Using C-ITS & Digital Maps
To Improve Road Safety

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Innovation and Digitalisation in Road Safety

- Digital Maps
- Cooperative ITS (C-ITS)
- Intelligent Speed Assistance (ISA)
GENERAL SAFETY REGULATION

- Type-approval system before vehicle go on the road
- Exclusive competence of the EU
- Significantly improved vehicle safety and road safety
  - International recognition
- Protection of occupants and vulnerable road users

Proposed Revision

- 17 Measures to improve vehicle safety
- Focus on ‘advanced driver assist systems’
  - e.g. ISA, AEBS, Emergency Lane Keep Assist

A REGULATION AS IMPORTANT FOR SAVING LIVES AS THE SEATBELT
INTELLIGENT SPEED ASSISTANCE (ISA)

- Speed is a primary contributory factor in 1/3 of fatal collisions
- ISA actively helps the driver to keep to the speed limit
  - Overridable
- 20% reduction in road deaths, 30% reduction of collisions
Intelligent Speed Assistance

With ISA, top speeds are curtailed. So:

• AEB will have more opportunity to prevent crashes
• When there are crashes, occupant protection systems will have a greater chance of preventing harm
INTELLIGENT SPEED ASSISTANCE (ISA)

How does the system know the speed limit?

Through:
• Speed sign recognition and/or
• Digital maps and/or
• Cooperative-ITS
Important that maps are up-to-date
TN-ITS

- Fostering the exchange of related road data between the source, Member States’ road authorities, and the data users, such as map makers and other parties
- Static map data such as speed limits

Important that maps are up-to-date
TN-ITS

Map Update Exchange

Common Exchange Format
TN-ITS

Map Update Exchange

[Diagram showing the process of data exchange from TN-ITS to other platforms]
• Maintainance of TN-ITS Standard: CEN TS 17268
• Expand TN-ITS Service to 9 new EU Member States
• Extend the TN-ITS Service in the 6 existing EU Member States
• Implementing a feedback loop
• Implementation Guidelines
INTELLIGENT SPEED ASSISTANCE (ISA)

How does the system know the speed limit?

Through:
• Speed sign recognition and/or
• Digital maps and/or
• Cooperative-ITS
Connectivity between:

- Vehicles
- Infrastructure
- Pedestrians
- Bicycles
- Everything
• Dynamic In-vehicle Speed Limits
• Weather conditions
• Emergency Electronic Braking Light
• Road works warning
• Intersection safety
C-ITS Platform concluded that C-ITS is capable of contributing substantially to road safety.

Specific safety enhancing services such as:

- In-vehicle speed limits
- Hazardous location warning
- Intersection safety

are expected to reduce fatalities as well as serious and minor injuries with 7%.

-7% Fatality Reduction

€3.4bn per year in 2030
13 March 2019
Commission Delegated Regulation establishing specifications.

31 Priority Services

Vehicle to Vehicle
- Traffic Jam Warning
- Stationary Vehicle Warning
- Emergency Vehicle Warning
- Electronic Emergency Brake Light
- Adverse Weather Conditions

Infrastructure to Vehicle
- Dynamic Speed Limit Information
- In-Vehicle Signage
- Hazardous Location Notifications
- Road Works Warnings
  (Signalised Intersections)
ETSC Recommendations

- Mandate safety enhancing C-ITS services
  - Day 1 Services:
    - In-vehicle speed limits, including dynamic speed limits
    - Emergency electronic braking light
    - Road works warning
    - Weather conditions, linked to dynamic in-vehicle speed limits
    - Intersection safety
  - Day 1.5 Services:
    - Vulnerable road user protection

- Retrofitting older vehicles
CONCLUSION

Both digital maps and C-ITS will contribute – directly and indirectly – to improving road safety.

Therefore important that the necessary infrastructure is deployed all across Europe.

Moreover, they will pave the way for connected and automated mobility.
THANK YOU!

The following icons from the Noun Project have been used in this presentation:

- Camera by Ishanda
- Google Car by James Mayle [Edited]
- Map by Tinashe Mugayi [Edited]