

KENSHIKI FORUM #4 - DEEP DIVES

LEXUS SCRIPT - FINAL

**EMBARGO UNTIL DECEMBER 5th
AT 11:00am CET**

<PASCAL>

Good afternoon everyone, and welcome to the Lexus Deep Dive!

During the next 20 minutes, we would like to take you on a journey into the Lexus world, with two main objectives.

Firstly, to explain the very specific role that Lexus is playing in our company's journey towards electrification and carbon neutrality.

To support me in explaining this, I have the pleasure of introducing from Lexus International:

Mr Takashi Watanabe, the Chief Engineer of Lexus Electrified.

Lexus Electrified is the name of our roadmap for electrification, and Mr Watanabe oversees all future product and technology developments. Watanabe-san, thank you for joining us here today.

Secondly, I would like to give you an update on our business in Europe ... and explain why we are so confident about our future growth.

Lexus has already a specific place in our company when it comes to electrification: for many years, most of our sales in Europe have been hybrid – over 90%, to be more specific.

Since 2005 and our first hybrid RX, we have developed a broad range of self-charging hybrid models ... and our customers have widely embraced the technology. They know that our hybrid leadership translates into superior quality and durability, outstanding energy efficiency, and a refined driving experience.

Now we see that customers' expectations are evolving, and this is visible in the growing importance of plug-in hybrids, especially in the fleet market. And in several European countries, we also see that electric sales are taking off, mainly in the premium segments.

Clearly, electrified powertrains will become more important in the coming years... with battery-electric vehicles ultimately taking the lead.

Challenges remain, however, in terms of charging infrastructure and electricity supply for example. And customers will need to change their habits, which doesn't happen overnight.

So, for the years to come, we will continue to develop our electrified technologies, delivering hybrid, plug-in hybrid, and full electric solutions that meet the diverse needs and expectations of our customers across Europe.

All future development will be based on the same principle: we want to leverage electrification to reinvent the driving experience. We want our vehicles to be truly fun to drive ... with an instant and precise response to driver inputs and very predictable vehicle behaviour.

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This is - what we call - the Lexus Driving Signature, and it's summarised in our 3Cs: Comfort, Control and Confidence.

The initial inspiration for this comes from our leadership: both Akio Toyoda and Koji Sato, the president of Lexus International, are passionate about cars and driving.

The most recent proof of this is Shimoyama ... the new Lexus global headquarters that are currently under construction in Japan. Shimoyama will have several test tracks that recreate the most extreme road conditions ... even including sections of the world-famous Nürburgring!

All the Lexus development disciplines, from design and R&D to production engineering and sales planning, will ALL be grouped at Shimoyama.

This will facilitate car-centric and agile development. Designers and engineers will work together, both on the track ... and at the drawing table ... delivering cars that will have driving performance at their core.

Our vision is that electrification is an opportunity to elevate the driving experience to the next level.

We already took significant steps with our first plug-in electric models, the NX and the RX ... which bring unique value to the market thanks to their integrated hybrid architecture.

Our plug ins strike an optimal balance between range and performance, thanks to our smart battery packaging strategy. There's more than enough range to enable our customers to enjoy BEV-like performance in real-world daily usage ... At the same time, we also avoid the excessive weight, cost and volume associated with an even larger battery.

But there is more: when the battery is depleted, our plug-ins switch to their highly efficient self-charging hybrid system ... bringing substantial benefits in terms of fuel consumption compared with our competitors.

We are happy to see that the media have already noticed this - with for example NX being voted Plug-in hybrid of the year in the UK.

Our next BEV model, the RZ, is another highlight, featuring critical innovations to support dynamics.

Two of them are worth mentioning: DIRECT4, our advanced drive force control technology, and One Motion Grip, our pioneering steer-by-wire system.

These are just the first steps ... Today, however, we want to look a little further into the future with you.

The Electrified Sport concept embodies our vision for next generation electric performance vehicles ... delivering supreme driving pleasure.

But before discussing technologies in more detail, let's take a few moments to admire this beauty!

To create a halo sports car worthy of the Lexus badge, our designers took their inspiration from aerobatics ... with planes executing bold manoeuvres in the sky.

This led to a new interpretation of our L-finesse design language ... which is all about contrasts. Here you can see how the design shows muscle and grace, dynamism and elegance.

Take a closer look and observe the attention to detail. Our designers have created a genuine work of art: taken separately, - every element of this car can be displayed and viewed as an artwork.

All right... Now it's time to get a little bit more technical. For that, let me first handover to Bart Eelen, Head of Lexus product and marketing at Lexus Europe.

<BART>

Thank you, Pascal, and good afternoon!

With Lexus Electrified, we want to encourage people to replace their petrol or diesel models with electrified options. As Pascal explained, each powertrain has an important role to play in coming years: hybrids, plug-in hybrids and electric vehicles ... to meet diverse driving environments, but also customer needs around the world.

In the past 17 years, we have sold more than 2.3 million Lexus electrified vehicles, and this has given us a unique experience and track record for all basic elements of electrification: motors, PCUs, and batteries.

Batteries are of course a core element. Our hybrid and BEV batteries are industry leaders in many ways: they are synonymous with safety, quality, durability, and performance.

What makes our batteries stand out, however, is their superior failure detection systems. There are multiple layers of monitoring of cells, modules and the entire pack, for example, to detect any abnormal signs.

In case of leakage, our low-conductive coolant prevents fire.

