Ford Motor Company

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Emmanuel Rosner: Good morning, everybody. Thank you very much again for joining us for the DB AutoTech conference here in San Francisco. My name is Emmanuel Rosner. I'm the U.S. autos analyst at Deutsche Bank, and we're extremely pleased to host Ford to kick off today's sessions here in San Francisco.

Representing Ford is Marion Harris. He was recently appointed CEO of Ford Motor Credit but was, until very recently, VP of the Mobility Business Group. He was responsible for the Connected Services business of Ford, including within Commercial Solutions, FordPass and all other things related to connected vehicles.

Marion joined Ford in 1999. He has held numerous roles in treasury and finance, and we're very, very pleased to welcome him. Together with Marion, we have Jeff Zelenick, who's Director of Investor Relations.

So as I mentioned, I think we're--Marion, you will run through a few slides, and then we'll have some questions for you. Thanks for being here.

Marion Harris: Great. Thank you, Emmanuel, and thank you to everyone here. Good morning. Hope you're doing well. So let's see. Oh, there we go right there. We'll start out. I just have a few slides we'll go through quickly, and we'll sit down and we'll chat with Emmanuel in a bit.

So this is our Creating Tomorrow Together framework. This is not a marketing plan or a product plan. This is--it's actually our plan to revolutionize Ford Motor Company. You can see that connected services are a key pillar of our plan for value creation.

So as we previously announced, 100% of our new vehicles in the U.S. are going to be shipped with connectivity this year, so essentially right now. And our global target is to have 90% shipped with connectivity by the end of 2020 globally. This is--we're doing this by rolling out the hardware across our 2020 model year, and we're very excited to make this investment.

So our automotive business continues to lead in several key sectors, including commercial vehicles and SUVs, but our connectivity investment is going to take this automotive business to the next level. By adding a service layer on top of the vehicle, we're going to provide new and more touchpoints for our customers than ever before, and it's going to transform our business into an automotive and mobility services business. That's going to give us many more touchpoints than what we've had in the past.

So historically, OEMs have spent the great majority of their time on, their customer engagement time, on the "shop by" phase of the customer journey. Once the vehicle was purchased, the OEM only had sporadic touchpoints--for instance, at service intervals, financing or warranty type work.

Connectivity allows us to curate daily experiences for these customers while having many touchpoints across the life of their ownership. This creates value for our customers and results in higher customer engagement and loyalty. We want our customers in our ecosystem, where we can drive engagement and offer services across the ownership of the vehicle. It also creates additional revenue opportunities for us throughout the life of the ownership of the vehicle.

So consumers today are increasingly expecting connectivity and services in their vehicles. And like smartphones, they expect these services to improve over time. Connectivity allows us to do that with over-the-air updates. And connectivity--excuse me, customers are also accustomed to OTA, as it's used in many of their devices today. They're used to bug fixes and they're used to device upgrades. And we know that a good digital ecosystem that continually improves drives product stickiness and loyalty. That is our objective at Ford Motor Company with connectivity. We want to be a part of our customers' digital lives so that they're loyal to Ford and stay with our brands.

Okay, so here are the three primary areas that connectivity is driving within Ford Motor Company. First is fitness, which is internal to Ford. Second is the customer experience, which makes Ford a part of our customers' digital lives and drives loyalty. And last is incremental revenue that comes from services and monetization. So I'm going to peel these back one by one.

On fitness, we're going to be using vehicle data across the business to drive efficiencies in our business. Some examples of this include improving vehicle quality with early detection and over-the-air updates, engineering efficiencies using part-level data, manufacturing and logistics efficiencies through better tracking and OTA, and better vehicle feature design using data from the vehicle.

I could give you tons and tons of examples across the business through marketing and sales, Ford Credit, and various areas. Connectivity is a game-changer for our business. It allows us to update features while fixing bugs, and customers don't need to return to dealerships, which reduces costs and drives customer satisfaction. And when we do have recalls, we can be much more precise in targeting than ever before. We'll have early warnings, we can pinpoint specific vehicles, we'll reduce the need for a blanket approach in warranty.

