IRTENZ Conference – Advanced Technology

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New Safety Technology and Availability.

Technologies to Improve Safety

- ADAS
- Driver Monitoring and Fatigue Detection
- Enhanced visibility
- Telematics and connected Systems
- Augmented Reality for Driver Assistance
- Biometric Monitoring
- Multi Modal Human Machine Interface
- Predictive Maintenance with AI

Advanced Driver Assist Systems

- Lane Departure warning
- Lane Keep System (ALKS/ELKS)
- Auto Headlamps
- Blind spot warning
- Digital rear view cameras
- Autonomous Emergency Braking
- Electronic Stability Control (ABS and BAS)
- Adaptive Cruise Control

Driver Monitoring and Fatigue Detection

In cab monitoring systems

- Use of cameras and AI to detect head position and eye activity

Intelligent Speed assistance

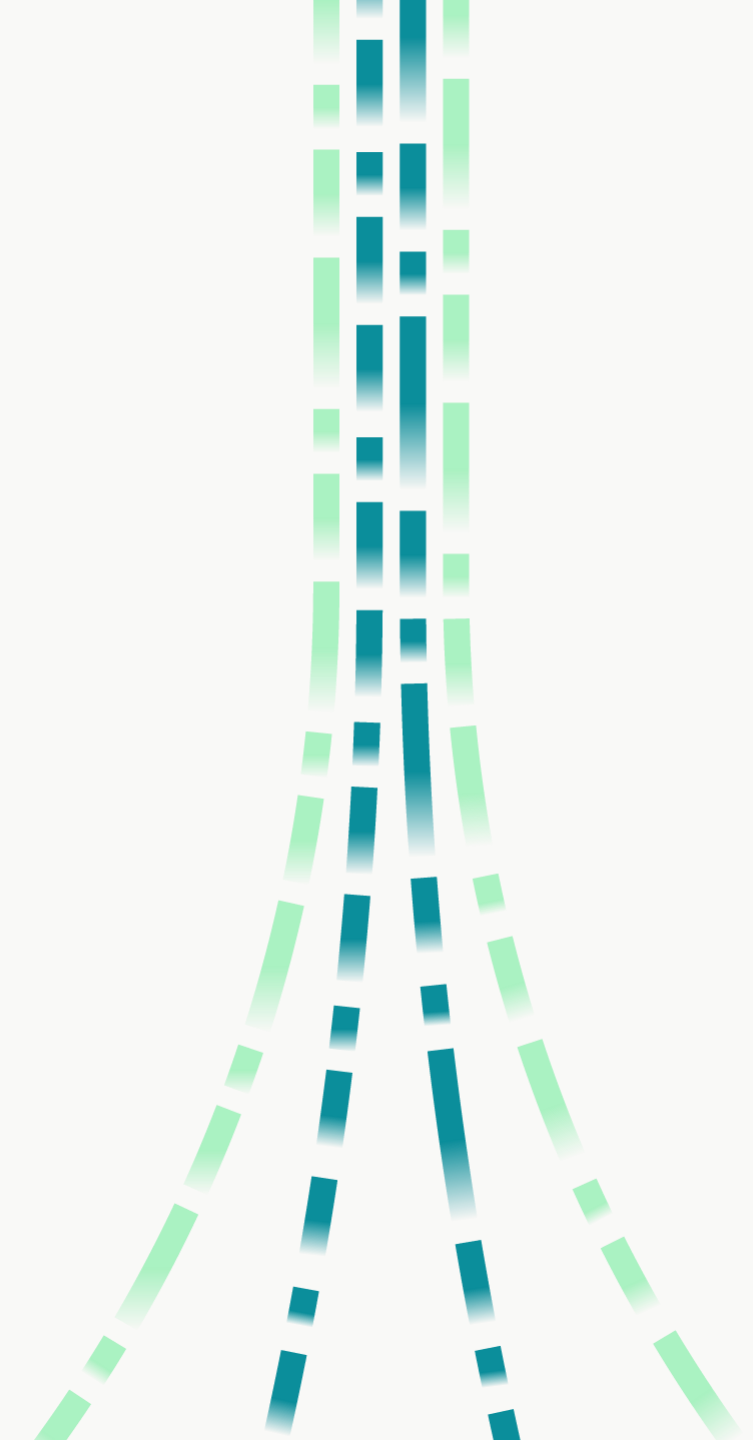
- Alert driver of over speeding

Enhanced Visibility

- Blindspot Information systems
- Autonomous reverse braking
- Cross traffic alerting
- 360 degree cameras and digital rear view monitors – virtual vision