This offers our customers the ultimate in safety and peace of mind.

We can also effectively prevent degraded substances on the anode, which have a significant impact on battery life.

As such, we can confidently set as development target that the battery of our full electric RZ will retain at least 90% of its capacity after 10 years of usage. This is another tangible benefit for all our customers.

But we have also focused on performance. Our latest innovation in battery technology has just been launched on the new RX hybrid: a bipolar nickel metal hydride battery.

The bipolar technology reduces resistance, so the battery can charge and discharge faster. The simple bi-polar structure, which has an anode and cathode on both sides of the collector, allows a more compact design of the battery.

This new structure delivers 70% more output from each battery cell ... meaning stronger acceleration with no loss of cabin or load space.

Besides this significant improvement of nickel-metal hydride battery technology, we are also studying next-generation lithium-ion batteries and advancing the development of all-solid-state batteries.

DIRECT4 is another Lexus exclusive electrified technology ... perhaps the most important one for achieving our electrified vision.

This drive force control instantly balances the torque between the front and the rear axle, delivering optimal traction in any road conditions.

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This has numerous advantages: linear acceleration, superior cornering performance, but also enhanced vehicle posture.

Another advantage of DIRECT4 is that it can be implemented in hybrid and in full electric vehicles, making it a very versatile technology to enhance the driving dynamics of any electrified vehicle.

We have already introduced DIRECT4 on our full-electric RZ and the RX 500h, our first-ever performance turbo hybrid. And looking ahead, we will obviously implement DIRECT4 on the Electrified Sport and other models.

We will continue to develop this core technology ... not just to please sporty drivers ... but also to enhance comfort.

Because DIRECT4 also brings significant benefits in terms of driving comfort for rear passengers. In fact, we are also developing a chauffeur mode, for customers whose first priority is smoothness and well-being.

The Electrified Sport will also be equipped with One Motion Grip, our exclusive Steer-by-Wire system, which we are now introducing on RZ. This technology is coming on all future Lexus BEV models.

It removes any mechanical connection between the steering wheel and the wheels of the car. This creates a whole new steering experience, eliminating hand-over-hand movements to do a U-turn, and automatic micro-corrections on uneven roads. But it also enhances vehicle agility at low speeds, and straight-line stability on the highway.

Now we would like to touch upon another development area in the Electrified Sport project.

And one that might sound a little crazy, but that actually makes a lot of sense. To explain, let me hand over to the father of Lexus Electrified. Watanabe-san, the floor is yours.

<CE WATANABE>

Thank you, Bart!

This new project all started with some Lexus engineers reflecting on what they liked about traditional ICE vehicles ... and what they would have to miss out on with electric cars.

Manual transmission was one thing they enjoyed in particular. There's nothing more engaging for a passionate driver than to be able to shift gears for the right amount of torque at any time.

So, we thought... let's do this!

We took a current generation UX 300e and turned it into a manual EV prototype.

We added a shift knob, a clutch pedal, and a tachometer, and we created a simulated drive-force map, with pedal and shift positions to re-produce the feeling of a manual transmission.

This delivered so much fun... that this project is now under serious development ... and it might actually be on some of our future BEVs.

From the outside, this vehicle is as quiet as any other BEV. But the driver is able to experience all the sensations of a manual transmission vehicle, including the possibility to stall, to roll back on a hill start if the clutch is not engaged, and of course... engine sound.

Here's a short video to show you!

<MANUAL BEV VIDEO WITH SOUND>

The only element that they did not reproduce is the smell of petrol!

On a more serious note, this system is really opening new doors. Since it is software-based, we were able to re-produce the driving experience of various vehicles and let drivers select their favourite mapping.

Looking at the bigger picture, this system would only be one of many on the Electrified Sport that would be fully managed by software. Others include DIRECT4, Steer-by-wire, and Brake-by-wire.

This would let us create new levels of customisation ... delivering a personalised experience for each driver.

This is just another way of radically enhancing the appeal of BEVs as performance sports cars.

Of course, I cannot tell you when we will be launching a production vehicle based on the Electrified Sport, but I can confirm that we are working on it.

This is not just a design concept; it is meant to become reality.

Now, let me hand back to Pascal.

<PASCAL>

Thank you, Watanabe-san.

We are really excited and eager to present such future electrified models to our customers in Europe.

Before concluding this Lexus presentation, I would like to take you back to the present days.

As explained earlier, while we have been severely impacted by supply cuts this year, we see a much brighter future in '23 and beyond ... with strong customer demand for our new products.

The new generation RX will arrive early next year, with a choice of 3 electrified powertrains: the RX 350h hybrid, the RX 450h+ plug-in hybrid, and the first-ever RX 500h turbo hybrid with DIRECT4.

In the spring we will start deliveries of RZ.

We also just announced that the UX 300e, the full electric version of our compact crossover, will be equipped with a new battery next year, resulting in a 40% increase of its range ... bringing it to 450 km.

We are also enhancing product strength on all our line-up with our brand-new multimedia system, featuring large touchscreens and advanced connectivity ...

... and with the latest generation of our advanced active safety and driver assist systems.

We are also very keen to strengthen our award-winning customer satisfaction even further ... developing advanced services to ensure peace of mind for our PHEV and BEV customers.

Beyond this, you can expect more product news next year. There will be 2 new additions to the Lexus line-up, 1 new generation model and 2 model updates.

So, this brings us to the end of our presentation for today.

Thank you for your attention!

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