Now for customer experience. Our goal is to delight our customers with seamless connected experiences inside and outside of the vehicle. We want ownership to be

effortless, and we'll offer complimentary features that surprise and delight while driving engagement. This is a different strategy than many of our competitors. We're not charging to lock or unlock the car after you've paid $40,000 for the car.

You may be aware of FordPass or Lincoln Way, which are apps that connect to our vehicles. These apps are continually improving, sometimes as rapidly as weekly, through rapid OTA releases, and they're delivering on our goals. We also can tailor these apps for specific purposes or regions, and you can see three examples of this here. The first screenshot is a sneak peek at our Version 3 of FordPass, which we'll launch sometime next year. And this app--this version--will bring the app and in-vehicle experience much closer together. The second is FordPass Pro, which launched in Europe earlier this year. We'll be bringing it to the U.S. It allows small businesses to manage their vehicles in one app, all of their vehicles in one app.

And the third shot is from Lincoln Way in China, and this is a really great example of surprising and delighting our customers. So our luxury customers, in addition to simply locking and unlocking or starting or stopping the car, in China we've delighted them with a real surprise feature, where they can precondition the cabin before getting into the vehicle. Many of you, I'm sure, who have been to China know that it can be quite polluted there. You'll see here that FordPass allows you to precondition the environment. You'll see that the particulate pollution inside the cabin is at 20, where outside it's at 283. So you can wait a little bit before getting into the vehicle.

We also have other areas for incremental revenue across subscription for value-added services, which we're going to be developing over time. We're also developing other services such as usage-based insurance, which will help our customers drive more safely and save money on insurance, and as well through vehicle APIs. Some of you may have seen we announced in-car delivery with Amazon earlier this year as well as a couple of other similar type arrangements, and this is going to allow us to do data monetization.

And then last, on commercial vehicle services, we are looking for incremental revenue here as well. We own work. Ford owns work, but we intend to take that to the next level. Our aspiration here is 100% customer uptime. We're going to help our customers get one more job, one more hour of the day, and so on.

Ford Commercial Solutions is our business to deliver on that aspiration. And we're building out our capabilities very rapidly, with a real emphasis on small and medium businesses. We'll offer free telematics and fleet management tools, but we're going to go further than that. We're developing software solutions that will help integrate their vehicles into their businesses so that customers can own every aspect of their work.

And with that, I'll finish up.

Emmanuel Rosner: Awesome. Great. Thank you very much. Yes. There are six chairs to choose from, so as you get cozy. Thank you so much for the presentation, and really appreciate you imparting your last pearls of wisdom before moving on to heading Ford Credit.

So on this topic of connectivity, I would like to address the user experience. So how does it materialize for people buying a Ford car or commercial businesses getting Ford cars?

And then the business model from Ford. And us as investors, how should we think about it? What is--how will it materialize in terms of return on investments?

So I guess first, you were talking about heading towards this 100% connectivity this year already in the U.S. and then 90% globally. Does that include both retail and commercial fleet buyers? Will people have a choice? Does it come standard? How does it happen in practice?

Marion Harris: It does. It is 100% across the board, retail and fleet.

Emmanuel Rosner: Do you have to buy it? Do you have to request it? Or do cars come pre-equipped with the hardware and--?

Marion Harris: It comes pre-equipped with the hardware. It's part of the vehicle invoice. It's not really an option to delete. You can choose not to activate the modem or share data, but the technology's there.

Emmanuel Rosner: Okay. And will every type of customer receive the same level of connectivity? Or how does it work there?

Marion Harris: Yes, it's the same modem. It's the same technology in the vehicle. So that technology is there. The level of service may be different and how much you choose to use.

