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UNIVERSITÉ
PARIS-EST
MARNE-LA-VALLÉE

MINISTÈRE
DE LA TRANSITION
ÉCOLOGIQUE
ET SOLIDAIRE

MINISTÈRE DE L'ÉCONOMIE
ET DES FINANCES

MINISTÈRE
DE L'ENSEIGNEMENT SUPÉRIEUR
DE LA RECHERCHE
ET DE L'INNOVATION

HORIZON 2020

LE PROGRAMME DE RECHERCHE ET
D'INNOVATION DE L'UNION EUROPÉENNE



PRÉSENTATION DU PROGRAMME DE TRAVAIL TRANSPORT 2018-2020

PARIS – CPU
10 novembre 2017

Bastien PINCANON - UPEM
PCN Transport



INFODAY PIN VILLE 10/11/2017
PAGE 1



PROGRAMME DE TRAVAIL 2018-2020

OBJECTIFS

Prise en compte :

- des besoins des citoyens, entreprises et marchés européens
- du développement durable au niveau international et lutte contre le changement climatique (COP 21 et objectifs fixés par l'ONU)
- de l'évaluation mi-parcours H2020 : importance accrue donnée aux activités d'innovation et de démonstration

4 domaines clés :

- Construire un avenir avec faibles émissions de carbone et résistants aux phénomènes climatiques
- Numériser et transformer l'industrie et les services
- Economie circulaire : relier les avantages économiques et environnementaux
- Renforcer l'efficacité de la sécurité

PROGRAMME DE TRAVAIL TRANSPORT 2018-2020

- Ouverture des appels : 31/10/2017
- Budget : 944.98 M€ dont
 - 298,61 M€ pour 2018
 - 315.51 M€ pour 2019
 - 330.86 M€ pour 2020
- 3 appels principaux
 - Mobility for growth
 - Automated Road Transport
 - Green Vehicles
- 54 topics
 - 20 pour 2018
 - 19 pour 2019
 - 15 pour 2020
- d'autres activités

APPELS 2018-2019 – DATES CLES

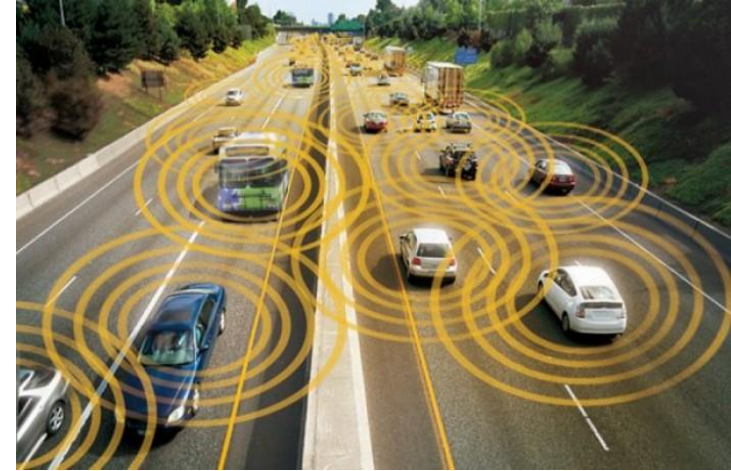
ANNÉES	APPELS	DATES OUVERTURE	DATES CLÔTURE		
			En 1 étape	En 2 étapes	
				Etape 1	Etape 2
2018	MG - Mobilité pour la croissance	31/10/2017	04/04/2018	30/01/2018	19/09/2018
	ART - Transport routier automatisé	31/10/2017	04/04/2018		
	GV - Véhicules verts	31/10/2017	04/04/2018		
2019	MG - Mobilité pour la croissance (AAP deux étapes)	05/09/2018		16/01/2019	12/09/2019
	MG - Mobilité pour la croissance (AAP une étape)	04/12/2018	24/04/2019		
	ART - Transport routier automatisé	04/12/2018	24/04/2019		
	GV - Véhicules verts	04/12/2018	24/04/2019		

