ERTRAC Vision

“Future Road Transport 2050”

Prepared by the Executive Group in collaboration with the Working Group Leaders.
KEY TOPICS

- Ensure mobility in urban areas
- **Environmental sustainability**: energy and resource efficiency, decarbonisation and air quality
- Ensure an efficient and resilient road transport system
- **Connectivity and Automation** – an enabler for improved mobility
- Provide perfect protection: safety and security
- Europe as world leader in innovation, production and services
VISION:
“People and goods can reach their destinations in cities in a way that is healthy, safe, affordable, reliable and comfortable”
ENSURE MOBILITY IN URBAN AREAS

Vision: “People and goods can reach their destinations in cities in a way that is healthy, safe, affordable, reliable and comfortable”

- **Walking, cycling, collective and shared mobility services** forming the backbone of the urban mobility transport, complemented by private vehicles
- **Mobility is higher but fluent**, inclusive and sustainable
- **Encouraging sustainable mobility behaviour** thanks to informed choices
- **Mobility on demand** including Carsharing and Ridesharing
- **Improved utilisation of shared vehicles and new technologies** have released former parking areas and other infrastructures for new use
- **Intelligent and dynamic access regulation**
- **Smart, automated and dynamic parking management** and allocation integrated with smart charging
- **Pro-active traffic and incidents management**
- **Emission free** in urban areas
- **Smart city** logistics, building a link with passenger transport and long distance freight transport
VISION:
“CO2-neutral road transport with minimal environmental impact including circular economy of vehicles and infrastructure”
Environmental Sustainability: Energy and resource efficiency, CO2 neutrality and air quality

Vision: “CO2-neutral road transport with minimal environmental impact including circular economy for vehicles and infrastructure”

- 100% renewable energy for transport (electricity, alternative fuels)
- Emissions free urban areas
- Negligible or near zero emission in rural areas
- Energy efficient road vehicles in real world conditions
- Gapless energy supply – charging infrastructure and alternative fuels everywhere needed
- Circular economy for vehicles and infrastructure
- Affordable and energy efficient vehicle production and maintenance
ENSURE AN EFFICIENT AND RESILIENT ROAD TRANSPORT SYSTEM

VISION:

“Infrastructure and traffic management provide a high efficiency road network services at competitive cost with minimized congestion, regardless of actual conditions and disturbances”
Ensure an efficient and resilient Road Transport System

Vision: “Infrastructure and traffic management provide a high efficiency road network services at competitive cost with minimized congestion, regardless of actual conditions and disturbances”

- Trans - European mobility control supports pro-active, user-centric and integrated, door-to-door mobility of people and goods.
- Adaptive and flexible traffic and transport management systems across all transport modes
- Performance based standards determine access to the road network
- Physical and digital Infrastructure services across Europe are appropriately equipped for automated vehicles, linking to international standards.
- Infrastructure services across Europe are on “pay as you use” basis.
- Construction and maintenance practices are automated, leading to high cost-efficiency and minimal works related safety risks and congestion
VISION: “People are getting the best service at highest level of comfort and safety”
Vision: “Digitalisation enables people to get the best service at highest level of comfort and safety”

- **Fully multimodal mobility** offerings including trip planning, pricing and payment
- **Connectivity everywhere** and at any time with stable connection and data rates
- **Communication between vehicles and infrastructure** to optimize traffic flow, traffic management and safety
- **Mobility as a service** regardless of ownership.
- **Predicted demand from individual behaviours**, enabling appropriate modal capacity and demand management
- **Digital technology** for vehicle access regulation, fee payments and prioritisation.
- **Data privacy and international standards** for data exchange and connectivity
- **Highly automated vehicles** for the inclusion of vulnerable users and people with reduced mobility (PRM)
- Accidents and delays are extremely rare and delays automatically resolved
- **Harmonized legal frameworks** for automated vehicles
SAFETY, SECURITY & RESILIENCE
Vision: “Safe and secure at any time”

- Nearly zero accidents and injuries due to safety functions and automated driving functions in fully connected vehicles, road users and infrastructure
- Optimised and intuitive Human-Machine Interface (HMI) following the idea of cognitive safety
- Safe and well maintained physical & digital infrastructure
- Dedicated traffic spaces for different road users where sensible
- Improved levels of in- and post-crash safety in the remaining collisions
- Secured privacy
- Safety and security features impossible to attack and misuse
- Continuous maintenance of software and system updates constantly improving their performance
- Systematic verification & validation of cyber physical systems
- Resilience: highly automated management systems to minimise the impact of incidents and accelerate recovery
EUROPE AS WORLD LEADER IN INNOVATION, PRODUCTION AND SERVICES
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- **Excellence** in education, research, and training
- Europe is the **first choice for entrepreneurs, world-leading experts and highly skilled workers** (Attract and retain the necessary research workforce)
- **Cross-sectoral collaboration** is fully established
- **Energy efficient and sustainable production** in Europe
- European network for costumer **oriented services**
- **Methods and processes** to accelerate the innovation process