



#H2020TransportResearch

Horizon 2020 Work Programme for Research & Innovation 2018-2020

Smart, green and integrated Transport Work Programme 2018-2020

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Research and
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Transport Challenge in H2020 Work Programme 2018-2020

Horizon 2020 Policy Priorities	Transport Policy Priorities
Increased investment in sustainable development and climate related R&I <ul style="list-style-type: none">➤ <i>35% of budget to climate actions</i>➤ <i>60% of budget to sustainable development</i>	Resource efficient transport that respects the environment
Integrating digitisation in all industrial technologies and societal challenges <ul style="list-style-type: none">➤ <i>Digital Single Market Strategy</i>	Better mobility , less congestion, more safety and security
Strengthening international R&I cooperation : <i>30 Flagships to ensure scope and scale in targeted areas</i>	Global leadership for the European transport industry
Resilience to societal concerns : <i>security and migration</i>	Socio-economic and behavioural research & forward looking activities
Market creating innovation : <i>EU Innovation Council pilot</i>	

Transport Work Programme 2018-2020

What's new..?

- **3 years** coverage: 2018-2019 and 2020
- Contribution to 2 key **Focus Areas*** (out of 4) addressing global challenges cutting across sectors and programmes:
 1. Building a low-carbon, climate resilient future
 2. Digitising and transforming European industry and services
- New structure, reduced number of topics and **cross-modal approach** in MG and NMBP calls
- Contribution to cross-cutting priorities: action on **electric batteries** worth EUR 200 million
- Reinforced **International cooperation: 5 flagship initiatives** of large scale and scope addressing global challenges (air quality, urban mobility, automation, logistics, greener/safer aviation) and 20 more topics encouraging InCo
- **Two-stage** procedure for MG call only

Transport Research: Key Facts in Nutshell

- **Budget 2018: EUR 298.6 mio** –EUR 945 mio in 2018-2020
- **3 main calls for proposals** and 22 topics open in 2018
- 31 October 2017: **calls open!** WP pre-published in H2020 web-site
- **3 types of action: RIA, IA, CSA/EraNet**
- **Other actions:** Prizes, SME Instrument, FTI, experts and procurements,
- Transport relevant topics in **other part of the H2020WP:** NMPB, ICT, ENERGY, SECURITY
- **Complementarities** with CleanSky, SESAR, Shift2Rail, FCH2
- **Open Access to Data policy:** applies by default to the whole H2020 to scientific publications and research data generated by projects → **opt-out option**

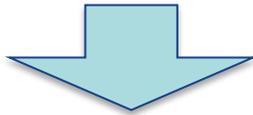


Transport Research: Key Objectives

- Electrification (incl. Battery Research)
- Increasing Energy Efficiency
- Digitisation (Automated and Connected Transport)

... *but also*

safety, competitiveness, logistics, new mobility systems, socioeconomics of transport



1. Call "Mobility for Growth"

- 1.1. Low-carbon and Sustainable Transport
- 1.2. Safe, Integrated and Resilient Transport System
- 1.3. Global Leadership and Competitiveness
- 1.4. Accounting for the People
- 1.5. Blue Growth Call Topics

