European Commission

#InvestEUresearch

#H2020TransportInfo

Horizon 2020 Work Programme for Research & Innovation 2018-2020

Transport Info Day

13 December 2017

Research and Innovation

Main features

- Budget 2018: EUR 298.6 mio – EUR 945 mio in 2018-2020
- 3 calls for proposals and 21 topics in 2018:
    1. *Mobility for Growth (MG), incl. BG*
    2. *Automated Road Transport (ART)*
    3. *Green Vehicles (GV)*

- Opening of calls - 31 October 2017
- 3 types of actions: RIA, IA, CSA + Other actions: Prizes, SME Instrument, FTI, experts groups and procurements
- Transport-relevant topics in other parts of the H2020 WPs: NMPB, ICT, ENERGY, SECURITY, FOOD and complementarities with calls and activities of 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
- Improved focus and clarity in the topic descriptions (notably the expected impacts)...while keeping an open and non-prescriptive approach

Transport WP 2018-2020 – Overview
What's new

- 3-year coverage: 2018-2019 and 2020
- Increased support to activities addressing global challenges and cutting across sectors and programmes: the Focus Areas (FA)* concept
  1. *Building a low-carbon, climate resilient future*
  2. *Digitising and transforming European industry and services*
- Improved coordination to address technological challenges: EUR 200 Mio indicative budget to R&I activities on batteries
- Reinforced International Cooperation - InCo: 5 flagship initiatives to address global challenges calling for global solutions (on Air quality, on Aviation called "Safer and Greener Aviation in a Smaller World", on Urban Mobility, on Automation, and on Freight Logistics) and 10 specific topics encouraging InCo
- Reduced number of topics and broader scope, new structure
- Two-stage procedure for MG call (except for the Aviation Inco flagship) and single-stage procedure for GV, ART and BG

*Focus Areas (FA): The other two FA aim at "Connecting economic and environmental gains – the Circular y" and at "Boosting the effectiveness of the Security Union"

European Commission

International Cooperation (InCo) in the Transport WP 2018-20

Global challenges call for global solutions

- **Emissions**, pollution, climate impact
- Oil dependency, energy efficiency
- Transport safety and security
- Standardisation of services, products and procedures

Local issues benefit from exchange of best practices

- Traffic congestion
- Land use planning
- Behavioural issues

European Commission

InCo general principles

- ✓ **General openness**: Projects can include international partners (participant or third party)
- ✓ **Targeted opening**: In certain topics, inclusion of international partners will be encouraged
- ✓ **5 Flagship initiatives** specifically devoted to InCo, large of scale & recognised in political dialogue
- ✓ **InCo is encouraged**: **No** eligibility and admissibility criterion

European Commission

InCo Flagships in the WP 2018

Area	Topic	Title	Targeted countries
1. Cooperation on particles in relation to health and climate change			
Low-carbon and sustainable transport	*LC-MG-1-1-2018*	*InCo flagship on reduction of transport impact on air quality*	Asia (e.g. China), CELAC and the US
2. Aviation International Cooperation Flagship – Safer and Greener in a Smaller World			
Safe, integrated and resilient transport systems	*MG-2-5-2018*	*Innovative technologies for improving aviation safety and certification in icing conditions*	Australia, Brazil, Canada, Japan, Russia and the US
3. Integrated multimodal low-emission freight transport systems and logistics (Not in 2018)			
4. Automated road transport			
Automated road transport	*DT-ART-01-2018*	*Testing, validation and certification procedures for highly automated driving functions under various traffic scenarios based on pilot test data (*)*	Australia, Japan, Singapore, South Korea and the US
	DT-ART-02-2018	*Support for networking activities and impact assessment for road automation (*)*	Australia, Japan, Singapore, South Korea and the US
5. Urban mobility and sustainable electrification in large urban areas in developing and emerging economies (Not in 2018)			

InCo 2018 topics with targeted opening

Area	Topic	Title	Targeted countries
Low-carbon and sustainable transport	*LC-MG-1-2-2018*	*Sustainable multi-modal inter-urban transport, regional mobility and spatial planning (*)*	US
	LC-MG-1-3-2018	*Harnessing and understanding the impacts of changes in urban mobility on policy making by city-led innovation for sustainable urban mobility*	China, India and the US
Safe, integrated and resilient transport systems	*MG-2-1-2018*	*Human Factors in Transport safety*	None
	MG-2-2-2018	*Marine Accident Response*	None
Accounting for the people	*MG-4-1-2018*	*New regulatory frameworks to enable effective deployment of emerging technologies and business/ operating models for all transport modes*	None
	MG-4-2-2018	*Building Open Science platforms in transport research*	None
(*) Proposals should foresee twinning with projects funded by US DOT			

InCo Twinning

Twinning of projects

- *Combining focus and flexibility*
- *With entities participating in projects funded by a third country (e.g. US)*
- *From project level to programme level*

The process

- *Common areas for twinning/cooperation*
- *EU call for proposals encouraging twinning*
- *Third country matches it with similar solicitation*
- *Third country and EU identify projects for twinning and establish first contacts*
- *Identified projects agree on twinning activities and respective efforts*
- *Examples of collaboration: exchanges of information, data, visits, methodologies, researchers, results, joint workshops, publications, etc.*
- ***No** merging of services, resources (including financial)*

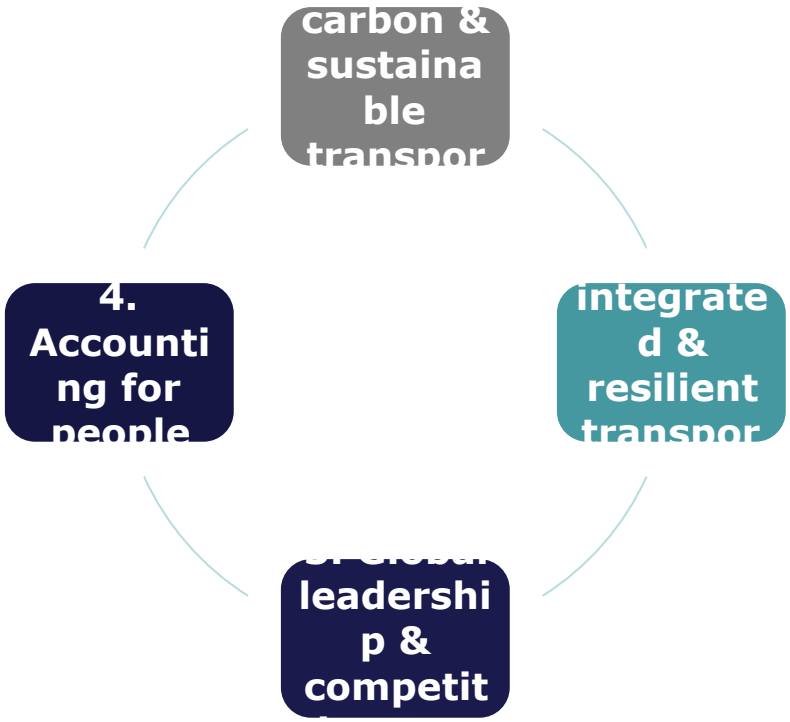
European Commission

WP 2018 Call: Mobility for Growth (MG)

17 topics

Overall objectives:

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



European Commission

WP 2018 Call: Mobility for Growth (MG)

AREA 1

Low-carbon & sustainable transport

Focus on

- The transition towards zero-emission and quieter mobility for all modes, for people and goods
- Tools and mechanisms for monitoring and detection of emissions & noise
- Scientific evidence for decision making process and planning
- Cross- modal / transport integration solutions in urban areas

European Commission

MG - AREA 1

Low-carbon & sustainable transport

2018 Total EU contribution: **EUR 61 Mio**

Topic	Title	Action type	Stage	Budget 2018	Budget 2019	Budget 2020
LC-MG-1-1 *InCo flagship 1*	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 *InCo flagship 2*	**Aviation** operations impact on climate change	RIA	1		10.00	
LC-MG-1-7 *InCo flagship 2*	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	

European Commission

Reduction of transport impact on air quality (1)

LC-MG-1.1-2018
(RIA)

Multilateral International Cooperation encouraged, in particular

Asia (e.g. China)

SELAC

US

(InCo Flagship "Cooperation on particles in relation to health and climate change")

Challenge: Understanding and reducing transport contribution to low air quality and health impact

Scope: several areas outside the reduction at the engine (covered elsewhere), in fact 6 subtopics on driver behaviour, monitoring, consumer information, aircraft/ship emissions and health. Each has specific description that needs to be carefully defined

Expected impact: reduction of emissions, consumer education, monitoring and enforcement, understanding of contribution to emissions and health effects, support regulation and risk assessments

Estimated EC contribution per proposal: proportional to complexity, from 2M for socio economic subtopics, up to 5M for more technical/scientific ones

European Commission

Reduction of transport impact on air quality (2)

Challenge: *A) Low-emission oriented driving, management and assistance*

Scope: Understanding how to reduce emissions (NOT consumption) by appropriate driving , including brake-tire emissions; disseminate by courses, campaigns, events (apps not enough). Study other user behaviours like maintenance, retrofitting and tampering and derive impact and ways of improving them.