I'll start with the retail customer. There will be some base level of connectivity that'll be included complimentary for our customers. And I talked about some of the--these are the elements around command and control and some of the dealer scheduling and so forth around basic connectivity. We do want you to be engaged in the vehicle. Then we'll be adding--we don't have anything to announce today--but we will be adding services over time that will be subscription-type services. But those will be value-added services that the consumer can choose to take.

Now on the fleet side, the emit rate from the modem is significantly higher. And so there's a much higher cost of delivering fleet telematics than there would be for a commercial--or, excuse me, a retail customer. And then the amount of data that a fleet owner chooses to use will result in a different monthly charge. And that can vary widely, from a simple business that just wants to know where their vehicle is without a lot of real-time data to, for example, a police department that needs to know where their vehicle is at every second on the road.

Emmanuel Rosner: Okay. And so talk to us about FordPass. Is that the consumer offering of (inaudible)?

Marion Harris: It is a consumer offering.

Emmanuel Rosner: Okay.

Marion Harris: And it's available, really, to anyone that has a Ford vehicle.

Emmanuel Rosner: Okay. Now if you're a customer of Ford Commercial Solutions, how does it provide value in practice? Do you partner upstream in terms of seeing what data they need? How do you incorporate yourself in their business?

Marion Harris: For our fleet customers, it's all about total cost of ownership. And I'm going to take that beyond the traditional definition of total cost of ownership. You think about fuel consumption and repairs, costs and so on. But I'm going to take it to the next level and say about preventive maintenance, being able to detect when something's going to go wrong before it actually goes wrong so you don't have downtime. When a business has a vehicle that's out of service, they're losing revenue. So that really gets into the total cost of ownership.

So with fleet telematics, we're able to provide real-time data to the owner about all kinds of aspects of the vehicle--everything from geolocation to vehicle health as well as other really important features around driver behavior. So we can do in-cab coaching for our drivers--or we will be able to do in-cab coaching, eventually--that will allow companies to avoid accidents, again back to the total cost of ownership, lower cost of insurance and so on. Make sense?

Emmanuel Rosner: Yes, certainly. Can you compare this with what's currently available? Is it all--I assume you're not turning on the On switch on January 1. So where are you now and what still needs to happen to hit those targets?

Marion Harris: A lot of these services are provided by fleet telematics companies. But the differentiator will be that the data coming from the vehicle will be a lot richer than what can be provided through what's called an e-PID, a plug-in device. So that allows us to go a lot deeper for vehicle diagnostics; it allows us to do a lot more things than what a traditional telematics company can do. And that's the value-add that an OEM would bring versus a telematics company--knowing whether or not the seatbelt is engaged, all kinds of things like that, that you wouldn't be able to get off of a plug-in device.

Emmanuel Rosner: Okay. And I guess a big part also of the story by being connected is the ability for over-the-air updates.

Marion Harris: Yes.

Emmanuel Rosner: So I think as part of the recent Ford Mach-E introduction, I think there was clear communication that this will be--this will have that feature. What is the plan for the rest of the fleet? Is this something that will happen in pretty short order? Any official targets on this?

Marion Harris: We don't have official targets. I would say that--well, let me start by saying we have some limited over-the-air functionality today, but it's really limited within some of our vehicles around modem or the infotainment system. The Mach-E will allow a much broader set of OTA capability. And as we launch new vehicles with significant freshenings, we would expect to do that beginning in 2020.

Emmanuel Rosner: And so what parts besides for the infotainment would benefit from over-the-air updates?

Marion Harris: You start moving into much more of the vehicle, around everything from window controls, seat controls, all those kinds of things. And over time as the vehicles become more fully networked, it'll allow you to control almost every aspect of the vehicle.

Emmanuel Rosner: Okay. And then what are your plans for the infotainment system in Ford vehicles? How does connectivity support these?

