

TRA 2018 Topics and Keywords

1.Environment and Energy Efficiency

Environmental impact of transport
Emissions
Decarbonization
Energy efficiency
Air quality/Noise/Health issues

2. Vehicles & Vessels - Design, Development and Production

Digital tools in vehicle & vessel design
Low emission design
Onboard technologies
Testing tools, Virtual testing
Materials, Components
Material processing and manufacturing
Robotics in manufacturing
Industry 4.0
Vehicle & Vessel Testing

3. Advanced Propulsion Systems

Electromobility
Alternative fuels
Clean energy for transport
Supply infrastructure

4. Smart Urban Mobility & Logistics

Mobility in Smart Cities
Mobility as a Service
Transport Modelling and Management
Spatial planning, Last mile
Integration of transport, energy and IT systems
Smart grid, Retrofitting
People and goods

5. People Mobility - Systems and Services

Public Transport
Transport hubs
Mobility as a Service
Transport on demand
Rural and interurban
Intermodality
Active Mobility (cycling, walking)
Info Systems, Ticketing
Crowd management
Transport modeling & simulation
Spatial planning

6. Freight Transport and Logistics

Industry 4.0
ICT Technology applications (e.g. block chain, Internet of Things, Big Data, ...)
Decarbonization & Electromobility for Logistics
Governance of Physical Internet
Transfer hubs (multimodal), synchromodality
Collaboration and supply chain management
Robotics, platooning, and automation in goods transport
Modularization, Vehicle adaptation and compliance

7. Transport Infrastructure

Transport Infrastructure Systems and Components
Infrastructure as part of the Internet of Things, Intelligent/Smart infrastructure
Sensors/Monitoring/Maintenance/Asset management, use of robotics, drones
Sustainability, Life cycle analysis (Modelling and prediction)

	Durability/Resilience
	Cost optimisation
	Safe and resilient transport infrastructure
	BIM (Building Information Management)
	Tunnels
8. Connected and Automated Transport	
	V2X, I2X for Automation
	Connectivity (including e.g. 5G)
	Sensors, Data Acquisition and Management
	Test Systems, Test fields, Virtual testing
	Digital Maps
	Physical infrastructure needs
	Use Cases
	Use of robotics, drones
	Control centers (multimodal)
	Safety of automated transport
	Transition to Automation
	Digital safety and security
	Regulatory framework
	Probe vehicle Data
9. Digital Infrastructure for Transport	
	Big Data, Cybersecurity
	ITS and Traffic Management
	Connectivity (V2x, I2x)
	Communication standards, 5G
	Satellite navigation and earth observation
	Connected services
	Streaming technologies
	Crowdsourcing of data (Smartphones)
	Augmented reality
	Block chain
	Regulation/standardization/harmonization beyond Europe
10. Safe, Secure and Resilient Transport Systems	
	Vulnerable Road Users (VRU)
	Transport Safety
	Climate change resilience
	Resilience to environmental and man-made hazards
	Security
11. Human Dimension in transport	
	Human Factors, Human Machine Interfaces (HMI), User needs, User Acceptance, Customer Satisfaction
	Accessibility/Affordability
	Inclusion
	Behaviour
12. Socio-Economics, Innovation, and Policy	
	Impact of new trends on the transport labor market
	Socio-Economics and Foresights
	Industry competitiveness
	Transforming Systems
	New business models
	Transaction management/security (Block chain)
	Political and legal framework
	Regulation deregulation
	Education/Training, Skills for future transport technologies