2. Call "Green Vehicles"

- 2.1. Batteries in H2020
- 2.2. NMBP* calls related to Batteries

3. Call "Automated Road Transport"

4. Other Actions

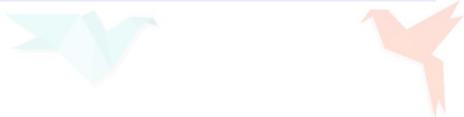
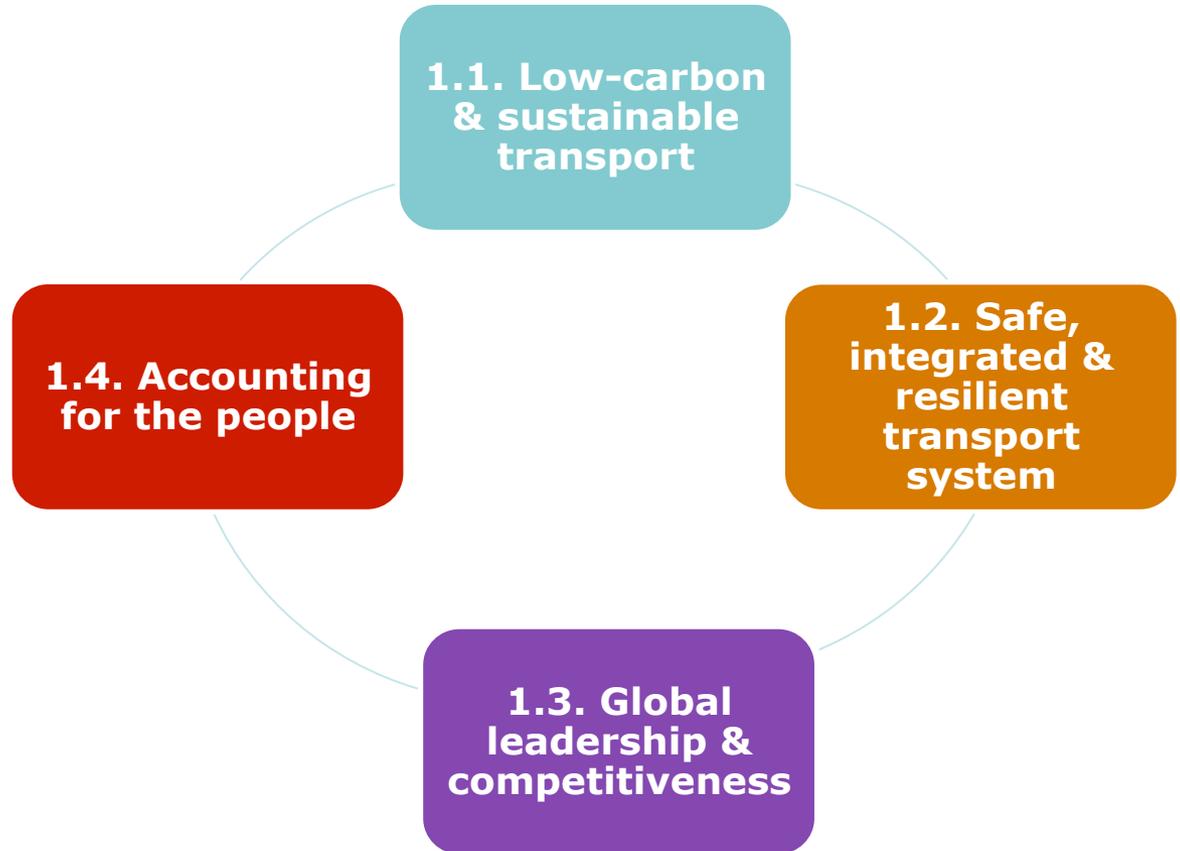
**Nanotechnologies, Advanced Materials, Biotechnology and Advanced Manufacturing and Processing WP*

1. Call "Mobility for Growth (MG)" 2018-2019-2020



Overall objectives:

- ✓ Reconcile competitiveness & sustainability
- ✓ Ensure better and safer mobility for all
- ✓ Address socio-economic aspects and provide evidence for policy-making



1.1. Call "MG-1 Low-carbon and Sustainable Transport" 2018-2019-2020



MOBILITY FOR GROWTH – MG call

1.1. Low-carbon and sustainable transport

Focus on:

- Support the transition towards zero-emission and quieter mobility for all modes
- Improve tools and mechanisms for monitoring and detection of emissions & noise
- Provide evidence for decision making process and planning

MG-1 Low-carbon & sustainable transport topics and budget

Total EU contribution: EUR 141 m in 2018-2019

Topic	Title	Action type	Stages	Budget		
				2018	2019	2020
LC-MG-1-1 <i>InCo flagship 1</i>	Reduction of transport impact on air quality	RIA	2	30.00		
LC-MG-1-2	Sustainable multi-modal inter-urban transport , regional mobility & spatial planning	RIA	2	12.00		
LC-MG-1-3	Harnessing and understanding the impacts of changes in urban mobility on policy making by city-led innovation for sustainable urban mobility	CSA	1	3.00		
		RIA	2	11.00		
LC-MG-1-4	Hardening vehicle environmental protection systems against tampering	RIA	2	5.00		
LC-MG-1-5	Advancements in aerodynamics & innovative propulsion systems for quieter & greener aircrafts	RIA	2		15.00	
LC-MG-1-6 <i>InCo flagship 2</i>	Aviation operations impact on climate change	RIA	1		10.00	
LC-MG-1-7 <i>InCo flagship 2</i>	Future propulsion & integration: towards a hybrid/electric aircraft	RIA	1		15.00	
LC-MG-1-8	Retrofit Solutions and Next generation propulsion for Waterborne Transport	IA	2		8.00	
		RIA	2		15.00	
LC-MG-1-9	Upgrading transport infrastructure in order to monitor noise and emissions	RIA	2		7.00	
LC-MG-1-10	Logistics solutions that deal with requirements of the 'on demand economy' and for shared-connected and low-emission logistics operations	RIA	2		10.00	

