

Case Study

Seeing Machines Routes Data Safely with Seagate Lyve Mobile 04 December, 2023 3 minute read

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Seeing Machines' goal is to leverage data to promote zero transportation deaths.

Key Concepts

Qualcomm

Lyve Mobile Array to Cloud Import Service level data transfer. insights for vehicle safety.

supports zero data loss for faster terabyte-Improved data transport leads to improved

Seeing Machines (https://seeingmachines.com), headquartered in Canberra,

Introduction

caused by human error, negligence, risky behavior, unpredictable events, or unsafe conditions. Seeing Machines believes these accidents can be avoided with the help of camera-based driver/operator monitoring safety technology. The company's mission is to achieve zero transport-related deaths by improving safety and reducing fatal accidents through the use of human data-driven technology. A leader in driver monitoring system (DMS) technology, Seeing Machines focuses on three key industries: commercial transport and logistics, automotive, and aviation. The company serves a growing market in the UK, Europe, Africa, North America, Latin America, and Asia Pacific.

Australia, develops technology that helps people in vehicles to return home safely.

According to the World Health Organization, around 1.35 million people die (and 20-

50 million people are injured) each year due to some form of transportation accident

Their Story

monitoring technology to help design a crash-proof vehicle. DMS technology has

now become a safety requirement in all future vehicles. With a focus on mission

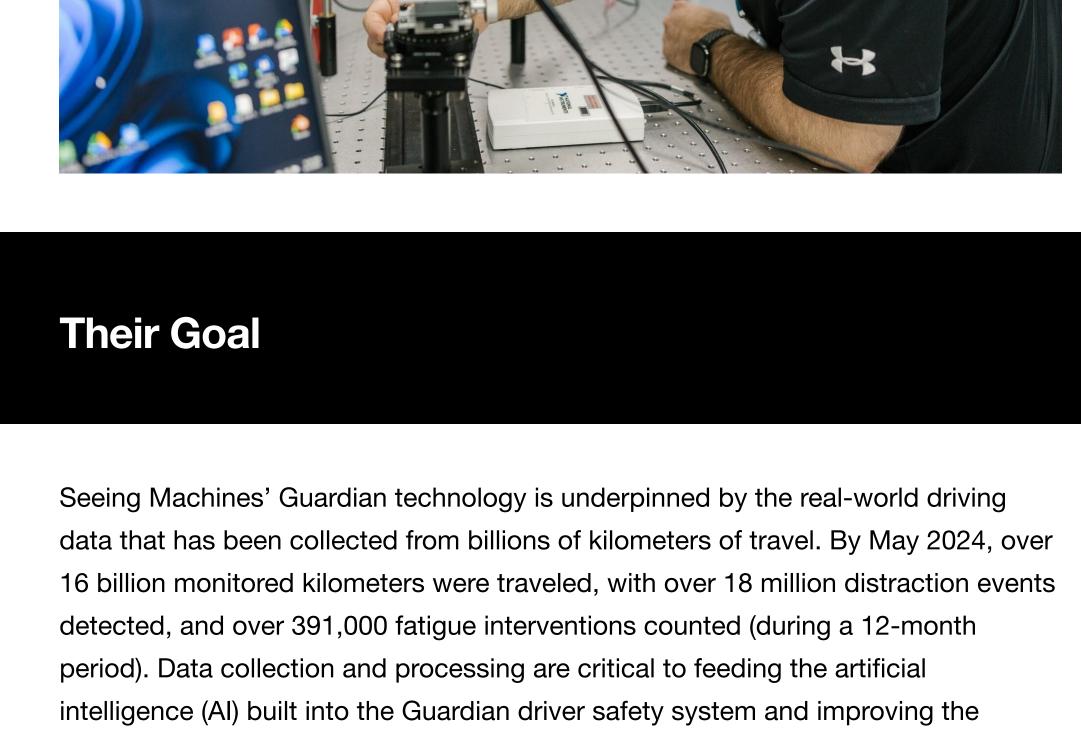
critical applications, Seeing Machines designs, manufactures, and sells state-of-

by some of the world's most recognizable brands across multiple industries.

the-art software, hardware, and systems currently used, trusted, and incorporated

Launched in 2000, Seeing Machines is an Australian National University spin-off program that collaborates with Volvo Technological Development to develop driver

Among the largest safety hazards in the transportation and logistics industry are fatigue and distraction. Seeing Machines claims the driver fatigue and distraction technology it created has been scientifically shown to minimize fatigue-related incidents by over 90%. The business launched its Guardian aftermarket solution to assist commercial fleet operators and commercial vehicle manufacturers—whose concerns extend beyond safety to include efficiency, cost, and regulation—in lowering the hazards of driver fatigue and distraction.



solution for compliance with the upcoming European Union (EU) General Safety Regulation (GSR). A key requirement for this task was the ability to successfully record data during the testing phase.

detection algorithms.

