

# **Conclusions of the ITU Symposium on the Future Networked Car**

# HL1: An Innovative Path to “Bend the Curve” on Global Road Safety

- Noting the staggering figures:
  - **1.24m people killed each year**, 20-50m people injured
  - 92% of road traffic deaths occur in **low- and middle-income countries**,
  - 50% of road traffic deaths are **vulnerable road users**
- Recognising the important role of innovation and new technologies, including automated driving
  - Human-centric and holistic approach
  - Legal framework, liabilities and regulations
  - Information, education and awareness
  - Affordability, appropriateness
- Recognised the importance of partnerships and collaboration; international standards
  - *“No one sector can bend the curve on road safety on its own”*
  - Road safety innovation index

# HL2: Innovation for the Future Car

- Jean Todt, President, FIA: We need to identify how to drop the number of fatalities – this requires a combined effort of communication companies, automakers and governments
- J. Owens, CTO, Delphi: We supply more computers than the computer companies do
- H. Touré, ITU SecGen: We need to shorten the transition time – and for that we need standards
- E. Molnar: Director, Transport Division UNECE: Regulators are responsible for creating a conducive environment for innovation
- J. de Nysschen, President, Infiniti Motor Company: Standardization will reduce the cost for our industry by billions
- T.R. Shields, Chair, Ygomi: We moved ITS communications standards to the ITU because, as a UN agency, ITU does a good job of doing honest standards

# TS1: State-of-the-art and potential of automated driving

- On the road today: *driver only; driver assistance; partial automation*
- Possible in the future, with the appropriate legislative framework: *high automation; full automation*
- Higher levels of automation will improve energy efficiency and reduce emissions, congestion and traffic accidents
- Improved quality of life: more safety; time to commuters; mobility to the aged and persons with disabilities
- V2V and V2I communications key to realizing the promise of automated driving
- High levels of automation expected on the market by 2020

# TS1: Barriers to overcome to realize automation's potential

- Questions around drivers' interactions with autonomous vehicles: handing-over and regaining control; capability to understand automatic functionality...
- Questions around liability in the case of accidents involving vehicles with automatic/autonomous functionality
- Data reliability and security are prerequisites to automation

Uncertain future:

- The industry is preparing for a range of possible futures in terms of standards, technologies, national policies...

More clarity required on roadmap and likely direction of regulation

# TS2: Regulatory changes on the horizon

## US government:

- Plans to require vehicle-to-vehicle communications systems on future cars and light trucks – regulation targeted for publication by the end of 2016; applied in 2021 (estimate)

## Federal Ministry of Transport and Digital Infrastructure, Germany:

- Roundtable on Automated Driving – Working Groups on Law; Driver/Car; Research (end 2014 first findings)

## UNECE Working Party on Road Safety (WP.1):

- March compromise proposal for an amendment to Article 8 of the Convention on Road Traffic, Vienna 1968: “Every driver shall at all times be able to control his vehicle or to guide his animals”
- General shape of compromise proposal: New clause referring to the technical regulations as well as including a broad definition of “Driver Assistance Systems”

# TS1&2: Future priorities

- Regulators need to be convinced of the business case that ITS saves money in the long run
- ITS and automation technologies are fast moving towards commercialization and market acceptance
- US, EU, China, Japan and Korea regulators are developing ITS strategies
- **In the cycle – innovate, standardize, legislate – standards follow innovation, then comes legislation later, but standards lack behind**
- The industry is preparing for a range of possible futures: standards, technologies, national policies...
- More clarity required on roadmap

# TS1&2: Common theme – collaboration needed – large coordination puzzle

Regulators; automotive, ICT and insurance industries; research

- Regulators waiting to see how the technology progresses and how car manufacturers are planning to commercialize automation
- Auto industry waiting for regulators to give clear guidance on legislative framework, questions around liability, etc.

Standards should be the means through which the auto industry and regulators meet

- For standardization to accelerate it needs multi-disciplinary involvement (mechanical; electrical/electronic; software, etc.)
- buy-in from legislators as well as a critical mass of vehicle manufacturers committed to reaching consensus on common standards



# TS3: Pimp my driving experience and save my life - Cars and roadside connected

- Road transport as part of the wider Internet of Things: connecting cars, road users, roadside infrastructure, etc.
- Enabler of a wide range of applications and services:
  - Safety
  - Comfort and convenience
  - Efficiency and environmental consciousness
  - >> Quality of life
- Security and privacy considerations must not be an afterthought
- Standards and interoperability – need for partnerships across sectors

# TS4: Automated emergency calls - Cars and roadside connected

- Automated in-vehicle emergency call systems – widely recognized means to reduce response times and to save lives
- Creation of a technology neutral regulatory environment
- Focus on speech intelligibility and tests specific to the e-call scenario (new ITU-T Standard)
- Harmonization of international standards and regulation
- Review of certification process

# TS5: There's an app for that - Nomadic devices and cars

- 7bn mobile cellular subscriptions, more than 2bn mobile broadband subscriptions
- Connectivity by anyone, at anytime, anywhere, including in the car
- Growing app ecosystem, addressing all needs, and changing mobility as we know it
- Driver awareness a growing concern
- Standards and interoperability a crucial issue: e.g., hands-free, vehicle-gateway functions, QoS

# Common themes

- To benefit from ITS it is important to address issues including: standards; cybersecurity; software reliability; information and education; legal frameworks and liability in a holistic manner with a wide range of actors
- Requires an initiative to bring key players from automotive and ICT sectors, regulatory, legal and standards bodies together to collaborate on a roadmap that would facilitate the transition to a globally coordinated rollout
- Interest and commitment shown by other players (e.g. insurance, retail, consumer goods)
- ITU should help raise awareness of the benefits of ITS in developing countries in reducing lives lost on their roads.