Connected Vehicles and Telematics

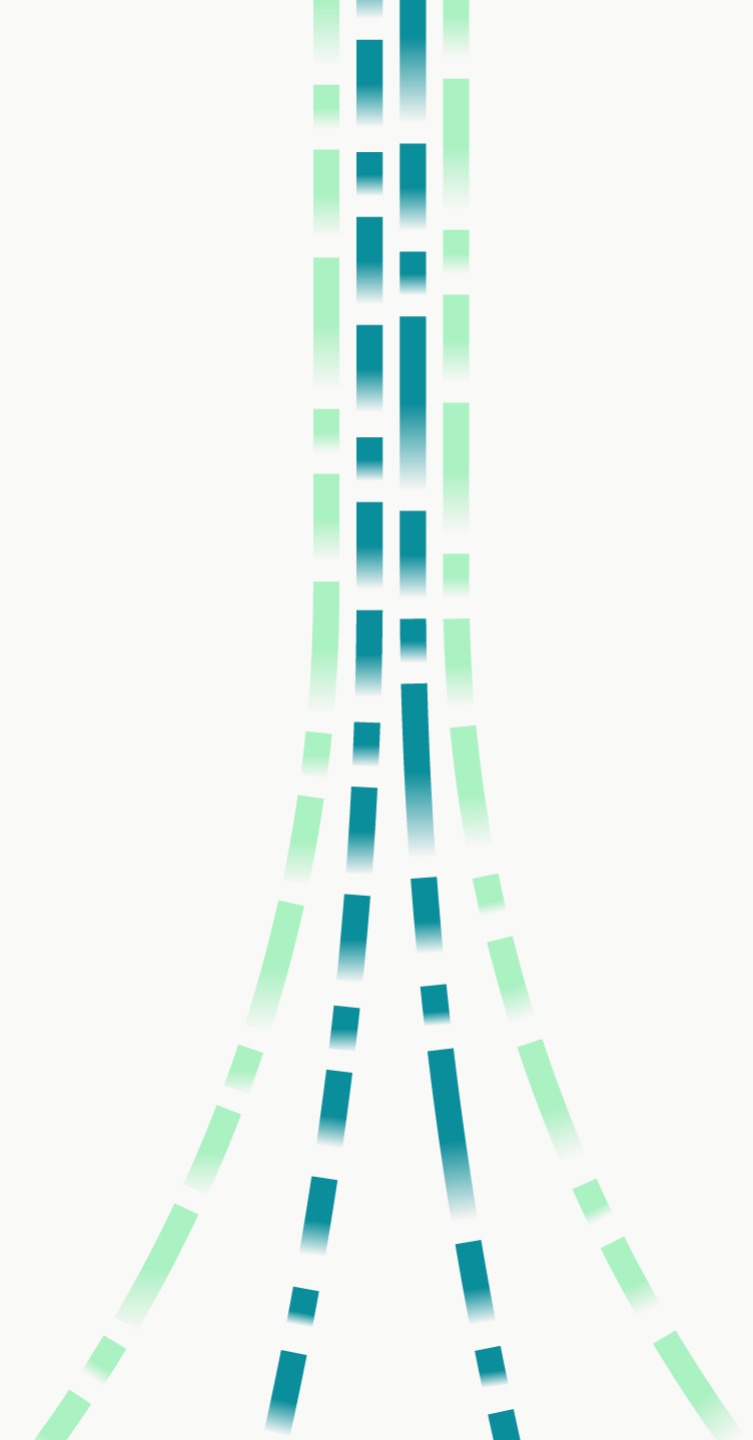
- V2X everything – 5G cellular/5G WiFi.
- V2I for adaptive route mapping
- V2P Vehicle to pedestrian/cyclist for advanced alerts
- Platooning
- Regulator data collection
- Road tolling
- Congestion charging



System Analytics

On Board mass management

Safety Management System



Augmented Reality for Driver Assistance

- Contextual Navigation
- Predictive Visualization
- In Lane Guidance

Biometric Driver Monitoring

- Physiological Monitoring
- Biometric Authentication

Multi Modal Human Machine Interfaces

- Adaptive Displays
- Gesture and Voice control
- Haptic feedback

Predictive Maintenance with AI

Analize real time telematics of on-board items

- Exhaust, Brake, Tyre, Oil, Coolant & Fuel temp
- Pad wear
- Tyre pressure
- Last service kms/date
- Lamp failures
- Vibrational analysis of electrical, steering and critical bearing condition

Suspension and Tyres

Smart Tyres - embedded sensors (real time tyre pressure, temperature, tread depth, load – real time monitoring for predictive maintenance, enhanced safety, improved fuel efficiency.

Adjustable Load distribution suspension

- Reduced road harm
- Less friction
- Optimized suspension design/function

E-Trailers

- New regulations required UN R13 / ISO11992-2
- Smart connectivity
- Shared battery load distribution
- E-axles –driven axles throughout the configuration
- Electric brakes/retardation
- Stability/control -anti sway
- Compatibility –old/new