InCo-related: China and Asia, CELAC

Challenge: *B) Definition of a green vehicle index*

Scope: Develop a holistic testing and scoring mechanism for conventional and electrified vehicles allowing to give a simple score to orient customer choice towards the greenest vehicles

InCo-related: no, but possible external coordination

Reduction of transport impact on air quality (3)

Challenge: *C) Sensing and monitoring emission in urban road transportation system*

Scope: Development of improved remote sensing of vehicles emissions for monitoring and repression purposes, with link with appropriate data infrastructure demonstration in different cities.

InCo-related: China (with funding in Chinese WP)

Challenge: *D) Cost effective enforcement of shipping related emissions legislation and assessment of impact on health and air quality*

Scope: Develop, evaluate and demonstrate cost effective systems to measure airborne pollutants from vessels under real operational conditions and derive their impact in coastal, urban and port areas

InCo-related: Asian ports/authorities and through IMO

Reduction of transport impact on air quality (4)

Challenge: *E) Measurement of airborne pollutants emissions from aircraft*

Scope: Measure emission during parking, taxiing, take-off and climb-out conditions and derive their impact on air quality in neighbouring areas.

InCo-related: Asia, CELAC and US

Challenge: *F) In-vitro and in-vivo assessment of health effects of ultrafine nanoparticles*

Scope: Experimental studies of the health impact (in particular cancer) of VOCs and SVOCs absorbed on different combustion particles on lungs and, in particular, beyond

InCo-related: possible, no specific countries identified

LC-MG-1.2-2018 (RIA)

Sustainable multi-modal inter-urban transport, mobility and spatial planning in large metropolitan regions

Challenge: New forms of transport & mobility could revolutionise demand with major consequences for the spatial organization of metropolitan areas or "**commuter belts**" (*regions consisting of a dense populated urban core and its less-populated surrounding territories sharing industry, infrastructure and housing*). Mitigating negative impacts of transport can and must be pursued.

Scope: Address impacts of planning in large metropolitan regions; identification of new forms of mobility impacting on spatial **redesign of urban and low-density areas**; use of geolocalization for **cooperative mobility** to foster more efficient use of infrastructure; suggest measure for the lowest carbon level in consideration of **interdependencies between spatial planning and production/consumption patterns**; comprehensive planning of the functional area extending the SUMP concept to the metropolitan region; development of sustainable policies with proven environmental impact.

Expected impact: Aid decision makers to anticipate and plan spatial adaptation and redesign to take full advantage of new forms of mobility; balanced development between urban and rural areas; reduced congestion, energy, emissions, noise and land-use; increased coordination between mobility and economic development; increased inter-mobility and higher resilience of the transport system.

Estimated EC contribution per proposal: 5 to 8 Million Euros

InCo-related: Encouraged – Twinning with US DoT funded projects to be envisaged

European Commission

LC-MG-1.3-2018
(CSA/RIA)

Harnessing and understanding the impacts of change in urban mobility on policy making

Challenge: to improve the understanding of the impacts of new urban mobility solutions on policy making. Both passenger and freight. City-led proposals.

Scope:

(A) **RIA** impacts of new mobility solutions, addressing the changing mobility patterns and set up of mobility services, including possible negative effects, and covers all relevant transport modes (including active modes) and vehicle types. Choose at least 1/5 aspects

(B) CSA facilitation of knowledge exploitation and support to the cooperation between projects and stakeholders involved in the current/ future CIVITAS projects. Address all 5 specific needs.

Expected impact:

(A) RIA: new, practice-based knowledge on how to navigate urban mobility policy through transition, ex; SUMPs, C-ITS, TEN-T, air quality

(B) CSA: promote the take up of innovation, a CIVITAS-type secretariat

Estimated EC contribution per proposal: For A- RIA: EUR 2-4 Mio, for B-CSA EUR 3 Mio

InCo-related: encouraged, especially with the US, China and India

European Commission

LC-MG-1.4-2018
(RIA)

Hardening vehicle environmental protection systems against tampering

Challenge: Reducing emissions by discouraging or stopping suppliers of "solutions" to disable emissions reduction devices (aftertreatment systems) and bypassing existing protection systems (OBD)

Scope: Avoid all tampering, but in particular the elimination of DPF and SCR, by analysing existing devices, both protection and tampering ones, with an hacker approach to find methods to improve resistance

Expected impact: Demonstration of more effective OBD/M in detecting faults and stopping tampering efforts, with real "challenges" by hackers

Estimated EC contribution per proposal: 3-5 M€

InCo-related: No

European Commission

WP 2018 Call: Mobility for Growth (MG)

AREA 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

European Commission

MG - AREA 2

Safe, integrated and resilient transport systems

2018 Total EU contribution: **EUR 73 Mio**

Topic	Title	Action type	Stage	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 *InCo flagship 2*	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 **InCo flagship 3**	Integrated multimodal, **low-emission freight transport** systems and **logistics**	RIA	2		14.00	

European Commission

MG-2.1-2018
(RIA)

Human Factors in Transport Safety

Challenge:

Human factors largest cause of accidents

Use automation to reduce impact of human factors

Scope: *(one of the following sub topics):*

A. Investigate safe human performance, demographic diversity, develop recovery/mitigation solutions, improve compliance with/ formulation of safety rules

B. Assess risk factors for waterborne &/or air transport in extreme situations. Compile data to use in risk based design & safety assessment. Guidelines for accident reporting.

Cross-modal transfer. Authorities e.g. EASA can be involved

Expected impact:

Significant decrease in human factor related incidents.

Improve rules, selection and training of operators.

Contribute to UN's ICAO, IMO, SusDev and EMSA goals

Estimated EC contribution per proposal: € 4-8 million

InCo-related: Encouraged (incl. collaboration with neighbouring countries)

European Commission

MG-2.2-2018
(IA/RIA)

Marine Accident Response

Challenge:

Actions following a marine accident can greatly reduce loss of life or damage to the environment.

Scope *(one of the following sub topics):*

A) *Focus passenger ships, Risk based damage & stability. Better wider data, link to IMO SOLAS revision. + Watertight door safety. RIA*

B) *Radical rethink of large passenger ship evacuation systems. RIA*

C) *& D) Better tackle fire on board RoRo **or** Container ships. IA*

Expected impact:

Improved safety, Improved IMO rules and damage stability models. Safer evacuation. Better tackle fires without external intervention.

Estimated EC contribution per proposal: €7-€12M

(select highest ranked in each sub topic)

InCo-related: Encouraged

European Commission

MG-2-3-2018
(CSA)

Airworthiness of mass-market drones

Challenge: to contribute to the on-going and pressing efforts aimed at regulating the emerging drone industry.

Scope: to gather, analyse and process information on existing and emerging standards, rules and regulations relating to worthiness of drones which are relevant to civilian applications;

Based on such data repository, to provide inputs for the development and validation of a well-reasoned set of appropriate EU-wide rules and technical standards;

Expected impact: to support the EU regulatory process which is geared at kick-starting drone services on a full-fledged commercial and regulated basis by the end of 2019

Estimated EC contribution per proposal: circa 2 to 3M€

InCo-related: No

European Commission

MG-2-4-2018
(CSA)

Coordinating national efforts in modernising transport infrastructure and provide innovative mobility services

Challenge: Ensure coherence at European level and avoidance of duplication of efforts and resources to find innovative solutions to upgrade transport infrastructure ensuring an adequate performance level that reflects also vehicle and ICT developments.

