

# Enabling the future of automotive, together.

Cocreating breakthrough ideas with leading  
OEMs and taking them to implementation.



# Introduction

**As vehicles become more software-defined and software becomes a key brand differentiator, OEMs must become more agile and innovative than ever. Rapid transformation in each of the four ACES pillars (autonomous, connected, electrified, shared) means today's automakers must also become more software-enabled, interconnected and digital.**

Responding to this change brings many new challenges and requirements, such as introducing multimodal communications platforms for continuous in-car connectivity, ensuring digital capabilities and safety features meet strict compliance and legislation requirements, and embracing cross-industry ecosystems for new billing and commercial models and revenue-sharing opportunities. All while optimizing supply chains, running leaner and increasing quality with sustainability underscoring everything.



NTT DATA understands the need **“** for OEMs to transform into software companies and can support them with a full-stack technology offering that brings together the entire connected automotive ecosystem.



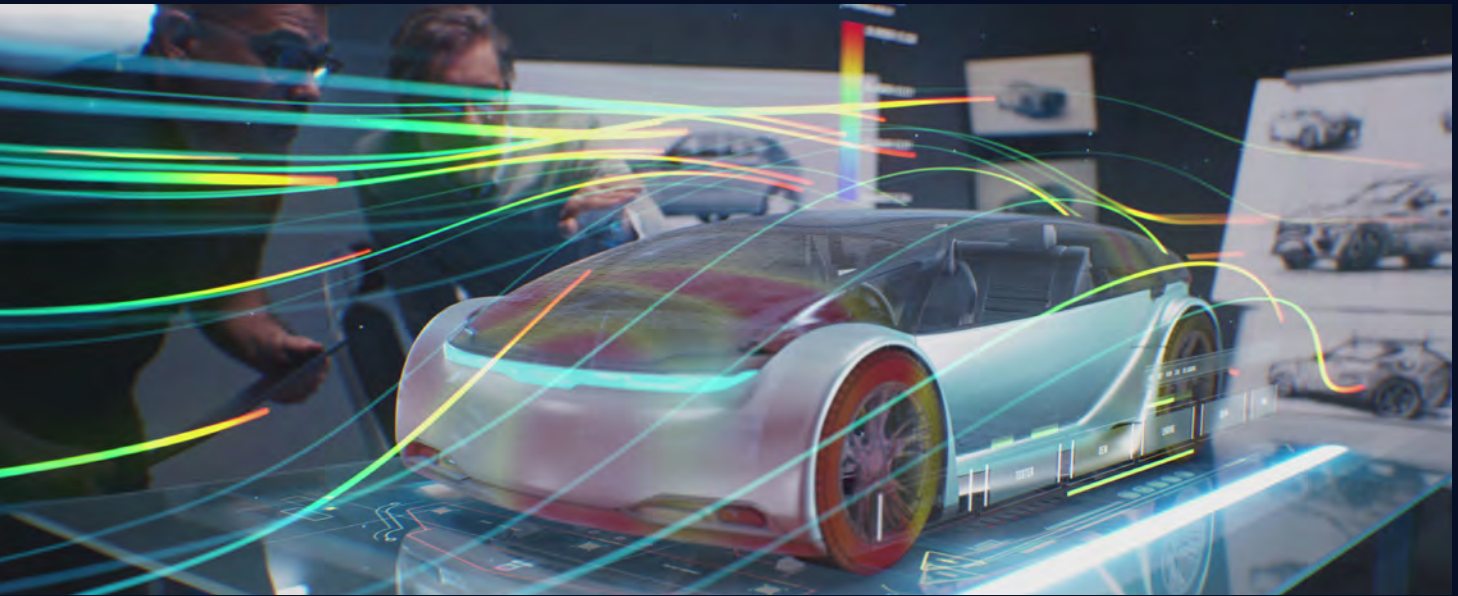
# A trusted partner and enabler for global automotive transformation.

**NTT DATA's global automotive transformation enablement solutions extend to the entire automotive sector and deliver integrations across complex business ecosystems, including between OEMs and Tier 1s, and the broader ecosystem of insurance, banking, telco, mobility and utility players.**

As the technical foundation for software-defined vehicle business models, mobility services and L4 autonomous driving capabilities, we provide the connectivity architecture to underpin transformation across your operations. Data can be analyzed and driven securely across backend processes through 5G, edge and IoT connectivity layers, leveraging the latest application technology.

We can enable intelligent digital factory processes, optimize your backend processes and develop and integrate software architectures for in-car and connected car services with capabilities that extend across design, production and delivery. Our low/no-code approach for application development delivers the flexibility to support new use case development and innovation, including VR/AR retail opportunities, social robotics and vehicle security. We can also provide consultancy and advisory services that support processes, certification and compliance and vehicle type approval.





