VicOne

UD TRUCKS

Driving What's Next

Securing Sustainable, Driverless Logistics

From Drivers to Driverless: Embracing the New Era in Smart Logistics

UD TRUCKS

A proud member of the Isuzu Group

Founded: **1935**

Headquarters: **Saitama, Japan**

Industry: **Vehicle manufacturing**

Employees: **6,203**

www.udtrucks.com

The logistics industry is currently facing a severe shortage of truck drivers. According to the International Road Transport Union, worldwide driver shortages are forecast to reach over 6 million by 2028. Japan is also facing this challenge. The Nomura Research Institute states that due to graying population and the introduction in 2024 of reforms aimed at curbing overwork, the number of truck drivers in Japan will be 36% less than what is required to meet the country's logistical demands in fiscal 2030. This issue is referred to as the "2024 Problem." However, due to the fact that over 90% of freight in Japan depends on road transport, the efficiency and stability of logistics have become critically important. Accelerating digital transformation will be a significant catalyst to ensure the smooth operation of daily life.

UD Trucks' "Fujin & Raijin. Vision 2030." is designed with this goal in mind, focusing on creating smarter and more energy-efficient logistics solutions through connectivity and digitization innovation. For instance, in 2022, UD Trucks and Kobe Steel conducted a Level 4 autonomous driving trial aimed at addressing the shortage of drivers in steel mills. These autonomous trucks successfully loaded approximately 17 tons of slag and autonomously transported it between multiple points on-site, completing tasks such as parking, loading, and unloading within the designated time frame.

"'Innovation that puts people first' has been our core philosophy for the past 80 years and will continue to be so in the future," said Ryota Kawano, the manager of ERM (enterprise risk management) Cybersecurity at UD Trucks. "Despite mounting pressures in the realm of future smart logistics, we are accelerating our innovation cycles based on digital transformation and software-defined vehicles (SDVs). We aim to provide 'safer' products to ensure the sustained operation of smart logistics while prioritizing the safety of every driver on the road."

Boosting Speed, Elevating Safety: Against Dynamic SDV Risks

The concept of “safety” in the automotive industry has evolved beyond just the physical strength of a vehicle. Today, it encompasses the entire system, including software and its vulnerabilities. Indeed, cybersecurity risks can significantly impact the overall safety of a car on the road.

“We’ve already seen ethical hacking experiments that compromise vehicle safety,” said Kawano-san. “While real-world incidents are uncommon for now, they’re happening more frequently. It’s crucial to address today’s risks proactively to prevent them from becoming widespread threats tomorrow.”

The convenience of downloadable software updates, similar to those for smartphones, comes with a hidden cost: security risks. A single security issue could impact tens of thousands of vehicles globally, especially since for many SDVs, critical values are standardized across different vehicle configurations through software definitions. This raises the possibility of widespread consequences from a single cyberattack. Kawano-san shared: “To ensure the security of every software update, continuous monitoring for signs of attack on vehicles already on the road is crucial. This proactive approach allows for swift action and rapid development of security patches to mitigate risks.”

In response to UN Regulation No. 155 (UN R155), UD Trucks has implemented a product security incident response team (PSIRT). Collaborating with product teams, the PSIRT addresses a wide range of quality issues using data from test drives and market cyberattack monitoring. This process is essential for effectively managing the growing number of SDVs.

On top of the existing hardware risks, the growing software security risks pose new challenges. Without incorporating security insights into the PSIRT process, UD Trucks might struggle to distinguish between malicious attacks and technical malfunctions. This could lead to delays in identifying and fixing problems, hindering product quality.

“The very concept of ‘speed’ becomes a weapon in our fight against evolving cyberthreats,” said Kawano-san. “It’s not just about reacting quickly, but about proactive defense. We achieve this through early and continuous security risk detection. To stay ahead of the curve, we need a system that’s constantly vigilant, seamlessly integrating threat insights into the product development cycle to ensure unrelenting quality improvement.”

A Unified Defense Strategy: Bridging VSOC and PSIRT Insights

To combat growing cybersecurity risks, UD Trucks needed a solution to streamline its security operations and gain deeper insights. It opted for VicOne's xNexus next-gen vehicle security operations center (VSOC) platform, which it integrated seamlessly into its existing PSIRT process.

