November 29, 2021

Nissan Ambition 2030 announcement
Speech Summary

Speaker: CEO Makoto Uchida

Making Nissan better

Today, I am here to share with you our long-term vision.

I believe the time is right for us to shift gears from focusing on business transformation to creating the future.

Nissan NEXT, our current transformation plan, is on track and with this we have laid a strong foundation for progressive change.

Addressing irreversible shifts

From here, we will move towards a more progressive future with a commitment to provide societies and customers with a diverse range of mobility solutions to drive innovation that enriches people's lives.

Our long-term direction is set in the context of three major shifts that inform our innovations, our business model and our priorities:

The first is the climate crisis: This is the most urgent and non-negotiable issue for the world today. The responsibility for action is with every one of us to ensure a sustainable future.

Second are social issues: Society is facing huge challenges. Whether it is aging populations in countries like Japan, urban mobility or insufficient transport systems in many parts of the world – all these issues impact on the environment, health, social equality and economic development. With digital technology and AI changing the way

cars and transportation services are provided, mobility is no longer a personal commodity but a social instrument shaping our cities and landscape.

Third is highly conscious and savvy customers: More customers are becoming environmentally and socially conscious and are at the same time demanding greater flexibility, personalization and excitement in mobility.

Nissan has always worked to address social issues and customer expectations through improvements to mobility.

In fact, this is our heritage. We were built with a vision to be a pillar of support to society.

Do what others don't dare to do

What drives us is our innovative and challenger spirit, which is in our DNA.

Since our founding, Nissan has been daring to do what others do not.

Our spirit sets us apart and has given us the confidence to pioneer exciting cars and technologies; from a pulse-raising sports car like the Z, to crossover vehicles that meet customers' diverse and growing needs, to our legacy of electrification and autonomous technologies.

Creating unique value

Our legacy gives us the credibility and confidence to define a strong roadmap for our future and to take on challenges for the next decade.

This is our future vision and direction - Nissan Ambition 2030. Our ambition is "together we empower mobility and beyond" for a cleaner, safer and more inclusive world.

We're taking this opportunity to clearly articulate how our innovations create unique value by empowering journeys offering confident, exciting, more integrated experiences.

And by empowering society through collaboration, we're creating a smart eco system with integrated mobility.

Electrification towards 2030

Nissan places electrification at the center of our strategy towards Nissan Ambition 2030.

We have a ten-year head start over our competitors in electrification.

By leveraging our accumulated experience, we will further advance our efforts to democratize electrification to achieve carbon neutrality through an innovative and comprehensive approach that only Nissan can provide.

Investing in our future

To date, we have already made an early investment of one trillion yen towards electrification and advanced technologies including powertrains, production, and charging infrastructure.

In the next five years, Nissan will accelerate the shift with further investment of 2 trillion yen.

We aim to maintain a steady product momentum by introducing 23 new electrified models including 15 new EVs that offer diversified choices and experiences for our customers.

Nissan will reach an electrification mix of more than 50% by 2030 globally across the Nissan and INFINITI brands.

We all know that batteries will be the key to transition to full electrification.

Battery demand is expected to increase, and to address an emerging supply challenge, Nissan is working with partners to increase production capacity for our electrified vehicles to 130 GWh globally.

Advancing battery technologies

While we address the growing battery demand, we must also work on battery innovations to make them more efficient, scalable and sustainable.

I am excited to announce that Nissan will introduce our first break-through all solid-state battery in 2028, with the pilot plant in Yokohama to be ready by 2024.

Here, too, our legacy is strong. About 30 years ago, Nissan was one of the first companies to start in-house development of lithium-ion batteries for automotive use.

From sourcing the right material to in-depth research at the molecular level, we have designed battery technology to suit multiple market conditions and have started mass-production.

I am proud to say Nissan has always delivered safe batteries with zero incidents.

Equipped with this deep expertise, we are developing all-solid-state batteries in-house. This will be a breakthrough and safe technology.

