5G for autonomous vehicles including current possibilities with 4G

Stefano Sorrentino
Master Researcher, Ericsson
5G Automotive Association WG2 Chairman

Symposium on the Future Networked Car 2018 (FNC-18)
Geneva, March 8th 2018
Connected vehicles: why it matters

**Increased safety**

- 2010 Road fatalities: 32, 2020 Road fatalities: 16

**Growing market**

- 2015 Revenue: 5 TN $, 2030 Revenue: 7.8 TN $

**Data explosion**

- 2013 Worldwide data volume: 0.34 Petabyte, 2020 Worldwide data volume: 545 Petabyte

**European Union:**
Decrease the number of road fatalities by **50%**

**Automotive industry:**
Revenue will increase from $5 trillion to $7.8 trillion

**Telecom industry:**
186% CAGR progressive data volume increase
Multiple connections, one 5G technology

Passenger owned connection:
User centric services, consumption boosted by Autonomous Driving
Focus on user experience and high bandwidth

public/private partnership connection:
Safety centric services, challenging business case, social benefit
Focus on service-level interoperability and controlled latency

OEM-owned connection:
Vehicle and driving centric services, proprietary solutions, differentiation between brands
Focus on predictable performance, affordable and optimized transfer of huge amounts of data
The 5G connected vehicle enablers

- New Radio and Core
- Ecosystem Scale
- Cloud Distribution and Network Virtualization
- Ad-hoc and cellular complementary access
- Slicing and Networks Federation
- Security