

Accelerating automotive business model innovation through cloud migration

Multinational automotive manufacturing company



Business opportunity

As the automotive industry is disrupted by shared mobility services, car manufacturers are under constant pressure to develop new and innovative business models to adapt to changing consumer trends.

Through a large merger, one automotive manufacturer faced the immense challenge of combining multiple automotive brands to seamlessly support future growth. By combining the unique strengths, resources and expertise of these leading brands, the company aimed to unify operations and harmonize delivery models to enhance its competitiveness in an increasingly dynamic automotive market.

Technical challenge

With the merger, the company inherited disparate information technology (IT) and operating technology (OT) systems that were slowing their journey to becoming a sustainable mobility technology company. The automotive leader needed a fully integrated technology environment capable of supporting the production of next-generation connected vehicles. To achieve their innovation objectives, the customer set four goals:

- Create a connected infrastructure stack by integrating IT and OT systems and standardizing business processes and workflows.
- Migrate 80% of their infrastructure to the cloud to harvest the benefits of cost reduction, time to market, new services, scalability and reliability.
- Empower the workforce by providing real-time visibility and actionable insights enabled by cloud services.
- Run a lean and more sustainable infrastructure with optimized energy consumption to actively reduce its carbon footprint.

Our solution

Together, the automotive manufacturer and Kyndryl, designed and are implementing a multi-phase migration to AWS cloud that:

- Enabled edge computing with AWS IoT Greengrass to collect and process equipment data locally in real time, allowing stakeholders to make quick, data-driven decisions and optimize asset performance.
- Developed standardized, cloud-based templates for manufacturing operation blueprints that can be rolled out globally for consistency and optimize resource usage and efficiencies across regions.
- Leveraged AWS IoT SiteWise to enable monitoring and visualization of real-time data from manufacturing assets, providing on-site and remote employees with actionable insights into production bottlenecks, downtime and performance metrics, fostering a culture of proactive issue resolution.
- Used AWS Migration Hub and AWS Database Migration Service (DMS) to systematically move legacy applications, databases and critical workloads to the cloud, benefitting from scalability, security and cost efficiency.
- Applied AWS IoT Analytics and AWS Machine Learning services help the customer reduce energy waste and improve the overall efficiency of its plants.
- Delivered 24/7 monitoring through AWS CloudWatch and Kyndryl Cloud Native Services, enabling real-time insights and proactive issue resolution.
- Reduced cloud expenses by up to 25% with Kyndryl cost management strategies, including Reserved Instances and Savings Plans.
- Fortified security and streamlined access with advanced networking and firewall solutions, ensuring robust data protection and seamless connectivity across operations.
- Ensured AWS environment remains optimized, secure and cost-effective post-migration.

The power of partnership

With meticulous execution and comprehensive use of **Amazon** services, Kyndryl ensured a transparent migration with no reported issues or outages, empowering the automotive manufacturer to scale systems and maintain continuous production with zero downtime.

Key Amazon services included in the solution:

- **IoT Greengrass:** Edge Runtime
- **S3:** Offered secure, scalable storage solutions
- **IoT SiteWise:** Monitoring & Visualizations of industrial data at scale
- **Database Migration Service (DMS):** Managed Migration Service
- **IoT Analytics:** Managed, operationalized analytics for IoT devices
- **Machine Learning:** Building Predictive Models
- **AWS CloudWatch:** Monitored infrastructure performance
- **AWS IAM:** Secured access to AWS resources
- **AWS Shield:** Provided DDoS protection





What progress looks like

- **Reduced operational variances by 18%** and improved overall quality control by standardizing global operating processes across 25 manufacturing plants worldwide.
- **Improved Overall Equipment Effectiveness (OEE) by 14%** as a result of real-time data access and predictive analytics powered by AWS IoT and edge computing solutions.
- **Increased productivity by 16%**, due to enhanced collaboration tools and remote monitoring capabilities that empowered the workforce to access critical data digitally.
- **Reduced IT operating costs by 28%**, freeing up capital for strategic investments in R&D and innovation, by migrating legacy systems to AWS.
- **Decreased energy consumption by 18%** through real-time monitoring and optimization of energy-intensive processes using AWS IoT and machine learning models.

What's your next digital business challenge?
Let's tackle it together.

Talk to an expert. →

kyndryl.

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