Marion Harris: Well, we've announced the launch of SYNC 4 for next year, which is a significant improvement over SYNC 3. It has about twice the amount of compute capability of SYNC 3. It supports high definition and larger screens. All of that is updatable via connectivity. And it'll also allow for all kinds of updates around things like digital assistant and so forth. And we'll have a much more conversational digital assistant in SYNC 4, but that whole module is able to be updated via over-the-air updates.

Emmanuel Rosner: Okay. So I guess, then, turning to the business model, I think Ford is now spending maybe $1 billion a year on connectivity, vehicle connectivity. Correct me if I'm wrong. What is the path to monetization and return on the investment?

Marion Harris: Well, I showed those three areas that we're really focused on: fitness, customer experience, and additional revenue. And I would also just note that revenue happened to be number three. There are huge opportunities for the company around internal fitness, so I'll start there. That's a big, big opportunity for us in terms of understanding the vehicle--where we're having issues; reducing warranty costs, and not just warranty costs but improving vehicle quality, which lowers total cost; engineering efficiencies; the predictive maintenance; OTA. That's a big cost save going forward versus what we have without connectivity. So that's one.

Second, and we're not giving any numbers on that, but I'll tell you it's a big number. Second is around consumer experience. And I don't want to dismiss this at all. Driving loyalty is really valuable. And when you consider the gross margin that we would make on a vehicle or even the service part of that, it's a significant amount, and it's significantly more than you would make off of a connectivity contract per se. And so it's not as--we're really focused on that because if you can keep a customer within the ecosystem, not provide as much variable marketing and make them addicted to the brand, that is worth a whole bunch more than the $20 a month that you could get for selling a connectivity package.

So for us, connectivity is about a way--it's about getting customers engaged in the ecosystem and surprising and delighting them with the seamless connected experiences that just make you addicted to the Ford brand.

Emmanuel Rosner: And on the first bucket, so improving quality, like negating the need for as many recalls, when do you think with this rollout timeline? When do you think you would see these impact on numbers? Obviously, some of the most recent Ford news was around fairly high expected warranty charges in the fourth quarter. And so you just now rolling this out; this is going to be on 100% of cars in the U.S. What would you think is an appropriate timeline to say, "Okay, well, now we're starting, this is getting helped or impacted by benefiting from this?"

Marion Harris: Yes, it'll take some time because our first vehicles with significant OTA won't launch until next year. So--and if you think about fixing issues on that, really, it starts rolling into 2021 and beyond. And as our vehicle parts start turning over with heavier connectivity, it's going to take years for this to happen, but it's a fundamental change in the business.

Emmanuel Rosner: Okay. Now you spoke about the value creation. So you're enhancing the core business of selling and servicing vehicles. What about the new revenue streams? I think you were talking in a second or third stage about these connected services. Anything you can give us as investors on what to expect there?

Marion Harris: Yes. The commercial--I talked about Ford Commercial Solutions. That's a--it's a really important business for us. Commercial vehicles are a tremendous business for us and we have a dominant position there. And building out these services will generate revenue and margin for us in a significant way. Around fleet telematics and the software that we talked about for helping small and medium businesses, those are value-added services for these companies that help them run their businesses more efficiently. It's not a nice-to-have in a vehicle like, "Oh, I can pay $20 a month to get the full feature that I don't need." This is going to help businesses run their businesses more efficiently. And so we expect it to grow quite substantially. And we're not rolling it out just in the U.S. It's in the U.S. and Europe, and we'll continue to look at the applicability around the world.

Emmanuel Rosner: Any projections around the streams, new revenue streams from connected services?

Marion Harris: We're not going to give a specific projection.

Emmanuel Rosner: Okay. And by the way, the $1 billion number is on the investment? Was that confirmed? Is that about $1 billion a year in terms of budget?

Marion Harris: I'm not going to confirm the number.

Emmanuel Rosner: Okay, all right. I'll keep trying. All right. So now, just talking about how you actually get there, how you develop this, it seems like developing these connected vehicles requires skills that are not really traditional for automakers and where you're basically competing for talent with other types of non-autos companies. So how are you getting this talent and the partners necessary to make it happen?