With this, we will be able to double the energy density versus current lithium-ion batteries. With batteries made smaller and thinner, we can offer flexible layouts with more dynamic performance expanding to larger segments like pickup trucks. Charging time will also be reduced to one-third versus current batteries.

Furthermore, ASSB can bring our battery costs down to $65 per kWh to realize cost parity with ICE vehicles, accelerating the shift to EVs.

Readying for the future

As we continue to harness our innovations, we are focused on preparing our factories to be future ready with a minimal carbon footprint.

We will expand future zero-emission production to major plants around the world through the Nissan Intelligent Factory.

We aim to electrify our production facilities to support the adoption of renewable power and alternative energy fuel cell generators.

With this, we aim for a 40% reduction in CO_2 emissions from our plants by 2030 compared to 2019.

Moving beyond mobility

In addition to advancing battery technology and making the production process carbon neutral, we are also working to build a comprehensive EV ecosystem.

As a pioneer, Nissan has always focused on maximizing the value of EVs by expanding their role as an energy device.

We are promoting V2X initiatives to improve energy management by optimizing the use of EV batteries connected to the grid and expanding the range of their use.

Along with it we are working on battery circular loop to refabricate, recycle, resell, and reuse of batteries.

Ensuring profitable growth

I also want to assure you that while we will make significant investments to transition towards a fully electrified world, we will uphold the profitability of the company above 5% to ensure our business remains viable for the long-term.

This will enable Nissan to sustain growth through the new age of electrification and pursue new business opportunities to help drive long-term profitability.

Speaker: COO Ashwani Gupta

Accelerating electrification

This ambition of ours is grounded and progressive. Let me now show you our pathway to realizing our electrification plans in the next five years.

We continue to take the lead in accelerating the natural shift to EVs, creating customer pull-through by: 1) driving excitement, 2) enabling adoption, and 3) ultimately, making the world cleaner.

And to deliver it, we are driving innovation mainly in three broad areas:

1. Product and technologies
2. EV competitiveness
3. Ecosystem

First, product and technologies: We will expand the range of vehicles and introduce human-centric technologies to offer superior value, more exciting experiences and at the same time we will make them more accessible.

Second, EV competitiveness: While battery-cost reductions will drastically change the dynamics of EV pricing, we are working at multiple levels to make EVs more competitive, including battery advancements and manufacturing efficiencies.

And third, ecosystem: A 360 approach to EV ecosystem from charging infrastructure to decarbonizing production and repurposing batteries as energy sources, we are redefining the role of the car.

Bringing choices and experiences

Speaking of products, over the past decade, Nissan has strived to provide zero-emission motoring while bringing unexpected value and thrilling experiences to our customers around the world – setting the industry standard for EVs.

Customers desire more choices and diverse experiences. This has led us to innovate further and offer e-POWER as a balanced solution. e-POWER borrows from our EV technology perfected in the Nissan LEAF and makes the benefits and enjoyment of electric driving accessible to more drivers.

Our past innovations have led to more than 1 million electrified vehicles on the road to date between the Nissan LEAF and our e-POWER models like Note Aura.

Expanding Line-Up

As we charge forward towards Nissan Ambition 2030, we are expanding the range of our products leading to an electrification mix of more than 40%, with 20 products in the next five years factoring in both EV, including Kei EV, and e-POWER models.

Democratizing EVs

While democratizing EVs, we have always aligned with the pace of the markets and set realistic targets. By 2026, our ambition is for:

- Europe to take the lead, with all core passenger vehicles to be electrified, resulting in more than 75% of our sales
- In Japan, more than 55% of our sales will be electrified
- In China, major vehicles will be electrified, accounting for 40% of our sales
- And in the U.S., we will accelerate momentum with an aim to achieve 40% of our sales to be fully electrified in 2030

Coming to our technology innovations, Nissan is built upon the brand promise of innovation for excitement. We aspire to provide customers with unique human-centric technologies, empowering journeys to be: 1) Exciting, 2) confident and 3) seamless.

