



# Connected Infrastructure for automated driving on roads

June 13<sup>th</sup>, 2022

**ALSTOM**  
• mobility by nature •

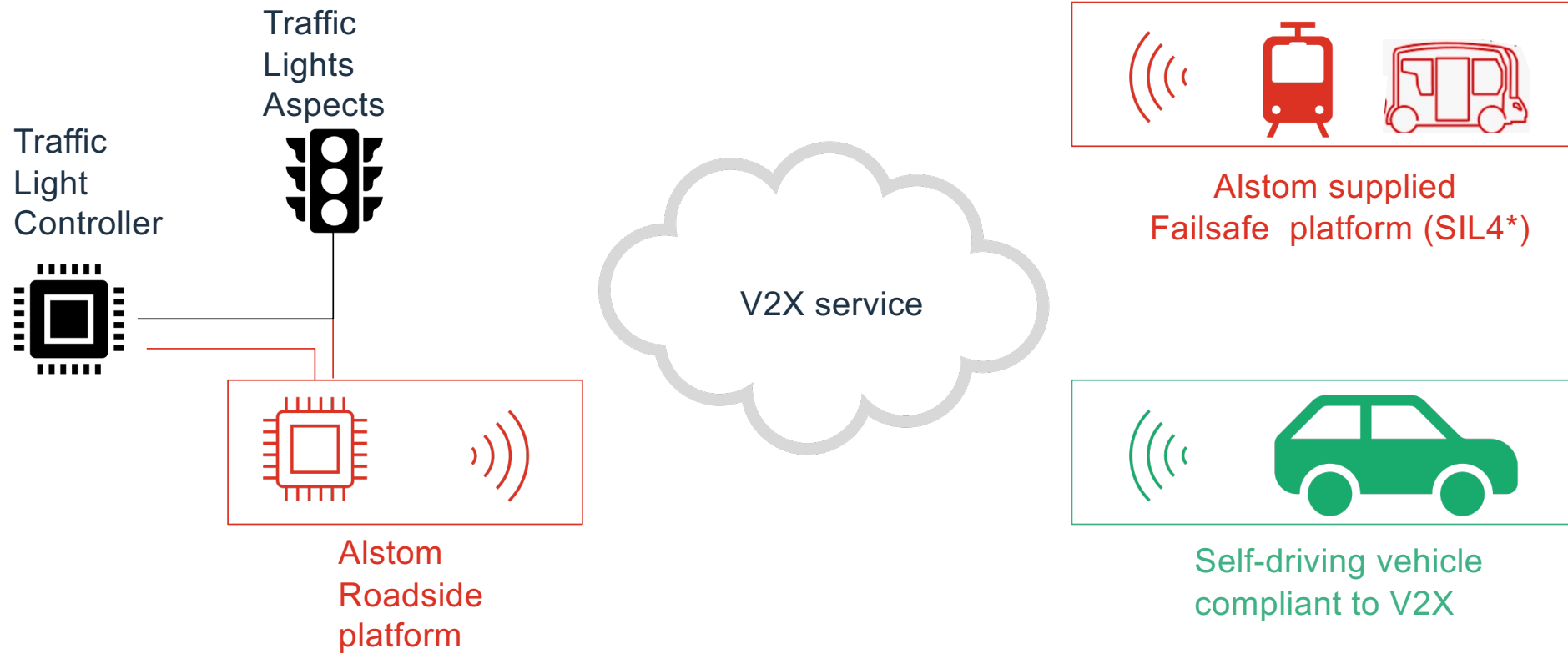


## Traffic lights for self-driving vehicles

---

- Road self-driving vehicles are (impressively) innovating in exploring their environment
- One topic has already been solved (for decades) in railways though:
  - Provide the infrastructure route locking to the vehicle in fully safety  
Safety Integrity Level 4
  - No need for image analysis of traffic lights. Information available and communicated in real-time in a safe way using vehicle connectivity standard (V2X)