Seeing Machines recently initiated independent testing to assess its Guardian



To follow the EU safety regulation testing requirements, Seeing Machines sought a

technology partner to help initially collect data and move it to the company's AWS

Seeing Machines faced two challenges. One was identifying a technology solution

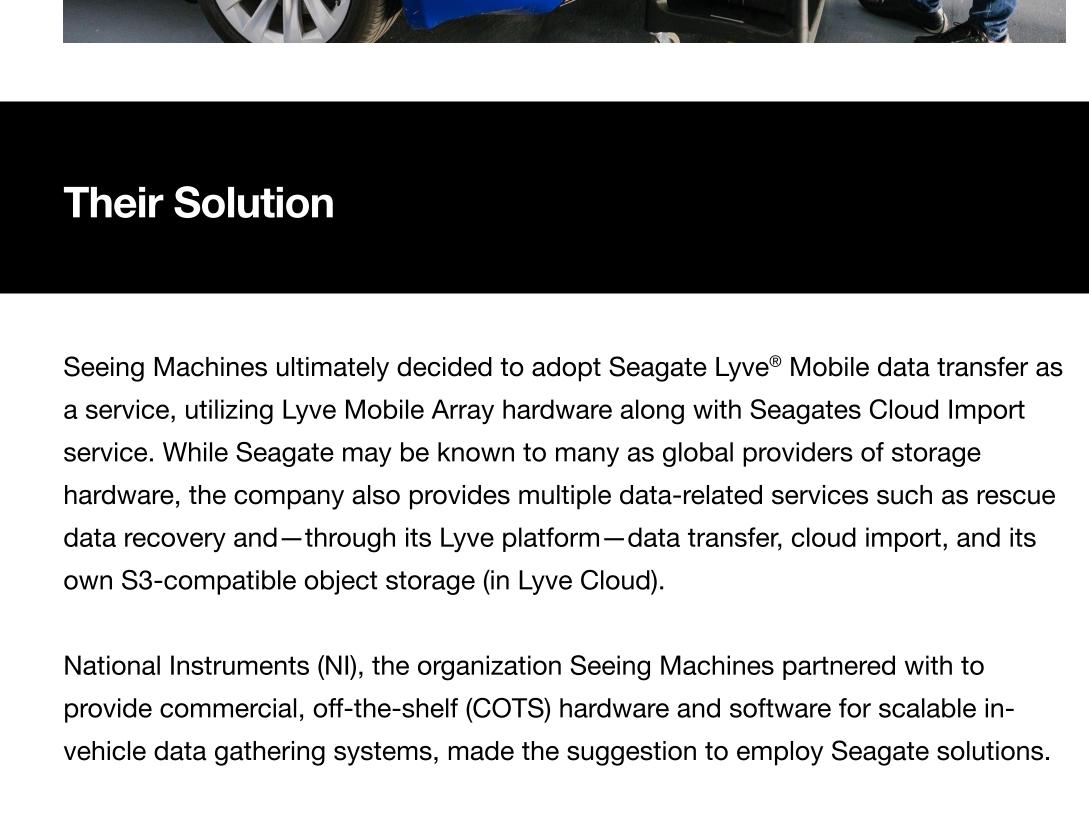
other was to quickly move collected data to the cloud. Seeing Machines stores its

data in the AWS Asia Pacific region (Sydney, Australia). The critical data must be

that could securely and efficiently store data that's captured inside the vehicles. The

account in the fastest and most efficient manner.

quickly moved to AWS for the engineering team to process it and fine-tune the related algorithms.



For this campaign, Seeing Machines reviewed alternative options, including storing

the vehicle-generated data on multiple disk drives and using postal services to send

Mobile and Cloud Import. Seeing Machines decided against this option to minimize

the devices back to Australia...a much slower process compared to using Lyve

The Lyve Mobile Array solved the initial challenge of what technology was best

with National Instruments' data logging environment using high-speed PCIe

suited to capture and store in-vehicle data. Seagate's device connects seamlessly

connectivity. For Seeing Machines, the Lyve Mobile Array's easy integration with the

video from the connected Guardian unit. The raw video camera feed from the NI PXI

gets recorded to the Lyve Mobile Array. The whole combined system is integrated

NI PXI test and measurement platform was a key differentiator. It connects directly

to an NI PXI chassis, which also hosts a camera interface card that records raw

delays in getting data into their engineering team's hands.