CALL "MOBILITY FOR GROWTH"

(H2020-MG-2018-2019-2020)

OBJECTIFS :

Alliance de la compétitivité et du bien être des citoyens, dans un contexte de réduction des émissions de carbone et de **sécurité**



- Transport durable à faible émissions de carbone
- Systèmes de transport sûrs, intégrés et résistants
- Leadership mondial et compétitivité
- Prise en compte de la société

MOBILITE POUR LA CROISSANCE (1/2)

- **Transport durable à faible émissions de carbone**
 - Vision '0 émission' et mobilité plus silencieuse
 - Innovations technologiques, aspects socio-économiques et réglementaires, sensibilisation du public
 - Nouvelles formes de mobilité, outils et mécanismes améliorés de contrôle et détection des émissions de polluants
 - Conseils auprès des autorités locales, régionales et nationales
- **Systemes de transport sûrs, intégrés et résistants**
 - Déplacements porte-à-porte pour les passagers et le fret
 - Moyens de transport plus performants et plus efficaces, systèmes de gestion du trafic
 - Aspects de la construction d'infrastructures et solutions innovantes de maintenance
 - Renforcement de la sécurité et de la qualité de vie des utilisateurs
 - Transport plus résilient et plus sûr

MOBILITE POUR LA CROISSANCE (2/2)

- **Leadership mondial et compétitivité**
 - Dans le domaine de la conception et de la construction
 - Technologies de transport innovantes : matériaux, procédés, technologies de pointe (automatisation & numérique)
 - Nouveaux modèles économiques
 - Environnement, confort et sécurité des transports
 - Outils pour l'analyse et le stockage d'une masse importante de données
- **Prise en compte de la société**
 - Ecosystème de transport numérique innovateur et inclusif pour le bien-être des citoyens
 - Adoption des solutions de transport et mobilité novatrices
 - Équité et accessibilité, changements démographiques, acceptation
 - Conseils pour la prise de décision politique

APPELS “LC-MG” CONCERNANT LA VILLE

TOPIC	TITRE	TYPE	Budget (M €)	
			2018	2019
BUILDING A LOW-CARBON, CLIMATE RESILIENT FUTURE: LOW-CARBON AND SUSTAINABLE TRANSPORT				
LC-MG-1-1-2018	<i>InCo flagship on reduction of transport impact on air quality</i>	RIA	30	
LC-MG-1-2-2018	<i>Sustainable multi-modal inter-urban transport, regional mobility and spatial planning</i>	RIA	12	
LC-MG-1-3-2018	<i>Harnessing and understanding the impacts of changes in urban mobility on policy making by city-led innovation for sustainable urban mobility</i>	CSA RIA	3 11	
LC-MG-1-8-2019	<i>Retrofit Solutions and Next Generation Propulsion for Waterborne Transport</i>	IA RIA		8 15
LC-MG-1-10-2019	<i>Logistics solutions that deal with requirements of the ‘on demand economy’ and for shared-connected and low emission logistics operations</i>	RIA		10

APPELS “MG” CONCERNANT LA VILLE

TOPIC	TITRE	TYPE	Budget (M €)	
			2018	2019
GLOBAL LEADERSHIP AND COMPETITIVENESS				
MG-3-2-2018	The Autonomous Ship	IA	20	
MG-3-3-2018	<i>"Driver" behaviour and acceptance of connected, cooperative and automated transport</i>	RIA	12	
ACCOUNTING FOR THE PEOPLE				
MG-4-6-2019	<i>Supporting Joint Actions on sustainable urban accessibility and connectivity</i>	ERA-NET COFUND		6

CALL “MOBILITY FOR GROWTH”

LC-MG-1-1-2018 (RIA)

InCo flagship on reduction of transport impact on air quality



Challenge:

Improvement of air quality (road vehicles, airports, ports)

Scope:

- *Low-emission oriented driving, management & assistance → China/Asia/CELAC*
- *Support to informed consumer choice*
- *Sensing and monitoring emission in urban road transportation system → China*
- *Measurement of the airborne emissions of pollutants from a vessel → Asia*
- *Measurement of airborne pollutants emissions from aircraft → USA/Asia/CELAC*
- *Understanding the biological processes leading to acute genotoxic and systemic effects of ultrafine nanoparticles*

Contribution attendue par proposition: 2-5M€ (Budget total : 30M€)

CALL “MOBILITY FOR GROWTH”

LC-MG-1-2-2018 (RIA)

Sustainable multi-modal inter-urban transport, regional mobility and spatial planning

INCO !

