



# Vehicle Regulations and ITS deployment

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# UN Vehicle Regulations

- Developed by the World Forum for Harmonization of Vehicle Regulations (WP.29)
- Legal framework: two UN legal instruments (1958 and 1998 Agreements)
- Countries and Regional Economic Integration Organizations (EU) introduced them in their legislation
- Mandatory or alternative to national/regional law
- Based in performance requirements
- Provide a unique legal environment for the development of new technologies and solutions at global level



# Vehicle Regulations and ITS

- Intelligent Vehicle Systems have been incorporated in vehicle regulations
- Other ITS applications are not included (line keeping assistance, drive alert ...)
- Other UNECE umbrella projects of ITS technologies are in progress for their inclusion in regulations at global level

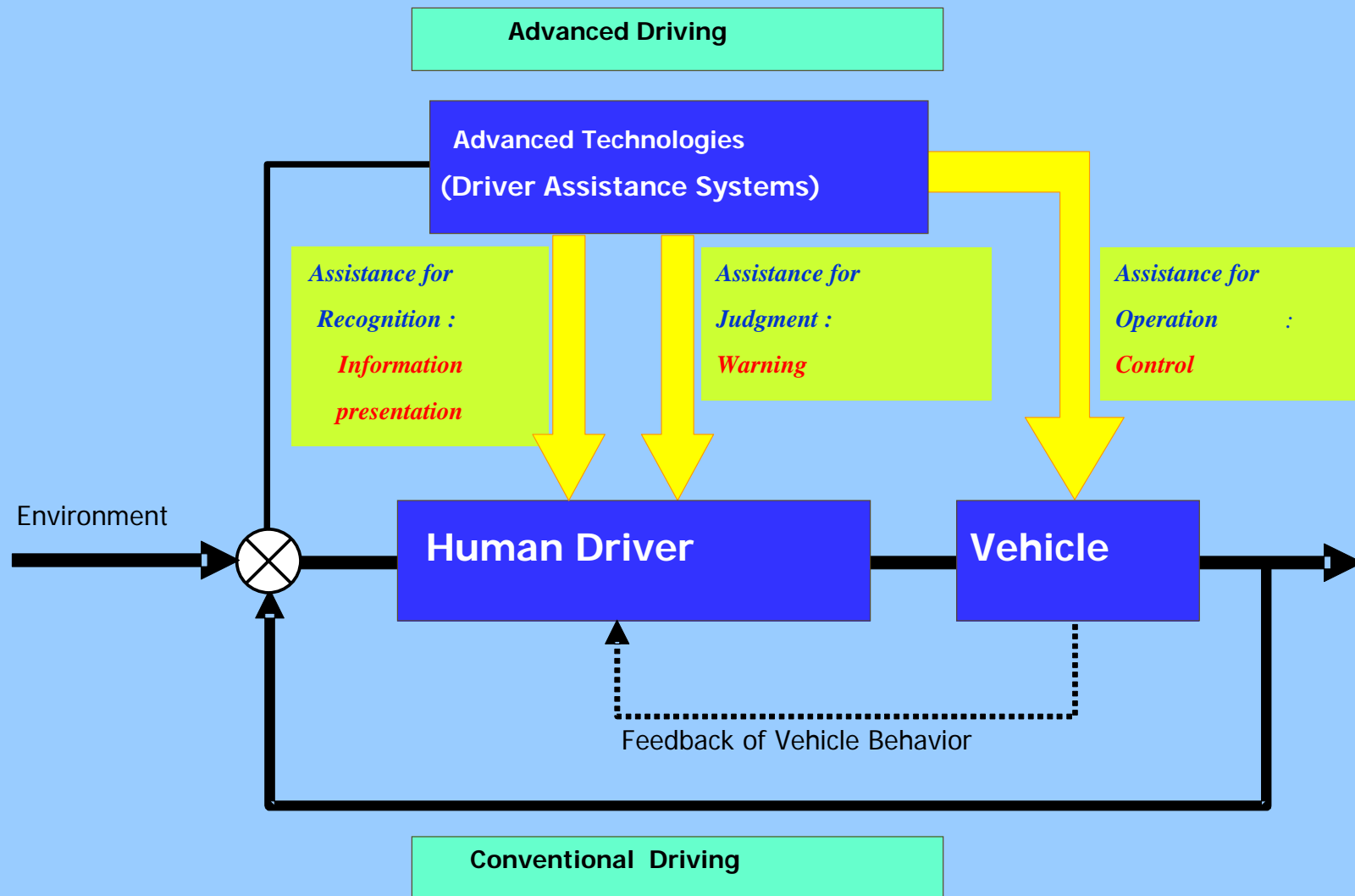


# ITS development through regulations

- Market development versus regulatory activity
- Some ITS must be incorporated into (worldwide) regulations (UNECE World Forum)
- Regulations performance oriented
- Allow technological development
- Harmonized regulations contribute to harmonize ITS
- All ITS must be compatible



# Intelligent Vehicle Systems





# Examples of In-Vehicle ITS Systems in the Market

Assistant level		Function	Examples
Recognition assistance	Information presentation	Information provided to the driver for route guidance, for notification of the unforeseeable events on the road as well as enhancement of visibility etc.	Navigation system Information on curving roads Night vision, etc.
Judgment assistance	Warning	A signal informing the driver of a hazardous situation, which if not corrected by an immediate action, will result in equipment damage and/or personal injury	FCWS LDWS SOWS Night pedestrian warning Unsteady driving warning, etc.
Operation assistance	Control	Automatic control for pre-crash situation to mitigate crash severity as well as control for normal driving to improve convenience	CMBS ACC LKA LSF Parking assist Navi-cooperative shift, etc.

## SYSTEMS

ACC: Adaptive Cruise Control

CMBS: forward Collision damage Mitigation Braking System

FCWS: Forward Collision Warning System

LDWS: Lane Departure Warning System

LKA: Lane Keeping Assist system

LSF: Low Speed Following

SOWS: Side Obstacle Warning System

VICS: Vehicle Information and Communication System



# ITS for Managed Transport Networks

- Avoid congestion
- Reduce pollution blanket hovering cities
- Noise reduction
- Increase road safety
- Increase vehicle safety
- Increase vehicle environmental performance
- Intermodal transport
- Border crossing facilitation
- TIR system
- Control of working hours



# UNECE Global Experience

- Vehicle Regulations
- Coordinated researches at global level
- Road Transport
- Road Traffic Safety
- Combined Transport
- Border Crossing Facilitation
- TIR system
- Dangerous Goods

Makes UNECE your partner for the worldwide  
development and harmonization of ITS





**Thank you for your attention**

**<http://www.unece.org/trans/main/welcwp29.htm>**