Vehicular Safety Technologies (VSTs)
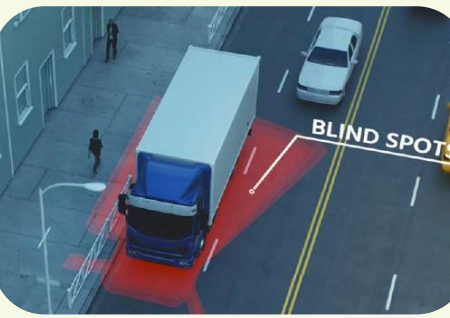
Common VSTs improve driver's situational awareness and monitor signs of fatigue or distraction

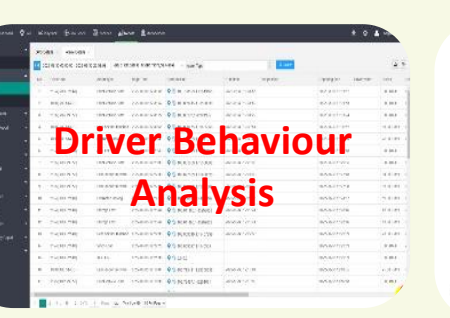| On-road solutions				On-site solutions			
Advanced Driver Assistance System (ADAS)	**Driver Status Monitoring Systems (DSMS)**	**Driver Behaviour Monitoring System (DBMS)**	**Blind Spot Detection**	**360 Degrees Camera**	**Proximity Sensors**	**Access Control**	**Video Analytics**
• Forward collision warning • Lane departure warning • Headway monitoring warning • Pedestrian detection	Alerts driver of: - Fatigue - Distraction - Smoking - Phone usage	Tracks: • Speeding • Harsh Acceleration • Harsh Cornering • Excessive Braking	Detects vehicles and pedestrians in blind spots when turning or changing lanes	Provides real-time view of area surrounding vehicle	Alerts driver when a person or an object is too close to vehicle	Authenticates worker before operation of equipment	• Geofencing for exclusion zones • Detects proximity and calculates trajectory • Traffic management

Productivity Solutions Grant (PSG) - Fleet Safety Management System (FSMS)

- **Companies from all industries are eligible to apply for the grant**. The solution broadly covers one or more of the following aspects – driver behavior monitoring, driver fatigue assessment/warning, anti-collision avoidance/warning and blind spot detection. Companies can more effectively manage driver deployment based on driving behavior, monitor and improve their drivers' safety performance, and reduce accident risks. Furthermore, the recorded data can help with post-accident investigations

- Supports pre-approved solutions with up to 70% grant support and capped at $30,000 per firm

- Company can apply for PSG if they meet the following criteria:

  - must be registered and operating in Singapore

  - purchase/lease of the solution must be used in Singapore

  - has a minimum of 30% local shareholding

  - Company's Group annual sales turnover should not exceed S$100 million, OR its employment size should not exceed 200 employees

- As at end September 2022, about 600 small and medium-sized enterprises (SMEs) have adopted pre-approved solutions under the FSMS to improve safety of their drivers

Fleet Safety Management | ADAS | Blind Spot Detection | DSMS | DBMS | Proximity Sensors | Video Analytics | 360 Degrees Camera | Scan for PSG packages

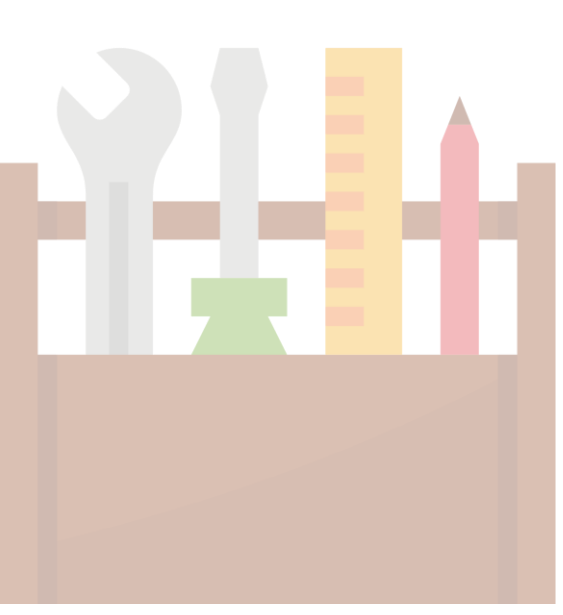## WSH Tech Resources

Visit the WSH Technology page on the Ministry of Manpower's website for more information

WSH Institute

MINISTRY OF MANPOWER

https://www.mom.gov.sg/workplace-safety-and-health/wsh-technology

Examples of VSTs Installation for Heavy Vehicles

On-road deployment

ADAS, Blindspot Detection, 360 Degree Camera and DSMS

Side and back camera

Visual enhancements include in-cabin LCD monitors that allow the driver to view the vehicle's surroundings

DSMS - Facing driver

ADAS - Installs in front of the heavy vehicle

DBMS – Installs in the heavy vehicles for real-time remote monitoring

Image source: Grid Plus*

* Awaiting final approval to be re-listed, as their previous listing expired after being listed for 2 years
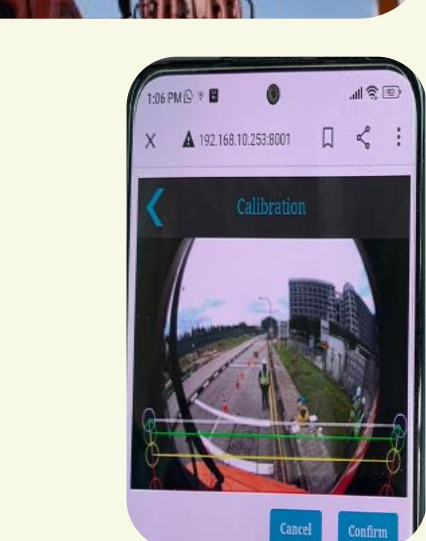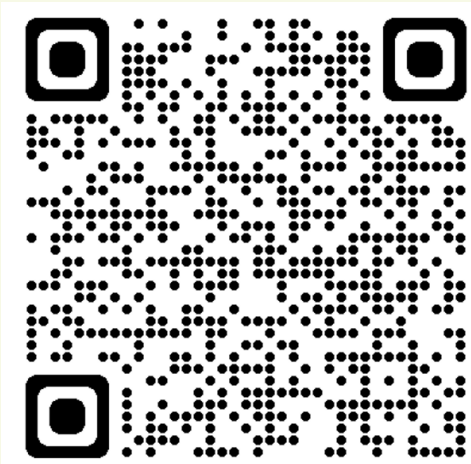
On-site deployment

Proximity Sensor-based System

Scan for PSG packages

Image source: Nettbox

Proximity Computer vision-based System

Scan for PSG packages
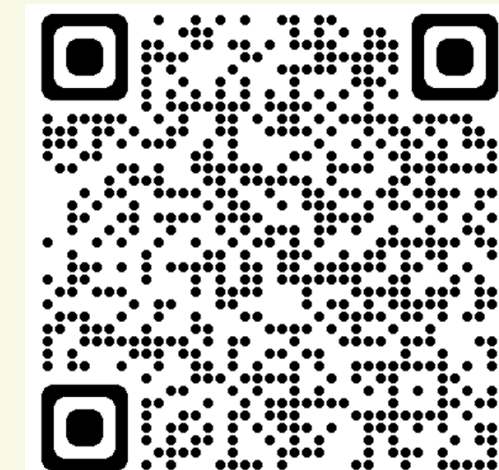
Image source: Solaris CES