Marion Harris: It's a great question. We've been in business more than 110 years, and it's been generally the same business: designing, manufacturing, selling, and financing vehicles. And now we have a whole different layer that we haven't had in the past. As we start thinking about this, we've brought in over 3,000 people with different sets of talent than we've ever had in the past, around high-tech employees with everything from programming to connectivity, data analysis and so on.

We have an Innovation Center here in Palo Alto. I actually spend a lot of time there. And we're hiring these resources across the world. We have big concentrations in Palo Alto, Dearborn, London, and Shanghai as well as Chennai, India. And I'll tell you, as an auto guy, it's really cool to see this group of people working together, and it's bringing a different culture and mindset into Ford Motor Company. We're moving a lot faster than I've ever seen us move before, and we're delivering some really, really cool things.

This talent that we've brought in has really fit into the Ford ecosystem well and is driving us and pushing us to deliver, and you can see that with the recent introduction of the Mach-E. That is really a very visible example of the culture change within Ford that's coming from the talent that we're bringing in from the outside.

Emmanuel Rosner: And any secrets for it, like how do you draw the talent?

Marion Harris: Well, you would think on the surface that joining a stodgy old manufacturing company wouldn't be so cool, but I think people realize the transformation that's going to happen in this business. They see it. You guys talked about it earlier onstage, with the attraction of microprocessors in the vehicle and the opportunity to change the experience for people, not only today but heading into the world of autonomy. And so this is the next great revolution. And we've had no issue attracting really strong talent into the business because they see how exciting the transformation is in the auto business. And it's not just in one particular location; it's a worldwide transformation.

Emmanuel Rosner: Okay. And then by the way, I agree on the Mach-E. It seems like it was precisely 2 years between just putting together that Team Edison to actually showing and demonstrating the car, another less than a year to actually produce it. So it's pretty--probably a faster timeline than I would have expected out of any automaker.

Now I'm curious about the connection with--the tie of connected services with autonomous vehicles. Obviously, it's a pretty big focus of investors but also of the AutoTech conference today. We have a decent amount of presentation on this. So how do the connected services you've been working on, how does that support the autonomous vehicle deployment plan for Ford? And maybe can you just remind us what are the autonomous vehicle deployment plans for Ford?

Marion Harris: Okay, all right. Well, let me start by saying we are--on the autonomous vehicle plan--we are continuing to work towards a 2021 launch of an autonomous service that we're going to build out. And as soon as we feel comfortable, we will remove the safety driver and begin commercialization of that business. So that's still the plan. How does connectivity fit into that? It is critically important. Imagine being in a non-connected autonomous vehicle. It just, by definition, can't happen.

But let me give you two aspects of it. There's one that the customer won't see and one that the customer will see. So the "won't see" part will be around the fleet management services of autonomy. So all the things that I just talked about around Ford Commercial Solutions and knowing the vehicle health, scheduling service, managing the vehicle to a particular location to get charges or different types of service, that's all behind the scenes and requires connectivity.

It's--you also--I'd also say that prognostics is a really important part of that. And I'm talking about vehicle prognostics, because you want to know when something is going to fail in the vehicle before it actually fails. The last thing you want to do is strand a rider in an autonomous vehicle someplace on the road because then, when they have no capability, they move the vehicle out of the way. So we want to be able to detect those kinds of issues, make sure that they get serviced, get them back into service, and all of that requires connectivity. That's a really important part of running an autonomous vehicle business, is the fleet management behind the scenes--very important.

The second piece will be the customer-facing piece inside the vehicle, the customer experience, how they approach the vehicle, what that--some of the stuff that you can do today, say, with an Uber. But once you get in the vehicle, what's the content that you're

going to deliver? How is it going to be delivered, knowing that, for example, that this is going to be about a 22-minute ride? How can we deliver content that you can absorb, that you want to absorb in that time period? And so having that kind of intelligence and curating those types of experiences, that's all about connectivity.