"VicOne's industry-leading AI and curated automotive threat intelligence deliver the insights we need: accurate and actionable," Kawano-san emphasized. "Every report equips us with clear and actionable insights, allowing us to identify even unknown risks early on and provide our design teams with precise recommendations with contextualized insights."

UD Trucks understands that cybersecurity isn't about achieving a perfect score of 100; it's about implementing solutions that align with the company's specific business needs and offer a balance between security and cost-effectiveness. "VicOne's cybersecurity proficiency empowers them to tailor their advice to our evolving business environment," Kawano-san explained. "Unlike other vendors with overly complicated and inflexible luxury offerings, VicOne crafts customized strategies that enhance our economic viability and integrate seamlessly with our existing operations."

Such flexibility and cost-efficiency were key factors in UD Trucks' decision. "VicOne's solutions not only bolster our product security but also cater precisely to our needs," said Kawano-san. "We chose xNexus because it delivers exceptional value for the investment. Its scalable design allows us to scale up gradually, make incremental investments, and improve our overall cost structure over time."

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Manager of ERM Cybersecurity at UD Trucks

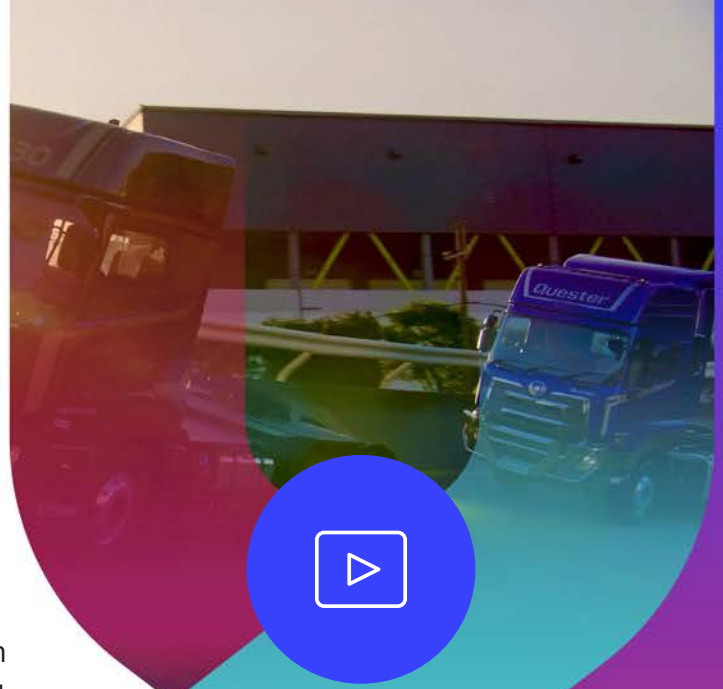
RESULT

Driving Trust, Securing Future Smart Logistics

With VicOne's xNexus, UD Trucks is now able to have real-time, accurate, and actionable insights into potential security risks. These insights are directly reflected on the design side, ensuring they are constantly up-to-date and secure. "Thanks to VicOne," shared Kawano-san, "we expect to shorten our software innovation cycle, helping us meet the conditions to obtain UN R155 certification." This trust extends beyond initial implementation. Kawano-san highlighted VicOne's ongoing commitment: "VicOne has earned our trust from the start. Their open communication, proactive problem-solving, and local real-time service have given us the confidence to navigate projects with unwavering assurance. Their expert security guidance and transparent risk assessments empower us to make informed decisions."

VicOne's adaptability ensures long-term value. As UD Trucks' vehicle architecture evolves and new usage scenarios emerge, VicOne's automated processes guarantee that the xNexus VSOC platform remains adaptable. This ensures continuous support for UD Trucks' latest developments, underscoring VicOne's commitment to its customers.

Kawano-san further emphasized the value proposition: "'Trust VicOne' isn't just a tagline; it's what we always feel during the project. It's a testament to their exceptional service and unwavering partnership." By investing in VicOne's solutions, UD Trucks gains a strategic advantage. "Their tailored approach strengthens our security posture while optimizing workflows and maximizing cost-efficiency," said Kawano-san. "With VicOne as a trusted partner, we can confidently navigate the future of logistics, ensuring safety and security for every driver on the road."



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Learn more and request a demo at **VicOne.com**.