Scope: develop a coordination mechanisms for NTAs; identify new roles and competences for infrastructure managers/operators; consolidate partnership between transport infrastructure stakeholders and research communities; coordination activities for the optimal exploitation of results.

Expected impact: enable infrastructure managers to provide higher quality and innovative services to users and costumers; enhance communication flow and cross-fertilization between actions; ensure appropriate flow from research to innovation to implementation.

Estimated EC contribution per proposal: 0.8 to 1 Million Euro

InCo-related: No

European Commission

MG-2-5-2018
(RIA)

Multilateral International Cooperation encouraged, in particular

United States,

Canada,

Russia,

Japan,

Brazil and

Australia

(InCo Flagship "Aviation – Safer & Greener in a Smaller World")

Innovative technologies for improving aviation safety and certification in icing conditions (1)

Challenge: Further increase aviation **safety**.

In-flight **hazards** increasing **worldwide**

Mitigation of performance degradation

Harmonised certification

Scope: **Several or all** of the following areas:

- Further **detection, understanding, sensing, modelling, simulation and testing** of icing, de-icing and anti-icing
- New **certification** methods, **means of compliance**, **standards** and **protection systems** for **all types of icing** and **air vehicles, engines** and on-board **systems**
- Address the overall **system integration**, including **operational and maintenance** aspects

Environmental anti/de-icing**, in-flight and on ground**

Authorities as **EASA/FAA** can be involved

Research up to **TRL 5**.

European Commission

MG-2-5-2018
(RIA)

Multilateral International Cooperation encouraged, in particular

United States,

Canada,

Russia,

Japan,

Brazil and

Australia

(InCo Flagship "Aviation – Safer & Greener in a Smaller World")

Innovative technologies for improving aviation safety and certification in icing conditions (2)

Expected impact:

- Contribute to increase **passenger safety** by fewer accidents and less in-flight events worldwide
- Contribute to decrease **costs for all parties** (e.g. industry, authorities, research & test centres) by **improved and internationally accepted certification, standards and means of compliance**, covering all types of icing hazards
- Contribute to **decrease delays in operations** thanks to more efficient avoidance of icing hazards and to fewer damages in need of inspection and repair

Estimated EU contribution per proposal:

3 - 5 million EUR but other amounts also possible

InCo-related: Yes (Aviation InCo Flagship)

European Commission

WP 2018 Call: Mobility for Growth (MG)

AREA 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

European Commission

MG - AREA 3

Global Leadership & Competitiveness

Total EU contribution: **EUR 44 Mio + EUR 8 Mio (BG)**

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		
MG-BG01	Unmanned and autonomous survey activities at sea	RIA	1	8.0		

MG-3.1-2018
(RIA)

Multidisciplinary and collaborative aircraft design tools and processes (1)

Challenge:

High development costs ➔ **new supply chain models** Design concepts ➔ aircraft products is a **complex, multidisciplinary and collaborative process**. New opportunities are offered by the High Performance Computing and Internet of Things.

Scope: to further develop and validate by **numerical and experimental means** the new multidisciplinary and collaborative aircraft design.

Address **one or more** of the following areas:

- Advance further and validate **multi-disciplinary and multi-material design and optimisation decision tools** for overall aircraft (including engine) architectures and on overall performances versus costs of the new products, including their intrinsic levels of safety and security
- Advance further **digital interconnection tools as well as rapid integration of Internet of Things** in aircraft design and manufacturing
- Advance further and validate **Computational Solid and Fluid Dynamics, Multidisciplinary Design Optimisation and Uncertainty Quantification methodologies** towards efficient integration of tools with different levels of fidelity, resolution, and complexity
- Significantly advance **user-centric visualisation methods** and tools as well as **big-data analytics**
- Explore further multi-component **collaborative testing and certification/air worthiness**, with emphasis on virtual and hybrid testing methods and tools

The proposals should cover a **TRL** spectrum from **2 to 5**

MG-3.1-2018
(RIA)

Multidisciplinary and collaborative aircraft design tools and processes (2)

Expected impact:

On Flightpath 2050, towards **maintaining global leadership** as well as **environmental protection**:

- Advanced multidisciplinary and collaborative capabilities for whole aircraft along its life cycle
- Significantly reduced aircraft design cycle and higher complexity decision trade-offs
- Development of synergies on visualisation methods and big-data analytics
- Increase the European innovation potential in Aeronautics and Air Transport by a more balanced and integrated collaboration of industry, including SMEs and research providers.

Estimated EC contribution per proposal: 2 – 4 Mio EUR

InCo-related: No

European Commission

MG-3.2-2018
(IA)

The Autonomous Ship

Challenge: To enable the disruptive technology of autonomous shipping (inland and marine)

Scope:

- Focus on early adopters (inland, SSS, ferries, coastal, urban)
- Compulsory demo to TRL7 of autonomous vessel in realistic environment. Also differentiate EGNOS/Gallileo
- Also address several other relevant factors listed (reliability, cyber, regulation, safety, socio economic, etc)

Expected impact:

Break though in autonomous shipping though realistic demonstration. Enable 1st commercial applications. Understand regulation and socio economic factors.

Estimated EC contribution per proposal: €10-€20M

InCo-related: No

European Commission

MG-BG-01-2018
(RIA)

Unmanned and autonomous survey activities at sea

Challenge: Autonomous vehicle to massively cut the cost of large area sea bed surveys

Scope:

- Develop and demonstrate to TRL 5 a sea bed survey vehicle that can operate for extended periods without a close support vessel.
- Energy & Propulsion for months over large areas.
- Minimal deployment/recovery cost.
- Robust secure data and "find me" transmission.
- Compatible survey equipment.

Expected impact:

Massive reduction in deep sea survey costs and increase available data. Promote European marine industry capability & Jobs, including SMEs.

Estimated EC contribution per proposal: to € 8 Mio

InCo-related: No

European Commission

MG-3.3-2018
(RIA)

"Driver" behaviour and acceptance of connected, cooperative and automated transport

Challenge:

- "Driver" behaviour in connected/cooperative/automated vehicles
- Public acceptance of connectivity and automation

Scope: *(at least 5 aspects to be addressed, related to):*

- Public acceptance for increased connectivity/automation
- "Driver" behaviour in different scenarios (people/freight)
- Human-Machine Interface (HMI) in real-time/changing conditions
- Ethical/legal issues of "driver" and/or vehicle decision making
- "Driver" training/regulations/automation impact (e.g. car sharing)

Trials/demos with service providers/users; cross-modal transfer

Expected impact:

- Enhanced "driver" behaviour, connectivity/automation acceptance
- Accelerate connected/cooperative/automated mobility
- Improve safety, security and reduce cost of transport

Estimated EC contribution per proposal: € 3-4 million

InCo-related: No

European Commission

WP 2018 Call: Mobility for Growth (MG)

AREA 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

European Commission

MG - AREA 4

Accounting for the People

2018 Total EU contribution: **EUR 11,4 Mio**

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	

MG-4.1-2018
(CSA)

New regulatory frameworks to enable effective deployment of emerging technologies and business/operating models

Challenge: Devise new regulatory approaches, frameworks and governance models flexible enough to cope with the fast pace of technological change and foster effective deployment of emerging user-centric technologies and business models, while at the same time preserving adequate level of protection

Scope:

- Identification of new disruptive technologies, services, business and operating models and mobility solutions (including social innovations)
- Analysis of regulatory responses and governance models and economic, political and social variables influencing them
- Identification of characteristics of regulatory responses able to accommodate disruptive innovation
- Analysis of cooperation among public and private parties and of data exchange, governance and communication

Expected impact: Aid regulators and policy makers in updating and building appropriate regulatory responses to the current and future developments in the transport systems

Estimated EC contribution per proposal: Between EUR 1 and 2 Mio

InCo-related: Encouraged

European Commission

MG-4.2-2018
(CSA)

Building Open Science platforms and codes of conduct in Transport

Challenge: Create a common understanding on the practical impact of Open Science principles in the area of transport research, identify current practices and devise concrete approaches for operationalising Open Science in transport research, and to adopt them in the form of a Code of Conduct.