So let me walk--so that's in the far. So let me walk from the now to the far. So now, connectivity is--for us, it's about Ford owners and their vehicles. It's about getting them connected, creating engaging experiences, creating loyalty, driving service and maintenance through the Ford dealer network. That's important.

Over time, in the near, it's going to be about Ford owners and any Ford vehicle. So porting your profile so that when you get into a Ford vehicle, it knows your seat settings and automatically adjusts for that, that it knows the radio stations that you like to listen to and content. And then all of your preferences are in the vehicle so that you, when go from one Ford to another, it's a seamless, connected experience. And then over time, back out to the far, is when you engage with a Ford mobility service, which you're able to walk from one type of service into another type of service and have that seamless portability of your profile and set of experiences that you would expect. Back into the autonomous vehicle, knowing what you like to watch, knowing what you like to do, and delivering that at the right time.

Emmanuel Rosner: So in practice here, the connectivity team, is it working closely with Ford and all those projects on the autonomous side?

Marion Harris: Yes, it is. In fact, the team that works on that is based out here in Palo Alto, that's developing the curated experiences for autonomy, and they work closely with the AV team in Dearborn.

Emmanuel Rosner: Okay. And then same question with the Team Edison that developed the Mach-E. Obviously, there was a whole new level of connectivity that was introduced to people when they introduced the car. Can you talk maybe a little bit about what was the involvement on the connected side?

Marion Harris: Yes, it's a great question. I'm sure many of you probably know Ted Cannis, who led the Mach-E team, because he was Investor Relations at Ford. Ted and I have known each other for a long, long time, and I tell you, we talked regularly and moved at a very fast pace. His team pushed us hard to deliver on different aspects of connectivity.

And it's about the customer experience. We really listened very carefully to the voice of, and they brought in many people from the outside. We listened very carefully. We had to work in ways that we've never had to work--we've never worked like before, excuse me--at Ford to move as quickly as we possibly could to deliver this. So it was a very collaborative experience, working with Team Edison, and I am very proud of what we've collectively delivered. I'm particularly proud of the Team Edison team for what they've delivered. It's really impressive.

Emmanuel Rosner: Right. And I guess Ford has some initiatives on the smart cities as well, which my guess is enabled by connected services. There's also a big focus within that on the vehicle two--V2X, vehicle-to-infrastructure, vehicle-to-vehicle. Can you maybe just talk a little bit about these initiatives? What is the plan there?

Marion Harris: We believe very strongly in this. And in fact, we are committed to delivering technology beginning in 2022 in the U.S., in all of our vehicles in the U.S.--for cellular vehicle-to-everything infrastructure, excuse me, or C-V2X. And we believe strongly that this is going to help reduce congestion, it's going to improve safety in our cities, and it's a really important and big initiative within Ford. It's also one that we--I say this, but we also require a technology-neutral regulatory environment to do that. But importantly, this is such a big investment, and it really requires everybody to be all in. So we are inviting everybody--all the other automakers, governments, other equipment makers and so forth--to join the effort to do this, because we believe that this is going to reduce congestion and improve safety in our cities.

Emmanuel Rosner: Okay. I guess that's a great first part. I wanted to open it to the audience as well if there's any questions. We haven't focused as much on the hardware part, for example, so if there's any questions in the audience, happy to take them now. Otherwise, I definitely have quite a few more.

Unidentified Participant: Thank you. When we compare your connectivity product to that of other automakers, a lot of the things that you just spoke about--predictive maintenance, being able to open the doors--these are things that BMW is offering with its ConnectedDrive system for more than a decade already. How do you feel how competitive your product is versus that of other carmakers?