# An Alstom contribution to road traffic



(\*) ASIL D or SIL4 level

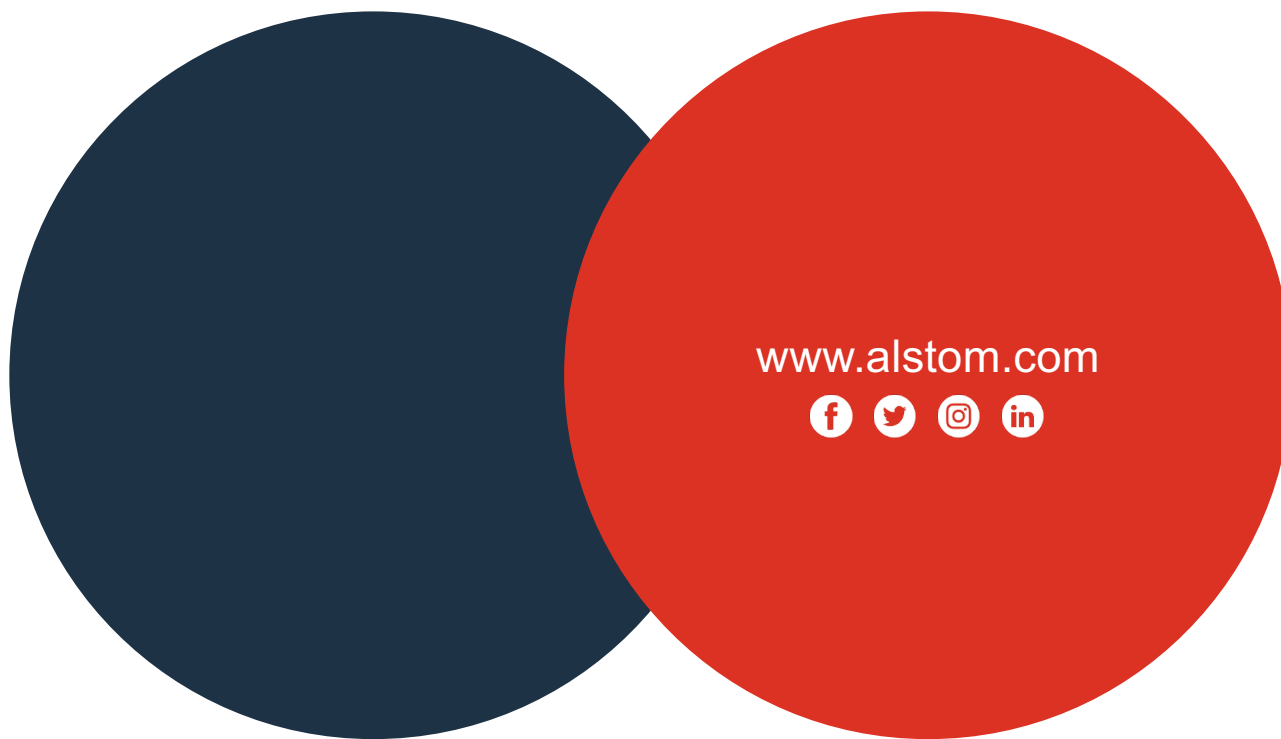
© ALSTOM SA 2022. All rights reserved. Information contained in this document is indicative only. No representation or warranty is given or should be relied on that it is complete or correct or will apply to any particular project. This will depend on the technical and commercial circumstances. It is provided without liability and is subject to change without notice. Reproduction, use, alter or disclosure to third parties, without express written authorisation, is strictly prohibited.

## On-going case study

---

- Automated shuttle service in Toulouse
- Route includes:
  - Open road with traffic lights
  - Roundabout
  - Cycle lane
  - Pedestrian and cycle crossings
- Under experimentation
  - Targeting commercial availability in 2023





[www.alstom.com](http://www.alstom.com)



**ALSTOM**  
• mobility by nature •