1.2. Call "MG-2 Safe, Integrated and Resilient Transport Systems" 2018-2019-2020



MOBILITY FOR GROWTH – MG call

1.2. Safe, integrated and resilient transport systems

Focus on:

- **Transport safety: contribution to the "*zero road fatalities*" goal in a changing environment**
- **Innovative solutions to reduce congestion and ensure seamless, safe and sustainable mobility for people and freight**
- **More resilient transport system and support network capacity**

MG-2 Safe, Integrated and Resilient Transport topics and budget

Total EU contribution: EUR 140 m in 2018-2019

Topic	Title	Action type	Stages	Budget		
				2018	2019	2020
MG-2-1	Human Factors in Transport Safety	RIA	2	18.00		
MG-2-2	Marine Accident Response	IA/RIA	2	35.00		
MG-2-3	Airworthiness of mass-market drones	CSA	1	3.00		
MG-2-4	Coordinating national efforts in modernizing transport infrastructure and provide innovative mobility services	CSA	1	1.00		
MG-2-5 <i>InCo flagship 2</i>	Innovative technologies for improving aviation safety and certification in icing conditions	RIA	1	16.00		
MG-2-6	Moving freight by Water: Sustainable Infrastructure and Innovative Vessels	RIA	2		30.00	
MG-2-7	Safety in an evolving road mobility environment	RIA	2		8.00	
MG-2-8	Innovative applications of drones for ensuring safety transport	RIA	2		15.00	
MG-2-9 <i>InCo flagship 3</i>	Integrated multimodal, low-emission freight transport systems and logistics	RIA	2		14.00 	

1.3. Call "MG-3 Global Leadership and Competitiveness" 2018-2019-2020

MOBILITY FOR GROWTH – MG call

1.3. Global Leadership & Competitiveness

Focus on:

- **Vehicle/vessel design and manufacturing and life-cycle approaches**
- **Rapid integration of ICT and IoT**
- **Human component of CAT technologies**

MG-3 Global Leadership and Competitiveness topics and budget

Total EU contribution: EUR 44 m in 2018

Topic	Title	Action type	Stages	Budget		
				2018	2019	2020
MG-3-1	Multidisciplinary and collaborative aircraft design tools and processes	RIA	2	12.00		
MG-3-2	The Autonomous Ship	IA	2	20.00		
MG-3-3	"Driver" behaviour and acceptance of connected, cooperative and automated transport	RIA	2	12.00		



1.4. Call "MG-4 Accounting for the People" 2018-2019-2020



MOBILITY FOR GROWTH – MG call

1.4. Accounting for the People

Focus on:

- **Innovative solutions for an accessible & inclusive transport system**
- **Behavioural issues and user needs**
- **Appropriate regulatory frameworks and policies to support innovation and deployment**
- **Dissemination and exploitation of sustainable mobility solutions**

MG-4 Accounting for the People topics and budget

Total EU contribution: EUR 25,1 m in 2018-2019

Topic	Title	Action type	Stages	Budget		
				2018	2019	2020
MG-4-1	New regulatory frameworks to enable effective deployment of emerging technologies & business/operating models for all transport modes	CSA	1	2.00		
MG-4-2	Building Open Science platforms in transport research	CSA	1	3.00		
MG-4-3	Demographic change and participation of women in transport	CSA	1	5.00		
MG-4-4	Support for dissemination events in the field of Transport Research	CSA	1	1.40	0.70	
MG-4-5	An inclusive digitally interconnected transport system meeting citizens' needs	RIA	1		7.00	
MG-4-6	Supporting Joint Actions on sustainable urban accessibility and connectivity	ERA-NET-Cofund	1		6.00	



1.5. Call "MG Blue Growth" 2018-2019-2020



MOBILITY FOR GROWTH – MG call

Two '**Blue Growth**' topics' in 2018-2019

Focus on:

- Reduce the costs of deep sea exploration
- Explore several possible scenarios for the wide scale adoption of different emission control technologies

1.5. MG Blue Growth topics and budget

Total EU contribution: EUR 16 m in 2018-2019

Topic	Title	Action type	Stages	Budget		
				2018	2019	2020
MG-BG-01	Unmanned and autonomous survey activities at sea	RIA	1	8.00		
MG-BG-02	Ship emission control scenarios , marine environmental impact and mitigation	RIA	1		8.00	