Marion Harris: Well, you mentioned a luxury brand, and we're talking--Ford is more of a mainland brand. So there is a big difference there. You would expect that in a higher-end luxury brand. I feel like the amount of services that we're delivering today and what we have in our pipeline to deliver will be more than fully competitive. I think it's--and there are some other things that I think have been done within the industry that we don't necessarily believe in. For example, BMW was charging for CarPlay. You saw recently that they repealed that, and that wasn't something that we ever contemplated. And again, for us, it was really focusing on the customer experience in the vehicle and outside the vehicle. So I think if we keep that customer right front and center of us, then we will be competitive.

Unidentified Participant: On the connectivity side of things, do you think it's going to be fleet-specific, where each company will have its car-to-car V2X standard of its own, that they can be big enough for that to work? Do you think it's going to be auto industry-specific with specific IEEE standards? Or do you think 5G can solve all those connectivity issues between the cars and other items?

Marion Harris: I'm probably not the right person to answer that. That needs somebody a little more technical to get into that. But I suspect that at least in the beginning, it's going to be more OEM-focused, just for standardization. I think if we allow for too many different configurations, we won't get the benefits of scale that we're looking for as an industry. And over time, that can potentially change, but my guess is we'll try to set some standards within the industry so that we can all rally around that and deliver what we need to deliver.

Unidentified Participant: Please, one more from me. So one of the things you mentioned were how it helps with engineering efficiency in the design process and in general. Can you just elaborate a little

bit more on this? Well, what exactly is the sort of data that you're going to be collecting, and how do you measure this efficiency?

Marion Harris: I'll give you two different examples. One, let's start with how people are using their vehicles. And I'm going to make something up here. Let's say there are two or three different ways to change the air conditioning settings, whether it's through HMI or a button or through the app or something like that. And by gathering the data on how people are actually using it, what button they're using and the preferences based on location and so forth will help us to better design and engineer. And if there are features that aren't being used that we've engineered into the vehicle, then you could take those out. Or if we find that something is driving more uses than we thought, we can make it more prominent. So that's an example of getting part-level data from the vehicle to improve the design and engineering, durability, and so forth. Maybe we find that a particular button is failing faster than we thought because it was overused. That's an example where we might want to put more engineering into a particular button because people are using it more than we thought.

Now there's another example of--that's human interface of maybe something that is a not-so-human interface, where something is on the road and we're trying to understand a particular issue with a component of the engine. And maybe we're seeing some data from a particular area in Arizona that is--this is not real; I'm making this up--that there's something happening with an alternator belt or something like that. By getting specific data from vehicles on the road and isolating that issue, it'll help us determine what the root cause of the issue is and help us engineer a solution for the next vehicle as well as maybe potentially providing an over-the-air update to solve that on the spot. So does that help?

Emmanuel Rosner: Yes. No, absolutely. It's interesting. I think Jim Hackett was on the record recently, saying that he's planning to reduce the cost of vehicles by taking out all the features that are not being used. I think you used the example of a CD player. And we were wondering in the DB Global auto scheme, are there still CD players in cars? So I think the numbers are there. It's probably at least half of the cars that still have them. So I don't know how much you save with this, but it definitely would be some savings.

Okay. So maybe to wrap it up, so connectivity seems to be this new priority under Jim Farley. Us, as investors, what should we be monitoring over the next few weeks, over the next few quarters? Is it the rollout of vehicles? Is it something that we'll be able to see in the numbers, that we're going to hear more around the next levels of connectivity? What should we be looking for?

Marion Harris: I don't think there's one particular key metric that's going to inform you. I think it's going to be how fast are we delivering on the connected services around FordPass. Are we updating the apps and so forth routinely? Are we getting good reviews around that? Are we making progress in the Ford Commercial Solutions business? Are we growing that business like we said we would grow it? And then in particular, are we good around the launch of Mach-E and so on? And are we able to not only launch a vehicle but provide improved services over time through OTA? So OTA is about bug fixes and it's about new features, and we need to be able to do both.

Emmanuel Rosner: Great. Well, please join me in thanking Marion and the entire Ford team for joining us this morning. Thank you very much.

Marion Harris: Great. Thank you.