Driving excitement

To further enhance excitement, e-4ORCE, our next-generation all-wheel drive system, combines 4-wheel drive, chassis control, and electrification technologies developed and refined over decades, to offer impressive control, stability, predictability and driving excitement. You can experience this in the all-new Ariya crossover EV.

Our electrification excitement extends beyond the roads to racetracks, and with Formula E we bring the excitement and fun of zero-emission electric vehicles to race enthusiasts.

Empowering drivers

Our ProPILOT driver assistance system has breakthrough human-centric technologies that increase driver confidence and provide an enhanced level of vehicle control and

safety for a smooth, relaxed ride that supports, responds and most importantly respects the driver's intentions.

With more than 1 million Nissan and INFINITI vehicles equipped with this technology, we aim to reach 2.5 million vehicles by 2026.

Connecting the world

Furthermore, we are incorporating smart connectivity features in our electrified cars, allowing for an integrated personal space and seamlessly connecting the world with the car for exciting on and off-board experience.

Next generation EV concept car

You can now believe that we are empowering experiences and taking them to the next level. With Nissan NEXT we organized our design strategies around Timeless Japanese Futurism. As we accelerate beyond Nissan NEXT, we have discovered and have been inspired by *shun* and *sho*, which will now reflect in our new EV vision.

Shun, to run fast and effortlessly and *sho*, to soar with power and grace. Both of these words in combination with our engineering breakthrough technologies define the science of speed in our design language.

Today, I am happy to introduce to you our next-generation crossover concept born from this vision of *shun*. As announced in Sunderland this July, this crossover utilizes the class leading CMF-EV platform designed by the Alliance and is the basis for the Ariya. Expressing its breath-taking acceleration and feeling of control, this new generation EV represents the shape of things to come. Sleek design, energizing driving, advanced safety technologies and a productive and comfortable interior space.

Advancing batteries

Coming to our second area of focus, EV competitiveness. The tipping point for EV adoption will be driven by the advancements in electric platform, powertrains and battery technologies.

First, let’s talk about battery technologies. Nissan is uniquely positioned to pursue this area of research. Our depth of expertise is in end-to-end research that spans from the battery molecule level through electrified mobility integration. This has enabled Nissan to develop safe and reliable battery technologies for integrated energy management – a true empowerment of journeys and society.

By fully leveraging our Alliance assets, we are working on cobalt-free batteries and aim to bring down the cost of our liquid lithium-ion batteries by more than 65% by 2028 in comparison to the second-generation LEAF.

Nissan is developing game-changing all solid-state batteries in-house with an investment of 140 billion yen by 2026 and utilizing our global network of research partners.

With ASSB, we expect the cost to go down to $75 per kWh in 2028 and hope to achieve $65 per kWh to realize cost parity between EVs and gasoline cars.

We will begin the construction of our pilot plant next year to get it ready in 2024 and intend to start mass production in 2028.

In parallel, we are ramping up our development activities and plan to be ready to prototype full-sized cells at the pilot plant in 2024. Our intention is to finalize our cell design and mass manufacturing process design at the same time and optimize our investments towards mass production.

Advancing powertrains

Now for the second area of focus - powertrain. Working with our affiliate Jatco, Nissan is pursuing innovations to improve efficiencies of our e-Powertrain system by integrating the key components, making them lighter and more efficient. This will result in a 30% cost reduction by 2026 compared to the 2019 second-generation LEAF.

Localizing production

Finally, to support our pivot to electrification, we will implement a local-to-local approach to our industrial strategy in four of our core markets: Japan, China, the UK

and the US. Nissan has a huge advantage of our existing manufacturing footprint and by investing further, we will create flexible and dedicated EV production lines or facilities. This optimized production approach will give us cost and operational advantage.

We plan to have battery production in close proximity for efficient industrial operations, expanding our EV Hub concept from the UK to China, the US and Japan. By 2026, our intention is to introduce 52 GWh capacity across major hubs, which is scalable to meet the realistic market demand.

A good example is our unique EV Hub concept – EV36Zero – the 1 billion-pound, flagship EV Hub in Sunderland, which represents our world-first EV manufacturing ecosystem interconnecting vehicle production, giga factory and MicroGrid for 100% renewable energy.