Scope:

- Analyse practices and expectations in implementing various aspects of Open Science in transport research;
- Map the landscape of existing research data infrastructures and scientific clouds as well as governance and new operational/business models developed to provide better data access;
- Create a forum for national and European stakeholders and engage international partners for mutual learning and sharing of best practices;
- Identify the main challenges and opportunities for implementing Open Science in the area of transport research;
- Design a Code of Conduct for implementing Open Science principles in transport research in Europe;

Expected impact: Contribute to creating a solid knowledge base on the implementation of Open Science approaches in transport research and set up a community working on the basis of a commonly agreed Open Science Code of Conduct

Estimated EC contribution per proposal: Between EUR 1 and 2 Mio

InCo-related: Encouraged

European Commission

MG-4.3-2018
(CSA)

Demographic change and women's participation in transport

Challenge: Specific transport needs of women linked to their physical and social characteristics have not been sufficiently addressed. Resulting inequalities in mobility opportunities need to be thoroughly explored and transport system adjusted to the specific demands of women to lead to increased social inclusion and equity.

Scope: assessment of specific requirements and employment opportunities; analysis of intersectorial aspects and their influence on mobility needs; Gender Impact Assessment of new transport-related technologies; future opportunities for transport professional careers.

Expected impact: better understanding of issues and creation of data to adjust the transport system to specific needs and contribute to the creation of an inclusive mobility system.

Estimated EC contribution per proposal: 2 to 4 Million Euro

InCo-related: No

European Commission

MG-4.4-2018-19
(CSA)

Support for dissemination events in the field of Transport Research (1)

Challenge: To organise events of major strategic nature with a European dimension (i.e. TRA and Aerodays) to help promoting and disseminating Transport Research activities in Europe

Scope: proposals to address **only one** of the following sub-topics:

1) TRA 2020 Awards: two competitions for transport research and innovation awards to be assigned at the 2020 TRA conference:

- One for students and young researchers to stimulate the interest in the transport field
- One for senior researchers in the field of innovative transport concepts based on results from EU-funded projects only

2) Support for event(s) in the field of aviation under the Presidency of the European Union

Objective of this action is the preparation and support of an event(s) to gather the aviation stakeholders for discussing political, industrial and research issues on a European and global level

Collaboration with different EC services and the Advisory Council for Aviation Research and Innovation in Europe (**ACARE**).

Member States holding a Presidency of the EU invited to liaise

European Commission

Support for dissemination events in the field of Transport Research (2)

Expected impact:

Contributing to a **wide dissemination of the results** of European transport research; raising the visibility and weight of the EU policy in the field; **increasing the attractiveness of transport related studies** and reinforce the pursuit of excellence in European transport research and innovation, by giving recognition and visibility to the best achievements

Estimated EC contribution per proposal:

0,4 - 0,7 Mio EUR for subarea 1) TRA 2020 Awards

Up to 0,7 Mio EUR for subarea 2) AERODAYS

Inco related: No

European Commission

WP 2018 Call: Automated Road Transport (ART)

2 topics

Focus on

- Testing and validation procedures
- Assessment of impacts, benefits and costs of CCAD systems
- Support for cooperation and networking activities

Please note

- *ICT Call: Topic "5G for Cooperative, Connected and Automated Mobility" (ICT-18-2018)*
- 2019-2020 Calls will focus on:
  - Human centred design of AV
  - Large-scale demonstrations

European Commission

WP 2018 Call: Automated Road Transport (ART)

2018 Total EU contribution: **EUR 15 Mio**

Topic	Title	Action type	Stages	Budget		
				2018	2019	2020
DT-ART-01 *InCo flagship 4*	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 *InCo flagship 4*	Support for **networking activities** and **impact assessment for road automation**	RIA	1	6.00		
		CSA	1	3.00		
DT-ART-03 *InCo flagship 4*	Human centred design for the new **driver role in highly automated vehicles**	RIA	1		8.00	
DT-ART-04 *InCo flagship 4*	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**					

ART-01-2018 (RIA)

Multilateral International Cooperation encouraged, in particular

Australia

Japan

Singapore

South Korea

US

(InCo Flagship "Automated Road Transport")

Testing, validation and certification procedures for highly automated driving functions under various traffic scenarios based on pilot test data

Challenge:

- How can we prove that new automated driving functions are really safe and reliable?

Scope:

- Develop testing and validation procedures of highly AD functions for different use cases in various traffic scenarios
- Research on merging simulation/virtual testing with real tests
- Common criteria for model-based validation and simulation on vehicle, components and V2X communication systems level

Expected impact:

- Comprehensive testing, validation and certification procedures for highly AD functions to pave the way for accelerated implementation of highly automated vehicles in Europe

Estimated EC contribution per proposal: EUR 4-6 Mio

InCo-related: Yes

European Commission

ART-02-2018 (RIA)

Multilateral International Cooperation encouraged, in particular

Australia

Japan

Singapore

South Korea

US

(InCo Flagship "Automated Road Transport")

Subtopic 1) Assessment of impacts, benefits and costs of connected, cooperative and automated driving systems

Challenge:

- How can we assess the impacts of connected, cooperative and automated driving systems?

Scope:

- Establish a solid multidisciplinary methodology to assess the long-term impacts of CCAD systems
- Provide a public toolkit for assessing impacts of CCAD systems and decision support system

Expected impact:

- Enable decision-makers to promote the most promising scenarios of CCAD systems based on a comprehensive impact assessment and knowledge base

Estimated EC contribution per proposal: EUR 4-6 Mio

InCo-related: Yes

European Commission

ART-02-2018 (CSA)

Multilateral International Cooperation encouraged, in particular

Australia

Japan

Singapore

South Korea

US

(InCo Flagship "Automated Road Transport")

Subtopic 2) Networking activities to support connected, cooperative and automated driving

Challenge:

- How to improve cooperation and networking amongst European and International partners to exploit synergies, avoid overlaps?

Scope:

- Explore ways to strengthen cooperation amongst stakeholders in the areas such as: R&I, international standards, large-scale testing, evaluation methodology, education and training.
- Provide support for a better coordination of national and multi-national funding programmes
- Support ongoing and extend international cooperation activities.
- Forum for European and international stakeholders

Expected impact:

- Support stakeholders to exchange learnings, data, exploit synergies

Estimated. EC contribution proposal: EUR 2-3 Mio

InCo-related: Yes (InCo Flagship 4)

European Commission

WP 2018 Call: Green Vehicles (GV)
2 topics

Bringing forward the activities of the EU Green Vehicle Initiative: prepare the ground for a potential massive introduction of electrified vehicles

- Support design and manufacturing of 3rd generation of electrified vehicles, components and new generation of batteries
- Improve the charging solutions to meet end-users needs (access, time, cost, payment systems, etc.)
- Develop new concepts to reduce energy consumption and emissions of long-distance vehicles
- Cooperate with developing and emerging economies for demonstration activities and pilots in large urban areas

European Commission

WP 2018 Call: Green Vehicles (GV)

2018 Total EU contribution: **EUR 56 Mio**

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 **InCo flagship 5**	**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**					
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**					

European Commission

GV-01-2018
(IA)

Integrated, brand-independent architectures, components and systems for next generation electrified vehicles, optimised for infrastructure

Challenge: Reducing cost and increasing efficiency for reliable mass produced car components/subsystems

Scope: Improve electric motors, power electronics, on-board chargers, thermal management components, heating/cooling components (only breakthrough) and their combinations in advanced electric architectures

Expected impact: At least 20% lower cost components/ subsystems, contributing to high efficiency applications for future cars without range anxiety, demonstrated on existing vehicle, no vehicle development)

Estimated EC contribution per proposal: 3M€ for single component to 5M€ for multiple components

InCo-related: No

European Commission

GV-02-2018
(RIA)

Virtual product development and production of electrified vehicles and components

Challenge: Reducing development cost and time for multi-propulsion electrified (FCEV, (P)HEV, BEV) platforms through digitalisation across the value chain

