



SMART, GREEN and INTEGRATED TRANSPORT

**Work Programme
2016-2017**

HORIZ  N 2020

Research
and
Innovation

Transport Work programme 2016-2017

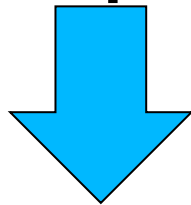
An overview

First calls published: 15/10/1015

All Transport 2016 calls now open!

Budget : EUR 938 mio – 450 mio in 2016

3 main calls – 55 topics



Call "Automated Road Transport"

Indicative budget: EUR 114 mio (64 mio in 2016)

Call "Green Vehicles"

Indicative budget: EUR 206,5 mio (78.5 mio in 2016)

Transport Work programme 2016-2017

What's new?

- ➡ **New call on Automation in road transport**
- ➡ **New R&I area on Safety**
- ➡ **Two inducement prizes for the "Cleanest engine"**
- ➡ **More emphasis on socio-economic aspects, behavioural research and forward-looking activities**
- ➡ **International cooperation in many selected topics (US, China, Brazil, Africa)**

Mobility for Growth - URBAN TRANSPORT

Topic	Title	Action type	Stages	Budget (EUR Mio)	
				2016	2017
MG-4.1	Increasing the take up and scale-up of innovative solutions to achieve sustainable urban mobility	IA	2		22
MG-4.2	Supporting "smart electric mobility" in cities	IA	2		
MG-4.3	Innovative approaches for integrating urban nodes in the TEN-T core network corridors	CSA	1		2
MG-4.4	Facilitating public procurement of innovative sustainable transport and urban mobility solutions	CSA	1	2	
MG-4.5	New ways of supporting development and implementation of neighbourhood-level and urban-district-level transport innovations	RIA	2	10	

Mobility for Growth - LOGISTICS

Topic	Title	Action type	Stages	Budget (EUR Mio)	
				2016	2017
MG-5.1	Networked and efficient logistics clusters	RIA	2	12	
MG-5.2	Innovative ICT solutions for future logistics operations	RIA	2		12
MG-5.4	Potential of the physical internet	RIA + CSA	2 1		
MG-5.3	Promoting the deployment of green transport, towards Eco-labels for logistics	CSA	1	2	

Mobility for Growth - ITS

Topic	Title	Action type	Stages	Budget (EUR Mio)	
				2016	2017
MG-6.1	Innovative concepts, systems and services towards 'mobility as a service'	RIA	2	25	
MG-6.2	Large-scale demonstration(s) of cooperative ITS	IA	2		
MG-6.3	Roadmap, new business models, awareness raising, support and incentives for the roll-out of ITS	CSA	1	5	

CALL: Automated Road Transport - priorities

- Vehicle-driver interface**
- User and social acceptance**
- Connectivity for advanced level of automation**
- Road infrastructure**
- Automation Pilots**
- Safe AD systems in complex traffic situations**
- Detect vehicle location and environment**

Automated Road Transport - Topics

Topic	Title	Action type	Stages	Budget (EUR Mio)	
				2016	2017
ART-02	Automation pilots for passenger cars	IA	2	48	
ART-04	Safety and end-user acceptance aspects of road automation in the transition period	RIA	2		
ART-05	Road infrastructure to support the transition to automation and the coexistence of conventional and automated vehicles on the same network	RIA	2	13	
ART-06	Coordination of activities in support of road automation	CSA	1	3	
ART-01	ICT infrastructure to enable the transition towards road transport automation	IA	2	50	
ART-03	Multi-Brand platooning in real traffic conditions	IA	2		
ART-07	Full-scale demonstration of urban road transport automation	IA	2		

ART 02 - Automation pilots for passenger cars

Challenge

Test automated cars in mixed traffic situations on public roads

Scope

- **Test readiness and reliability of automated driving technologies for passenger cars in Field Operational Tests (FOTs)**
- **Evaluate effects of AD systems in a mixed traffic environment and under different conditions**

Expected impact

- **Demonstrate impacts in terms of road safety, transport management, energy use, etc.**
- **Better knowledge about user acceptance and behaviour**

Estimated budget per proposal: EUR 18-36 Mio

ART 04 - Safety and end-user acceptance aspects

Challenge

- Develop automated driving technologies which are fully accepted by the users
- Ensure safety of automated driving systems (level 3) in all kinds of traffic situations