Optimizing batteries

As the world accelerates the shift toward EVs, it is imperative to make EVs truly sustainable through a circular economy by giving batteries additional value. Nissan is working on a comprehensive EV energy ecosystem, exploring several initiatives to optimize and expand battery energy management uses. From using them as a reliable energy solution with our Vehicle-to-Everything applications and ensuring efficient recycling, we are closing the loop to generate value throughout the life cycle.

As early as 2011, Nissan launched V2X and created a distributable energy model where EVs act as mobile energy storage. We are proud to say that, today, more than 70% of V2X pilot projects globally use the Nissan LEAF. In Japan, we are working with more than 150 partners for the Blue Switch project, which facilitates disaster countermeasures by using EVs.

We are confidently moving toward the commercialization phase, targeting the mid-2020s. We aim to extend V2X services and also establish battery recycling facilities in Europe and the US.

Optimizing energy

But it’s not just about how we optimize energy now; it is also about how we progress our sustainable efforts. Our experience in advancing 4R into a business in Japan, and our ability to accurately diagnose battery state of health gives us the opportunity to elevate the batteries reuse and repurpose scheme developed in Japan to a global level.

We are planning to establish new battery refurbishing facilities in Europe in 2022, and in the US in 2025. This scheme will not only breathe a second life into batteries but can make them more affordable.

As we at Nissan strive to contribute to a more sustainable energy cycle, we will always maintain our commitment to our customers and ensure their EV experience is seamless and frictionless.

Charging anywhere

Charging infrastructure is critical to EV adoption. To ensure our customers can charge without disrupting their journeys, we are creating easy and reliable access to charging points, wherever they are.

In fact, Nissan's uniqueness is the comprehensive approach we have been taking. We are giving access to our customers to more than 1 million chargers around the world. Over the past decade, Nissan has invested 25 billion yen and we plan to invest an additional up to 20 billion yen by 2026, working with our infrastructure partners.

Personalizing experiences

Digital journey is a central part of the Nissan customer experience. We are offering customers the flexibility to choose the most comfortable purchasing experience that aligns with their preferences, from a digital purchasing journey to a hybrid digital-to-physical experience, putting the customer in control of every step. By 2021, all our core markets will offer our customers a holistic digital experience.

We are proud of our long track record of innovating, and of our role in delivering the EV revolution. Today, we recommit to that spirit of innovation and we look with confidence and excitement to a future powered by cutting-edge advancements in products and

technologies, EV competitiveness and ecosystem, allowing customers to shift willingly to electrified cars.

Speaker: CEO Makoto Uchida

Aiming for zero fatalities

Along with carbon neutrality, our Nissan Ambition 2030 envisions two more critical goals – zero fatalities and a more inclusive society.

We are working diligently to develop drive assist and vehicle intelligence technologies to reduce fatalities, empower our customer journeys and empower society by providing choice of mobility.

Zero fatalities is a long-established goal of Nissan, which has inspired us to bring to market some of the most advanced driver assistance and safety technologies.

Pioneering innovations

Since the 1990s, with more than 10 world-firsts, we have been one of the first companies to start commercializing these technologies and integrating them into a comprehensive safety concept, Nissan Safety Shield.

Empowering journeys

Our 25-years of expertise in applying driver assisted technologies culminated into a more integrated driver assistance system, ProPILOT.

As we progress to the future, we are advancing intuitive technologies that support driver behavioural intentions from cognition to judgement to handling. This means we need to further evolve capabilities of cognitive technology. One of these initiatives is high-performance next-gen LIDAR technology.

With its revolutionary cameras, radars, and controllers delivering innovative high resolution and detection capabilities, the LIDAR system assesses the risks around the vehicle from an expanded distance coverage.

By accurately and instantly determining the shape, position and movement of objects around the vehicle, this technology will make a significant contribution to further reduce real-world accidents.

Nissan aims to complete the development of this technology by the mid-2020s, with a goal of incorporating it into most new models by 2030.