Scope: Development of integrated digital environments for design, modelling, manufacturing, testing exploiting high power and cloud computing, big data, machine learning, data mining

Expected impact: Improving competitiveness and quality while reducing time-to-market by at least 20%, keeping into account circular economy and life-cycle approaches, while fully integrating all supply levels

Estimated EC contribution per proposal: 2-4M€

InCo-related: No

European Commission

WP 2018-19 Call deadlines

Work Programme 2018-2020	2018		2019	
	Opening	Closing	Opening	Closing
Single Stage (MG -incl. BG-ART and GV calls)	31/10/2017	4/4/2018	4/12/2018	24/4/2019
First Stage of 2-Stages (MG call only)	31/10/2017	30/1/2018	5/9/2018	16/1/2019
Second Stage of 2-Stages (MG call only)	-	19/9/2018	-	12/9/2019

Transport WP 2018-2020
Budget in million EUR

	2018	2019	2020	Total
MG Call	197.4	168.7	147.5	**513.6**
ART Call	15	38	50	**103**
GV Call	56	78	112	**246**
Other Actions	7.4	8	1.6	**17**

European Commission

Evaluation criteria

Excellence

Clarity and pertinence of the objectives

Soundness of the concept, including trans-disciplinary considerations, where relevant

Extent that proposed work is ambitious, has innovation potential, and is beyond the state of the art (e.g. ground-breaking objectives, novel concepts and approaches)

Credibility of the proposed approach

Impact

The expected impacts listed in the work programme under the relevant topic

Enhancing innovation capacity and integration of new knowledge

Strengthening the competitiveness and growth of companies by developing innovations meeting the needs of European and global markets; and, where relevant, by delivering such innovations to the markets

Any other environmental and socially important impacts (not already covered above)

Effectiveness of the proposed measures to exploit and disseminate the project results (including management of IPR), to communicate the project, and to manage research data where relevant

Implementation

Coherence and effectiveness of the work plan, including appropriateness of the allocation of tasks and resources

Complementarity of the participants within the consortium (when relevant)

Appropriateness of the management structures and procedures, including risk and innovation management

Stage 1/two-stage proposals: only the aspects of the criteria in red are evaluated

Other actions

- Horizon Prize for the "*Cleanest engine of the future*" open until 20/08/2019 - EUR 3,5 Mio
- ELENA Facility & Smart Cities (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

European Commission

EIC SME Instrument & EIC Fast-Track-to-Innovation

Schemes to promote close-to-market innovation – WP «Towards the next EU FP for R&I: European Innovation Council (EIC) Pilot »

1. **SME Instrument** – EUR **480 Mio** in 2018
   - ✓ Open to SMEs only
2. **Fast track to innovation (FTI)** - EUR **100 Mio** per year
   - ✓ Open to all types of participants – industry involvement mandatory

➢ **Bottom-up logic**: all areas covered by all H2020 programmes → all technologies and innovative solutions for transport and mobility

➢ **Open call**: several cut-off dates per year

European Commission

Thank you!

Participant Portal

Transport Challenge and the WP

Questions? Contact Research Enquiry Service

#InvestEUresearch

European Commission

Coffee break: 11.15 – 11.45

European Commission

European Commission

#InvestEUresearch

Horizon 2020 Work Programme for Research & Innovation 2018-2020

All you need to know about the selection process

Horizon 2020 Transport Info Day

#H2020TransportInfo

Marc Vanderhaegen, Head of Unit

Programme Support, Coordination and Communication

INEA

Research and Innovation

5 steps of the selection process

European Commission

1 Submission of proposals

Call deadlines: mark in your agenda!

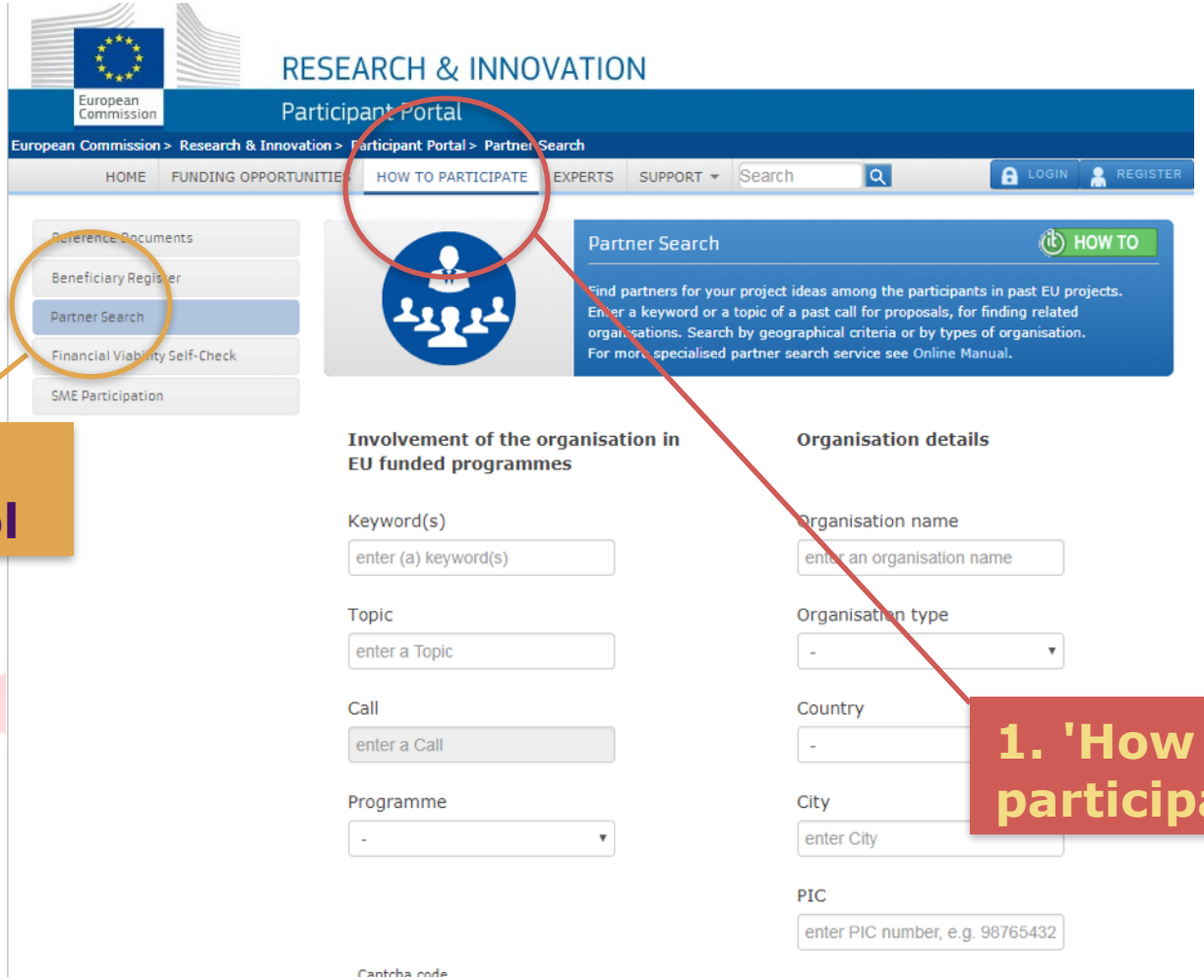
2018 activities	Budget	Opening	Deadline
Mobility for Growth *two-stage topics*	**€155 M**	**31.10.2017**	***first stage*** **31.01.2018** ***second stage*** **19.09.2018**
Mobility for Growth *single-stage topics*	**€41 M**	**31.10.2017**	**04.04.2018**
Green Vehicles *single-stage topics*	**€56 M**		
Automated Road Transport *single-stage topics*	**€15 M**		

European Commission

1

Submission of proposals

New service in the Participant Portal: Where to look for partners?