Scope

- Analyse user requirements, expectations and concerns related to the use of automated driving systems
- Design safe human-machine interface and driver monitoring strategies
- Develop fail-safe/fault tolerant systems and solutions for safe operations of AV in complex and mixed traffic situations

Expected Impact

- AD systems which are fully safe, reliable and in line with user expectations
- Proper validation procedures for automated driving systems to test functional safety and performance

Estimated budget per proposal: EUR 3-6 Mio

ART 05 - Road infrastructure to support Automated Driving

Challenge

Establish road infrastructure conditions to allow safe automated driving in the transition period

Scope

- **New methods of traffic flow modelling**
- **Design, upgrading and adaptation of “hybrid” infrastructure**
- **Required forms of visual and electronic signalling and optical guidance**
- **Best ways to enlarge the electronic road horizon for AVs**
- **New safety performance criteria for road infrastructure**

Expected impact

Support stepwise introduction of automated driving by innovative modelling, design and engineering of road infrastructure

Estimated budget per proposal: EUR 2-5 Mio

ART 06 - Coordination of activities in support of road automation

Challenge

**More coordinated approach of Automated Vehicles testing
More efficient sharing of data and experiences of different FOTs**

Scope (proposals should address 1, 2 or both areas)

Area 1 Solid knowledge base on all ongoing R&D

Forum for National & European stakeholders

Support international cooperation activities (USA, Japan)

Area 2 Platform of data exchange of FOT

Strategy for sharing and exploiting collected data in National, European and international FOTs

Expected impact

Provide comprehensive picture of the state of the art in terms of R&D in automated road transport

Better visibility, comparability and transferability of available results and data from FOTs

Estimated budget per proposal: EUR 0,5-3 Mio

TWINNING - Road vehicle automation

EC and US DOT encourage twinning to exchange knowledge and experience and exploit synergies

- **Twinning activities are on voluntary basis**
- **Full flexibility for defining twinning activities**

Examples for twinning activities: exchanges of information, data, visits, methodologies, researchers, results, joint workshops, publications etc.

In the proposal phase: 1st stage proposal: broadly outline planned areas for twinning with US organisations

2nd stage proposal: specify the workpackages and tasks for "twinning" activities with US organisations

No need to specify US organisations in the proposal

Twinning is foreseen only for a selected number of topics

Green Vehicles – Topics

Topic	Title	Action type	Stages	Budget (EUR Mio)
				2016
GV-02	Technologies for low emission light duty powertrain	RIA	1	65
GV-03	System and cost optimised hybridisation of road vehicles	IA	1	
GV-11	Stimulating European research and development for the implementation of future road transport technologies	CSA	1	3,5
GV-12	ERA-NET Co-fund on electromobility	ERA-NET	1	10

GV 02 - Technologies for low emission light duty powertrains

Challenge

Increasingly stringent emission standards, but real driving emissions not sufficiently reduced

Scope

Addressing optimal combination of innovative engine and after-treatment technologies

Future combustion engines for electrified powertrains

Support for improved regulation of nanoparticles below 23 nm

Expected impact

Reduce CO₂ and polluting emissions in real driving conditions

Estimated EC contrib. per proposal: EUR 5-10 Mio

International Cooperation (Japan, US) encouraged

GV 03 - System and cost optimised hybridisation of road vehicles

Challenge

Reducing cost and complexity of pure hybrid, plug-in hybrid and range extended electric vehicles

Scope

Identify potential for cost reduction by technical simplification of powertrain for light-duty and / or heavy-duty vehicles

Expected impact

Cost reduction allowing for higher market penetration of hybrid vehicles

Estimated EC contrib. per proposal: EUR 7-10 Mio

Horizon prize for the cleanest engine

Challenge

- Helping the development of technologies to reduce emissions of pollutants in real driving conditions

Scope

- Two prizes addressing (A) the existing fleet (retrofitable technology) and (B) future vehicles

Expected impact

- Reduce noxious emissions

Indicative budget: EUR 1,5 (A) + 3,5 (B) Mio

Target audience: individuals, SMEs, research centres, universities, suppliers of components, car manufacturers

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Thank you for your attention!

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