Straubel>**: I think what Toni meant is with the battery pack, as in battery pack as well as the powertrain together are more expensive than an engine.

**<A - Deepak Ahuja>**: Yeah.

**<A - Elon Reeve Musk>**: That's true.

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**<Q - Antonio M. Sacconaghi>**: How big do you think that delta is today and when – do you think of it as being kind of \$10,000 or \$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?

**<A - Elon Reeve Musk>**: Well, the – I think it's more important to bear in mind is that 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, where the cost of gasoline is very expensive, and electricity is far cheaper. So that factors into the cost of ownership pretty significantly, and it's typically in 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 vs. a gasoline car. That said, in terms of the initial costs 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.

**<Q - Antonio M. Sacconaghi>**: Okay.

**<A - Elon Reeve Musk>**: Just off the top of my head.

**<Q - Antonio M. Sacconaghi>**: 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? 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 there'll be more standard editions and gross margins will end the year at 20%, are you willing to make that trade-off?

**<A - Elon Reeve Musk>**: My guess is it ends up being sort of above the, six of one, one half dozen of the other, where if there's a given amount of FCF, you sort of either decide to achieve that with a smaller production or a smaller volume of cars or at a higher margin or a larger volume of cars at a smaller margin. I think we'd urge towards the second. We would rather make more cars at a lower margin. But I think it's more or less a flat trade.

**<Q - Maynard Um>**: 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 cost and sustaining profitability?

**<A - Elon Reeve Musk>**: It's a highly proprietary number. We cannot give it out.

**<Q - Maynard Um>**: Okay.

**<A - Elon Reeve Musk>**: I'd like to tell you, but no.

**<Q - Maynard Um>**: Okay.

**<A - Elon Reeve Musk>**: We do think we have the best costs in the world. To best of my knowledge, our costs are better than anyone else right now, and are improving.

**<Q - Maynard Um>**: Okay. 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?

**<A - Elon Reeve Musk>**: I talked directly with Kazuhiro Tsuga about this, the Head of Panasonic. And he has assured me that this will have no impact on Tesla.

**<Q - Dan Galves>**: 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.?

**<A - Elon Reeve Musk>**: Well, we've been reluctant to introduce the leasing on Model 3 because of how – of its effects on GAAP financials. So it is worth noting that our demand to-date is with zero leasing. So obviously, leasing is



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a way to improve demand, but it makes our financials look worse. So we've like – we're not wanting to introduce that right away. I mean, we'll introduce it sometime later this year, probably. I'm not sure what the percentage of lease is for S and X right now.

**<A - Deepak Ahuja>**: It's around 20%, low-20s.

**<A - Elon Reeve Musk>**: Yeah.

**<A - Deepak Ahuja>**: And it stayed stable at that level for many, many quarters, which is – it feels like the natural demand, because if we don't do, sometimes it artificially bumped up.

**<A - Elon Reeve Musk>**: Yeah, exactly. Our leases are legit. And it usually expects a small business tax write-off, is important for leasing, so.

**<Q - Dan Galves>**: Okay. Thanks. And I have just like two quick housekeeping questions. One, is there a restructuring charge that you expect in Q1? How much is it? And is it included in your expectation of a small profit?

**<A - Deepak Ahuja>**: Yeah, it is included in that. It's difficult to say exactly what that is. At this point it's, I'd say roughly around \$40mm, but that number can vary slightly.

**<Q - Dan Galves>**: Okay. Thanks. And then just the last one is...

**<A - Deepak Ahuja>**: But it's – sorry, go ahead.

**<Q - Dan Galves>**: Yeah, 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?

**<A - Elon Reeve Musk>**: No, it's actually – we're just being 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. And 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...

**<A - Deepak Ahuja>**: Improve.

**<A - Elon Reeve Musk>**: Our costs will improve, I think actually quite a lot, because we've just been actually quite – the current system is quite boneheaded actually, just speaking self-referentially. So just being – just stopping doing the foolish things will vastly improve our service costs, vastly 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 who's great, by the way, is – 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, is literally what was happening. Super-nuts stuff. So it's going to get way better. And, yeah, way better. And...

**<Q - Benjamin Joseph Kallo>**: I have one question. It's got four parts to it. Happy New Year, Elon. So the first part is, so our Street numbers and consensus, we've got everything wrong for 6 years or 7 years since you went public, and they're about \$6 in earnings. Talk to us about that if you can?

Number two, Elon, could you talk to us about – you talked about – you cut some workforce at SpaceX event there at Tesla. I feel like 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, could we talk about maybe for the third thing for JB, no one's ever going to talk about stationary storage, but we've 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, the top of that \$6 this next year?



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**<A - Deepak Ahuja>**: I mean, we can't really, Ben, talk about consensus and what that means. I think 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.

**<A - Elon Reeve Musk>**: Yeah, JB, is there anything you want to say?

**<A - Jeffrey B. Straubel>**: 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 we can't say much more in detail.

**<A - Elon Reeve Musk>**: I mean, our internal projections for stationary storage are closer to 3 gigawatt hours. But some of it's kind of lumpy and may or 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 the 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 a long time.

**<A - Jeffrey B. Straubel>**: We continue to set production records basically every month. So it's growing.

**<A - Deepak Ahuja>**: And the profitability of the storage business and the gross margin continue to improve as we keep ramping up production and scale.

**<A - Elon Reeve Musk>**: It's going to be a gigantic business down the road.

**<A - Martin Viecha>**: And the last question was about the economy, global economy.

**<A - Elon Reeve Musk>**: 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 to be slightly profitable even if there is a significant recession, and then be all the stronger for it when the recession ends. But we have to be relentless about costs in order to make affordable cars and not go bankrupt. That's what our head count reduction is about. Yeah. We have to be super hardcore about it. It's the only way to make affordable cars.

On the SpaceX side, the cost reduction was for a different reason unrelated to – SpaceX has two absolutely insane projects that would not only bankrupt the company. There's Starship and Starlink. And so, SpaceX has to be incredibly Spartan with expenditures until those programs reach fruition.

## Elon Reeve Musk

### *Management Changes*

#### *Executive Retirement*

- I'll let you make the announcement, but Deepak is going to be retiring
- And Deepak I think it's now been – he first started about 11 years ago
- Yeah, almost 11 years
- Thank you for your tremendous contribution to Tesla
  - And he's announcing retirement
- 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 Advisor to Tesla for probably years to come, hopefully

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### ***New Appointment***

- 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 nine years
- Yeah, so, Zach, management and technology at Wharton undergrad, and then worked at Tesla and spent couple of years at Harvard Business School, which I actually don't think was necessary, by the way
- So Zach's incredibly talented and has made huge contribution to Tesla over the years
  - And obviously, a very well-known colleague 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

## **Deepak Ahuja**

### ***CFO Retirement***

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 still this was a good time

- It's a new chapter, a new year

Tesla has had two 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**

### ***New CFO Introduction***

So my name is Zach Kirkhorn

Just a brief background on myself

So I joined Tesla just under 9 years ago

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

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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 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

- I'm very much looking forward to discussing our progress on future earnings calls

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