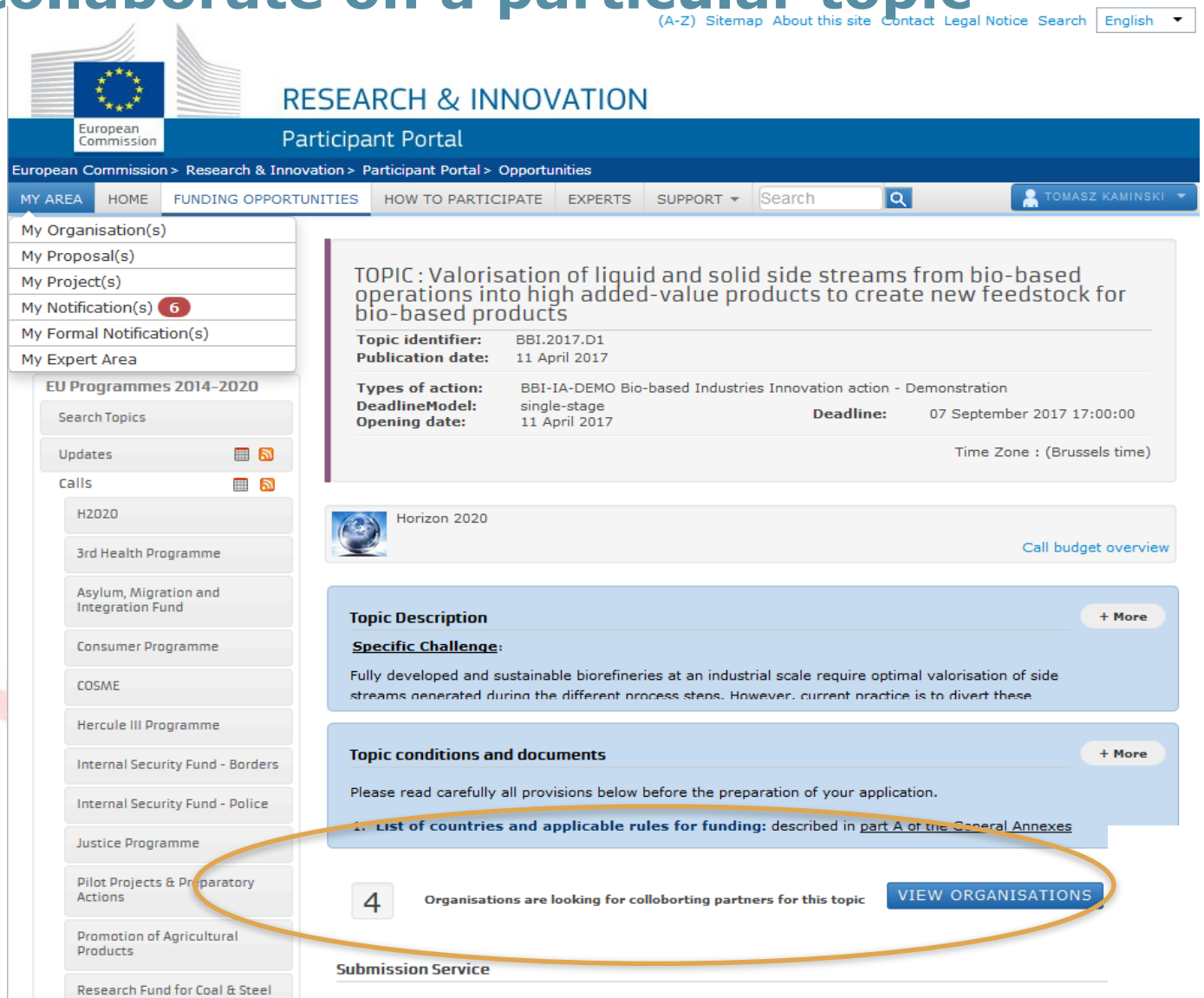
2. Partner search tool

1. 'How to participate' tab

1

Submission of proposals

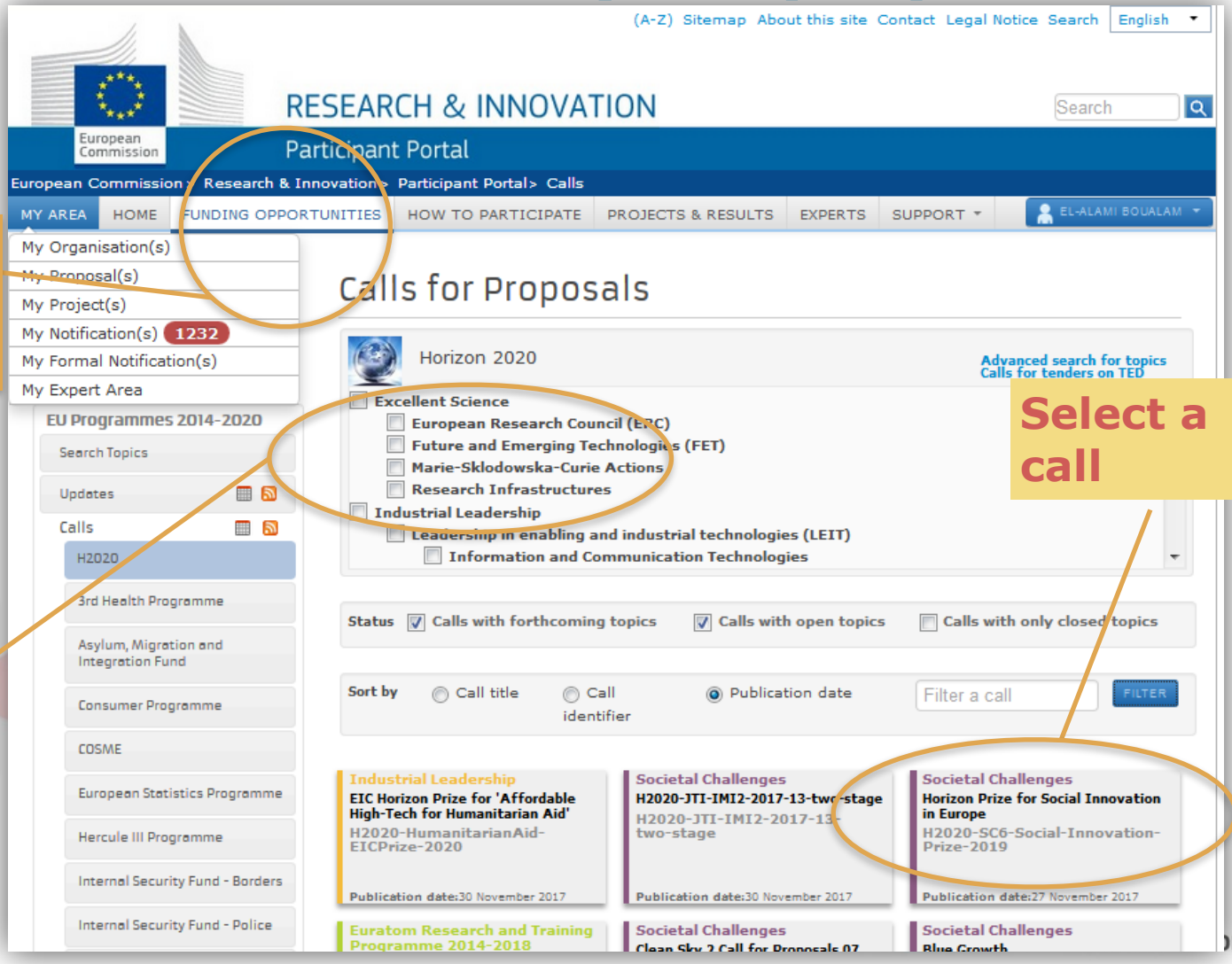
Other new service: publish your interest to collaborate on a particular topic



1

Submission of proposals

How to submit your proposal?