Making mobility accessible

Further, the evolution of autonomous drive technologies will provide new mobility options for cities and rural areas and will significantly improve quality of life. To realize this, we are currently developing fully autonomous drive technologies under specific conditions.

Globally, mobility environments and urban infrastructures are vastly different in different markets. So, we are working with our relevant partners to solve the unique issues in each market.

Empowering mobility together

For example, in the UK, we are partnering with the UK Transport Research Laboratory to research complex urban traffic environments.

In the U.S., we will conduct joint research with NASA to study how autonomous vehicles operate more efficiently through cloud AI.

In China, we are exploring various strategic partnerships, like with WeRide, a company specializing in fully automated driving technology, to suit China’s unique traffic environment and customer needs.

We are also exploring opportunities to pilot robo-vehicle ride-hailing services in China’s smart cities. Nissan now has a dedicated team in Shanghai to accelerate the introduction of mobility services.

In Japan, we will continue to pilot Easy Ride, an urban mobility service in collaboration with NTT Docomo in Minato Mirai, Yokohama.

In addition, in Namie Town, Fukushima Prefecture, we are aiming to realize a sustainable mobility service to support community activities in line with the new town planning for reconstruction.

Starting this month, a new three-month pilot is underway to test a more advanced user-friendly service.

We believe that these intelligent technologies will complement electrification technologies and allow for new mobility and connected services in the future. This will mean new business opportunities for us.

Stronger together

While Nissan as a pioneer has set standards for electrified vehicles and autonomous technologies, one of our greatest differentiators is our alliance with Renault and Mitsubishi Motors. We can rely on our 20-year partnership and the advantage of common assets, standards and processes that have supported our growth, a strength that other OEMs do not have.

We have been expanding our commonization strategy. With the leader-follower model, we are increasing the efficiency of product and technology development. We will work together as an Alliance to promote standardization in order to strengthen our competitiveness and expand economies of scale.

As I mentioned today, the environment surrounding us is changing dramatically. We need to hone technological, software and service development capabilities to drive mobility into the future and achieve net zero emissions.

We are able to work closely together because of the trust we have built up over the years, and this will be a great strength for us to realize our long-term vision.

Innovating to excite

As a visionary company, we always set our sights on what's even further ahead. We have questioned assumptions and challenged conventions to bring innovation for

excitement. I am proud to do the same now with a glimpse into the future – our reimagined EV concepts -- a further evolution of EVs from the Ariya and next-generation crossover EV.

These concepts based on our new Nissan EV Technology Vision will be possible because of Nissan's revolutionized component technology combined with our engineering packaging capabilities. The reduction in size and the integration of components together with all-solid-state battery will set new boundaries for re-imagined vehicle packaging.

The optimum hardware structure will bring out the full potential of future complex software configurations and further realize the precision, performance, efficiency and versatility of our offerings in the EV space.

Empowering beyond expectations

With this sophisticated technology packaging, we will be able to achieve the best performance for a variety of different model types - from convertibles like the Nissan Max-Out, that maximizes your driving excitement and maximizes your moments; to multi-sport utility vehicles like the Nissan Hang-Out, which provides a '3rd space' at home, or away, for work and for play; to pick-up trucks like the Nissan Surf-Out, taking you on thrilling adventures and exploring new frontiers.

These concept cars are a true representation of how Nissan empowers journeys beyond expectations.

Empowering our people

Let me stress that the key to the future success of our ambition is our human capital. This path of disruption will place a high demand for workforce transformation. We need to identify the right skill sets and hire the right talent to drive new growth.

Nissan will look to add 3,000+ engineers in the area of advanced technology research and upskill or reskill our workforce to ensure a high-performing organization.

Empowering mobility and beyond

With Nissan Ambition 2030 as our guiding principle, we are determined to transform Nissan into a company admired by all our stakeholders.

We will continue to drive innovation to enrich people's lives and realize a cleaner, safer, and more inclusive world.

Note: Years mentioned are fiscal (April through March)