2. Green Vehicles topics and budget

Total EU contribution: EUR 246 m in 2018-2019-2020

Topic	Title	Action type	Stages	Budget		
				2018	2019	2020
LC-GV-01	Integrated, brand-independent architectures, components and systems for next generation electrified vehicles optimised for the infrastructure	IA	1	42.00		
LC-GV-02	Virtual product development and production of all types of electrified vehicles and components	RIA	1	14.00		
LC-GV-03	User centric charging infrastructure	IA	1		35.00	
LC-GV-04	Low-emissions propulsion for long-distance trucks and coaches	IA	1		25.00	
LC-GV-05 <i>InCo flagship 5</i>	Urban mobility and sustainable electrification in large urban areas in developing and emerging economies	IA	1		18.00	
LC-GV-06	Next generation and realisation of battery packs BEV & HEV					112.00
LC-GV-07	Advanced light materials and their production processes for automotive applications					
LC-GV-08	Reducing the environmental impact of hybrid light duty vehicles					
LC-GV-09	Next generation electrified vehicles for urban use					

2.1. Batteries in H2020

WP 2014-2017
12 projects
funded
€ 80 million

WP 2018-2020
Pre-published
€ 100 million

WP 2019 – 2020
Additional funding
€100 million

Research on
batteries
**€ 280
million**

**NMBP & Transport WP*

2.2. Call "NMBP" – Battery Related topics and budget

Total EU contribution: EUR 45 m in 2018-2019

LC-NMBP-27-2019	Strengthening EU materials technologies for non-automotive battery storage
<i>Develop more price competitive, better performant and highly safe battery storage solutions, with improved lifetime by lowering the cost and capital expenditure</i>	
LC-NMBP-30-2018	Materials for future highly performant electrified vehicle batteries
<i>Development of new or significantly improved materials and/or chemistries to optimise the battery cell and its components, with features clearly beyond the state-of-the-art technologies that are currently used in commercial cells for automotive applications</i>	
2020	Horizon Prize Innovative Batteries for e-Vehicles
<i>To develop a safe and sustainable battery for electric-vehicles which provide the same or better performance than vehicles with internal combustion engines and to be capable of recharging the electric vehicle within a time equivalent to fill a conventional gasoline/diesel fuel tank</i>	

3. Call "Automated Road Transport (ART)" 2018-2019



Call Focus:

- **Promote market introduction of highly automated driving systems (SAE level 4) through large-scale/cross-border demonstrations**
- **Develop and test sustainable automated driving functions in real driving conditions, in various traffic scenarios and urban areas**
- **Contribute to regulatory framework, certification procedures and standards**
- **Develop new concepts for shared, connected and automated mobility**
- **Address cross-cutting issues (safety, users' needs, efficiency,...)**

3. Automated Road Transport topics and budget

Total EU contribution: EUR 103 m in 2018-2019-2020

Topic	Title	Action type	Stages	Budget		
				2018	2019	2020
DT-ART-01 <i>InCo flagship 4</i>	Testing, validation and certification procedures for highly automated driving functions under various traffic scenarios based on pilot test data	RIA	1	6.00		
DT-ART-02 <i>InCo flagship 4</i>	Support for networking activities and impact assessment for road automation	RIA	1	6.00		
		CSA	1	3.00		
DT-ART-03 <i>InCo flagship 4</i>	Human centred design for the new driver role in highly automated vehicles	RIA	1		8.00	
DT-ART-04 <i>InCo flagship 4</i>	Developing and testing shared, connected and cooperative automated vehicles fleets in urban areas for the mobility of all	IA	1		30.00	
DT-ART-05	Efficient and safe connected and automated heavy-duty vehicles in real logistics operations					
DT-ART-06	Large-scale, cross-border demonstration of highly automated driving functions for passenger cars					50.00



4. Other Actions

20 August 2019

Horizon Prize for the cleanest engine of the future (EC cont. € 3.5 Million)

Stimulate the development of next generation engines and powertrains using conventional fuels in order to improve air quality issues in European cities

- **ELENA Facility & Smart Cities** (in the Energy WP)
- **Public Procurements & Expert Contracts** for studies, monitoring/evaluation exercises and forward-looking activities
 - New mobility patterns in EU cities
 - Employment implications of connected and automated driving
 - EU-US Transport research symposia
 - Dissemination and exploitation of results
 - Cooperation with ITF on decarbonisation of transport and with JRC on transport modelling
 - Ex-post analysis of transport JUs

Save the Date!

For more information:



Transport Work Programme:

<https://ec.europa.eu/programmes/horizon2020/en/shaping-work-programme-2018-2020-societal-challenge-4-smart-green-and-integrated-transport>

Thank you!

#EUTransportResearch

<http://ec.europa.eu/research/transport>