into the vehicle undergoing independent testing. With the in-vehicle data challenge met, that left the significant, subsequent challenge of getting the remote vehicle data generated in Spain to Seeing Machines engineers in Australia via the cloud as quickly as possible. Seagate met the company's needs again with its integrated, vendor-agnostic Cloud Import service. Cloud Import is an additional feature for Lyve Mobile Services that allows customers to easily accelerate data ingestion from the field to all major public clouds. It's a

game changer for organizations in data-hungry industries that constantly move

Not tied to a vendor, Seagate Cloud Import Service can utilize a wide range of

Lyve Mobile Array gets transported from the data collection site in Spain to the

nearest in-country hotspot and from there, its multiple terabytes of data get

network ingestion points (hotspots) around the world. In Seeing Machines' case, the

imported into AWS. For this project, the Seagate Lyve Mobile/Cloud Import solution

has collected the field data, transported the device, and made its contained data

accessible to the customer in Australia (via AWS access) in less than 48 hours.

mass data in unique environments where time-to-data is critical.

For Seeing Machines, the success of implementing Lyve Mobile and Cloud Import was getting collected data safely and quickly into the hands of the engineers in Australia. After arriving at Seagate's ingestion facility, the data was successfully moved to Seeing Machines' AWS bucket in less than eight hours with no data loss. As Seeing Machines introduces its latest third generation of Guardian to global customers, it can highlight that it passed independent testing for relevant EU GSR. Seeing Machines wants to achieve zero transport-related deaths by efficiently gathering vehicle data, transferring it to an analysis and AI center, and refining algorithms. The business intends to keep working with Seagate for Cloud Import Services and Lyve Mobile to boost overall productivity and conduct more testing and data collection initiatives in the future.

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Navigation

Media

Their Success

"I really enjoyed working with the Seagate team. They were extremely proactive and responsive to our business needs, and committed to the success

of Seeing Machines. I

success the first time

greatly appreciated the

onsite support to ensure

around. The Lyve Mobile

data transfer as a service

OpEx model helped us

from Seagate's

infrastructure."

model was also a great fit to

keep costs predictable. The

manage costs and benefit

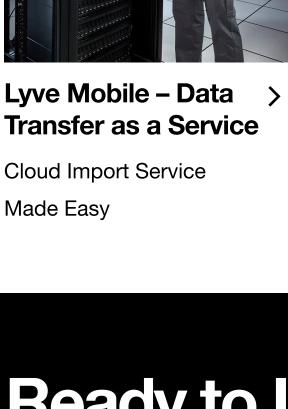
Shane Donnellan

Seeing Machines

Head of Test Engineering

Related Resources

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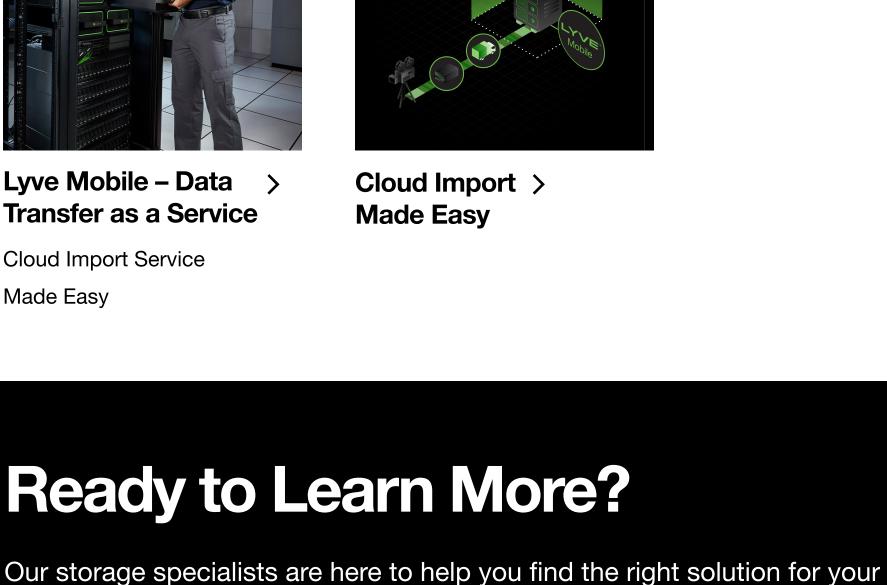


data challenges.

Learn more

seagate.com

product offerings or specifications. SC67.1-2405US



Ready to Learn More?

respective owners. When referring to drive capacity, one gigabyte, or GB, equals one billion bytes and one terabyte, or TB, equals one trillion bytes.

Your computer's operating system may use a different standard of measurement and report a lower capacity. In addition, some of the listed capacity

is used for formatting and other functions, and thus will not be available for data storage. Seagate reserves the right to change, without notice,

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