# Meeting the changing technology and service requirements of today's software-defined OEMs.

Our full-stack solution is built for automakers seeking to become lean, software-driven businesses and establish greater control of the value chain for building software-defined vehicles. It can deliver change at an industrial scale to overcome your new energy, mobility, digital factory, retail, customer experience and cybersecurity challenges.



**Deliver enhanced ACES vehicle features and solutions through a full-stack solution set.** Identify and prioritize high-value use cases, using our consulting services to help create highly scalable and cost-effective in-vehicle services. By supporting you across software, data, development, design, DevOps, cloud and security, we help take ideas from concept to delivery faster.

We also enable the delivery of connected vehicle, on-demand and autonomous services through our high-capacity, low-latency Global IP Network, data centers and advanced software architectures and services. This is supported by our continued investment in undersea cabling and highly reliable satellite communications.



**Optimize costs and reduce waste to create a lean and efficient organization that can operate more sustainably.** Use real-time data from across distribution and workforce management systems to optimize supply chains and save costs through inventory management, idle materials costs and improved production yields.

We help you achieve sustainability goals by consolidating data, technologies and suppliers, introducing "greener IT" that offsets carbon and material use. In addition, we help you capture and analyze data with dashboards for ESG reporting and gain a deeper understanding of environmental impacts.





**Use data-driven innovation to respond faster to internal and market challenges.** Leverage new and emerging technologies like AI, biometrics, VR and AR to rapidly build, develop and deploy advanced use cases using our consulting, software integration and technical services with a coinovation approach.

For example, we can help you to use AI and analytics to enable real-time insights and to understand customer preferences better, evolve predictive maintenance and service solutions or pilot blockchain-based services and infrastructures.



**Introduce a comanagement approach across ecosystems and partnerships.** Outsource management of your infrastructure while keeping control and ownership of the platform itself. API-enabled integrations mean you and NTT DATA jointly gain continual reporting and transparency based on factual data that enables stringent governance.

Through increased control and visibility of data, we help create a connected, data-driven common platform that can be deepened and evolved over time.



**Drive transformation across software, operations, manufacturing and people.** From identifying opportunities by mapping critical areas for change and realizing high-value use cases to managed end-to-end security services, we support the end-to-end transformation that improves your business's performance, productivity and profitability.

Critically, we also help prepare your people for change by supporting the adoption of new processes and ensuring they are sustained over the long term.. In addition, by improving employee collaboration and user experiences, we help your people to work more effectively and efficiently.



**We stand by a commitment to high quality, extreme reliability and continuous, human-centric innovation.** We're proud of the values that stem from our Japanese heritage. Our focus is to build long-term relationships that drive value, with an aspiration to improve society through the ingenious use of technology. Our human-centric approach means we know how technology impacts people and how it enables them to do their job.



**We can be as local as necessary and as global as possible.** With more than 76,000 automotive experts, we operate across five continents in over 190 countries with a local presence in over 80. Our high localization and local language capabilities mean we understand your specific culture, industry and customer requirements. In addition, our Global Operations Centers provide 24x7 access to skilled network engineers and have a 6-second average answer-time.



**We combine innovation and industry knowledge to accelerate and scale change for OEMs.** We invest USD 3.6 billion annually in R&D with six worldwide innovation centers dedicated to pursuing advanced technologies across fiber optic networks, quantum computing, industrial metaverse and autonomous driving. Already, we're conducting some 800 projects with our automotive clients. By bundling our innovation power with our technology partners, we deliver the best possible technology across applications, cloud, data centers, networking and security.



**We deliver world-class security and compliance to meet automotive regulations.** With security embedded across software and infrastructure architecture, our platform is innately secure and reliable. Through a scalable array of security capabilities, including advanced analytics and threat intelligence with complete compliance monitoring, we mitigate over 2 million cybersecurity threats every year.

# All the components for your transformational needs and long-term success.

**We deliver everything from infrastructure and applications to front- and back-end processes, with a complete portfolio of managed services. And as leading integrators, we bring all key technology platforms and solutions together.**



# A positive vision for the future of automotive.

Our ambition is to support OEMs as they evolve, enabling them to securely optimize their data layer across backend processes to edge devices through core network connectivity into every area of transformation – from production and demand fulfillment to mobile connectivity and digital sales processes.

We bring a positive vision for what the future can look like and can collaborate with you with the ecosystems, innovation, and new business models you need to be able to compete in a software-defined ACES environment.

Together, we can find and deliver the answers to new and emerging energy, retail, digital and customer experience challenges while enabling cross-industry ecosystems between mobility, telco, insurance, utilities and banking.

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With NTT DATA, we can enable the future of automotive – together.