Call & submission service

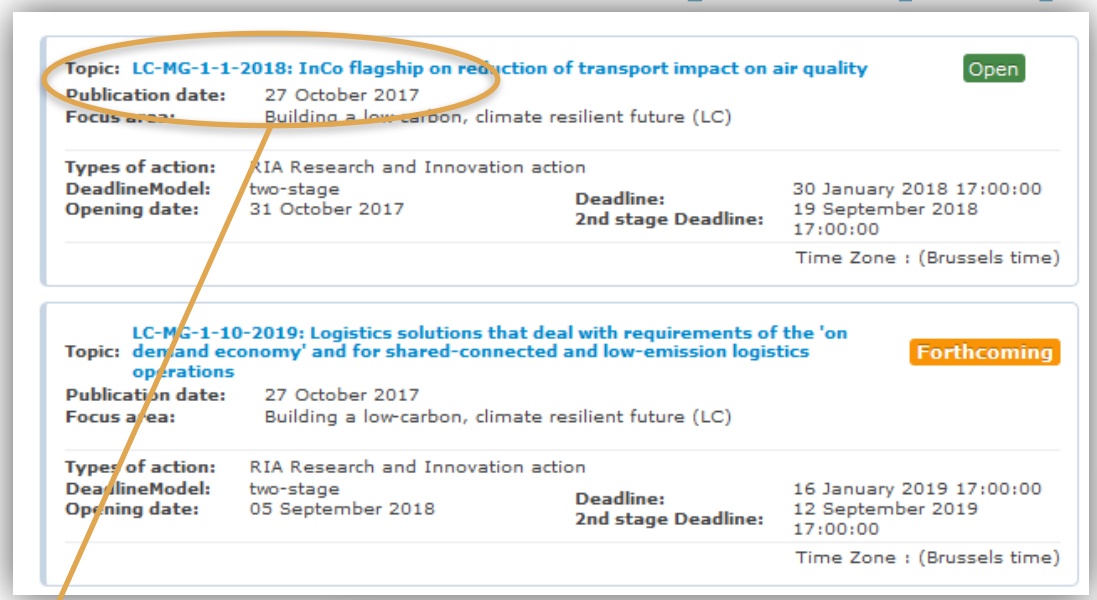
Search& Filter calls

Select a call

1

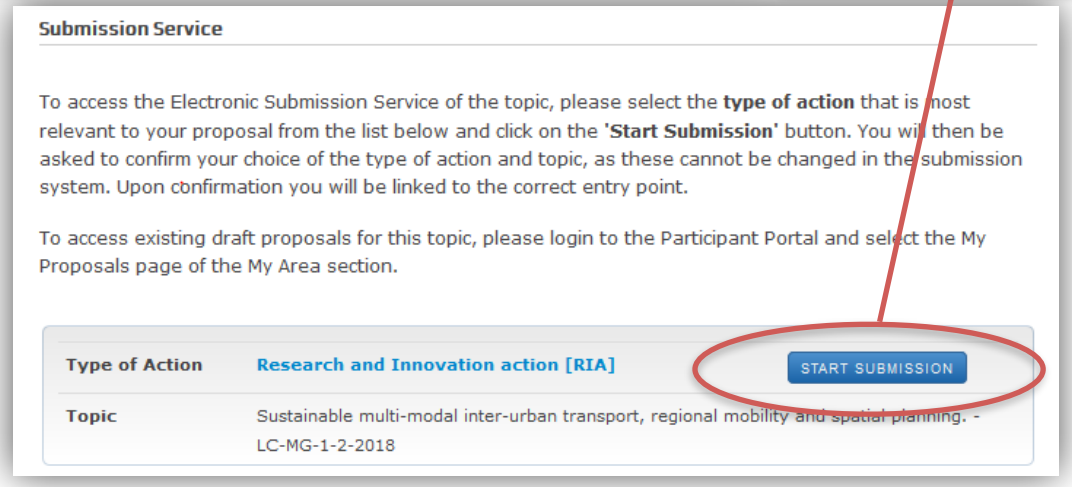
Submission of proposals

How to submit your proposal?



Select topic

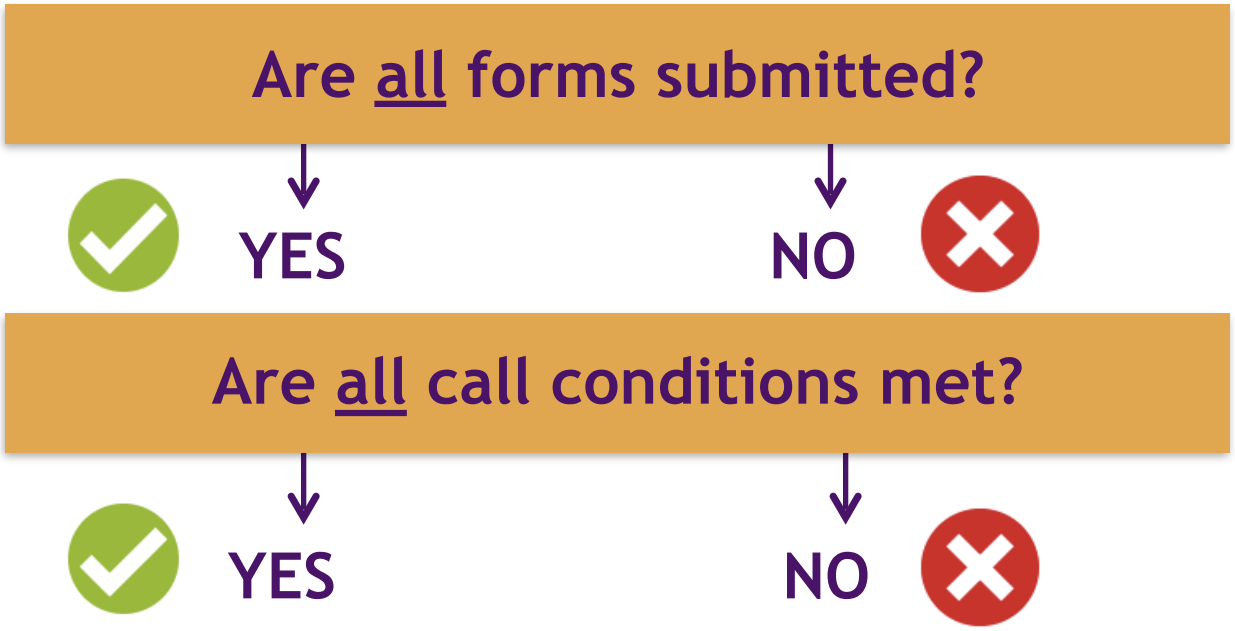
Start submission



2

Admissibility & eligibility check

Admissibility & eligibility check



ATTENTION! Only admissible and eligible proposals will be evaluated

General annexes of the Work Programme list all eligibility & admissibility criteria

European Commission

3

Evaluation by external experts

Evaluation by external experts

Min. 3 experts, up to 5

Proposals evaluated as submitted

Evaluation is framed by the workprogramme

European Commission

3

Evaluation by external experts

External experts

EU database of over 80,000 evaluators

1. **High-level expertise**
2. **Independence**
3. **Impartiality**

Balanced composition

Regular rotations & new experts

European Commission

3

Evaluation by external experts

What do we ask the external experts to do?

Understand call text

Evaluate individually - remotely

Meet to reach consensus

European Commission

3

Evaluation by external experts

Against what do they evaluate?

Excellence

Impact

Quality & efficiency

European Commission

3

Evaluation by external experts

We're looking for new experts!

Not applying?

Become an evaluator!

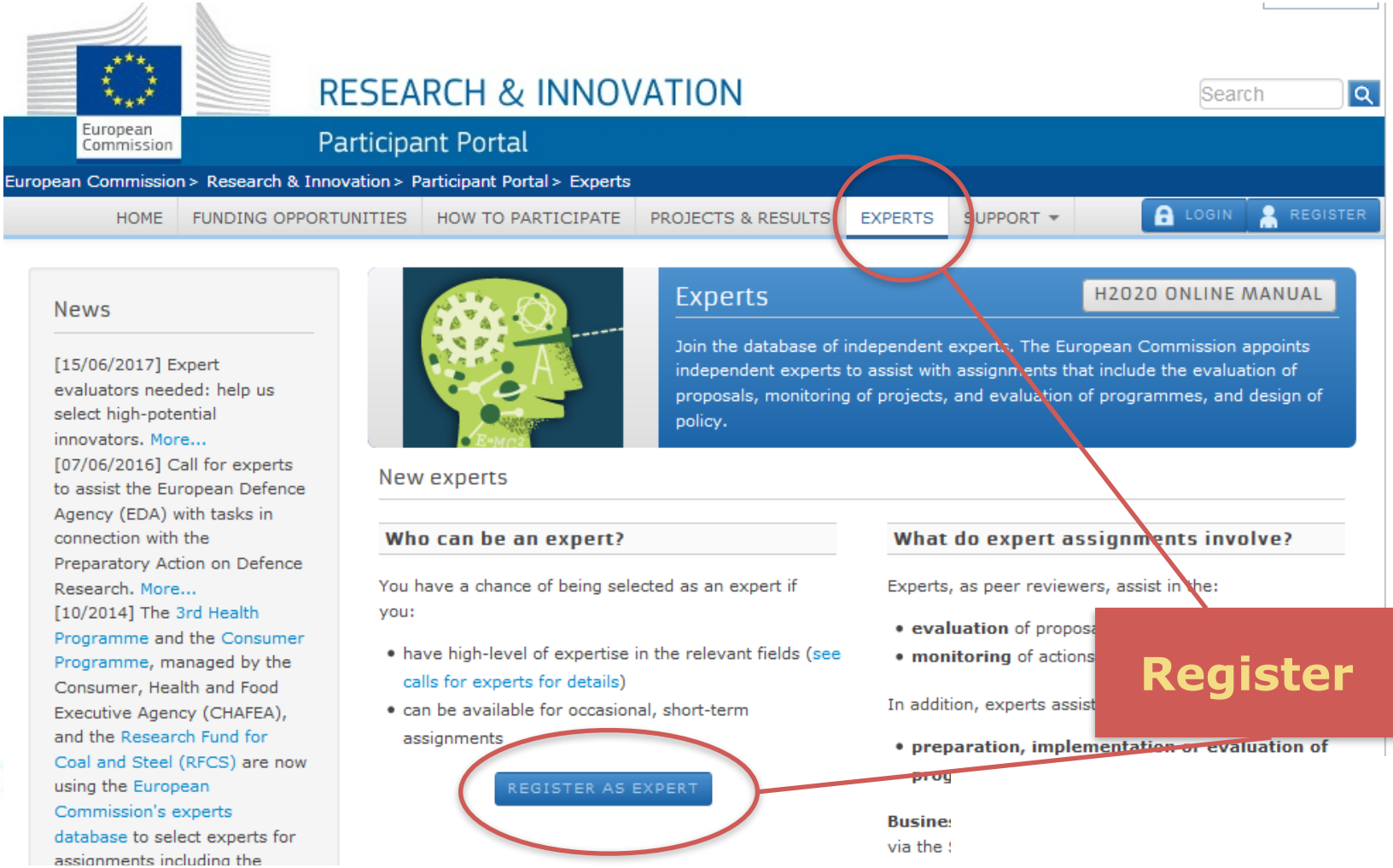
Sign up in Participant Portal

European Commission

3

Evaluation by external experts

How to become an expert?



4

Decision on funding

Outcome of evaluation

Ranked list of proposals

Main list

(top scores)

Reserve list

Rejection

Deadline to inform: 3 or 5 months

European Commission

5

Signing a grant agreement

Grant agreement

Successful proposals invited to start a

Grant Agreement Preparation

Very tight deadline: max. **8 months from call deadline to sign the contract**

No negotiation phase = no substantial changes

European Commission

#InvestEUresearch

Horizon 2020 Work Programme for Research & Innovation 2018-2020

How to prepare a good proposal

H2020 Transport Info Day

#H2020TransportInfo

Marcel Rommerts
Head of Transport Research Unit
INEA

Research and Innovation

Tip 1: Don't waste their time! Have a strong concept

1. Calls are very competitive
2. Success rate on a first stage call is around 30%
3. Success rate on a single stage call is around 15% and 30% for a second stage
4. Have a strong concept:
   - What do you want to achieve?
   - Show how it will meet the requirements of the call

European Commission

Tip 2: Understand call conditions and text

Consult FAQ's in good time – or ask your own question!

European Commission

Tip 3: Impact

Identify and substantiate the impacts

Dissemination & exploitation plan

European Commission

Tip 4: Sound budget construction & good project team*

Budget is reasonable	**Resource allocation is balanced**
All partners have a clear and justified role in the project	**All partners are commited to implement the results**

→**The team should share a vision**

*only for single stage and second stage calls

European Commission

Tip 5: Simple to digest

SIMPLE LANGUAGE
(MAJORITY OF EXPERTS ARE NON-NATIVE SPEAKERS)

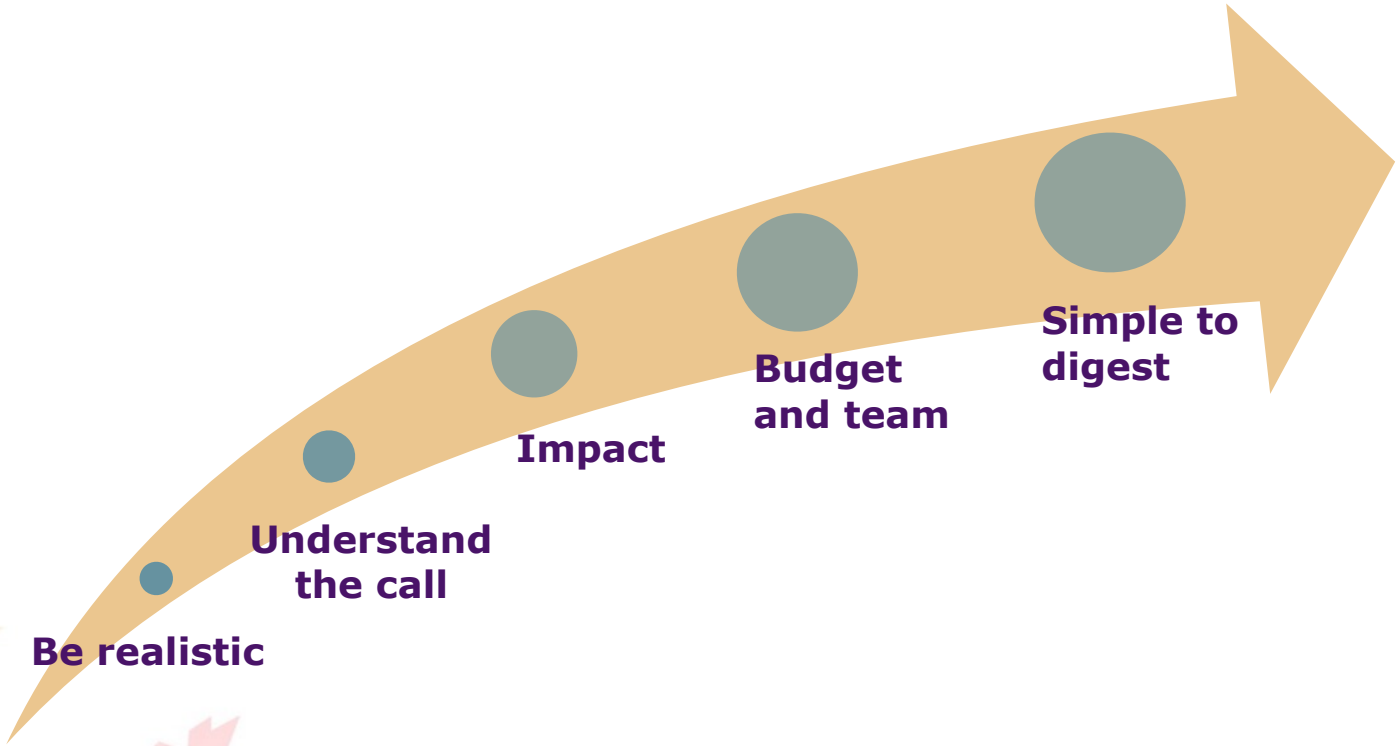
MAKE INFORMATION EASY TO FIND

RELEVANT SUMMARY TABLES, GRAPHS & IMAGES

RESPECT PAGE LIMIT

European Commission

5 steps to success



European Commission

Thank you!

#H2020Transport

@inea_eu

inea@ec.europa.eu

www.ec.europa.eu/inea

More info: EU Participant Portal

http://ec.europa.eu/research/participants/portal/

Frequently Asked Questions

https://ec.europa.eu/research/participants/portal/desktop/en/support/faq.html

European Commission