Challenge:

Assessing new forms of mobility in all transport modes, their infrastructures, travel flux evolvement, spatial-economic development, environmental and quality-of-life issues...

Scope:

Identification of new forms of mobility, comprehensive planning for the entire functional area, sustainable policies with proven environmental impact

→ International cooperation - Twinning with US DOT

Expected Impact:

Evidence of long term impacts of innovative transport technologies and business models

Contribution attendue par proposition: 5-8M€ (Budget total : 12M€)

CALL “MOBILITY FOR GROWTH”

LC-MG-1-3-2018 (RIA+CSA)

Harnessing and understanding the impacts of changes in urban mobility on policy making by city-led innovation for sustainable urban mobility

INCO !

Challenge:

Understanding of the impacts of new urban mobility solutions on policy making.

Scope:

- *Impacts of new mobility solutions, addressing the changing mobility patterns and set up of mobility services (RIA)*
- *Knowledge exploitation and support to the cooperation between projects and stakeholders → CIVITAS 2020 + International cooperation USA, China, India (CSA)*

Expected Impact:

Support mobility policies + CIVITAS support activities

Contribution attendue par proposition : RIA : 2-4M€ (Total 11M€)

CSA : 3M€ (Total 3M€)

CALL “MOBILITY FOR GROWTH”

LC-MG-1-8-2019 (RIA+IA)

Retrofit Solutions and Next Generation Propulsion for Waterborne Transport

Challenge:

Reduction of emissions from waterborne transport

Scope:

- *Develop and validate a concept for a passenger ship powered primarily by high power fuel cells (RIA)*
- *Develop and validate the next generation high efficiency propulsion systems for ships using electrification and or clean fuels and or renewable energy sources - cost effective retrofit solutions for marine shipping / Inland waterways (IA)*

Expected Impact:

Retrofit solutions will reduce SO_x, NO_x and PM pollution from waterborne transport

Contribution attendue par proposition : RIA : 3-5M€ (Total 15M€)

IA : 4-6M€ (Total 8M€)

CALL “MOBILITY FOR GROWTH”

LC-MG-1-10-2019 (RIA)

Logistics solutions that deal with requirements of the 'on demand economy' and for shared-connected and low-emission logistics operations

Challenge:

Prioritize/combine competing interests from the private side and public (policy) side relative to shared, connected and low-emission logistics operations

INCO !

Scope:

- *Value cases for integrated systems of logistics/ freight operations in urban areas*
- *Integration of low-emission, and possibly connected delivery vehicles in urban logistics*

Expected Impact:

Understanding of cost effective strategies, measures and tools to achieve essentially zero emission city logistics in major European urban centers by 2030

Contribution attendue par proposition: 2-4M€ (Budget total : 10M€)

CALL “MOBILITY FOR GROWTH”

MG-3-2-2018 (IA)

The Autonomous Ship

Challenge:

Develop and demonstrate integrated automation technologies within a real environment

Scope:

Demonstrate a fully autonomous vessel within a realistic environment including collision avoidance, interaction with waterway and/or port infrastructure, interaction with waterborne traffic, connectivity, control, navigation and docking, condition monitoring, smart maintenance, fail safe operation... (TRL7)

Expected Impact:

Establishment of the first commercial automated water transport services within 5 years

Contribution attendue par proposition: 10-20M€ (Budget total : 20M€)

CALL “MOBILITY FOR GROWTH”

MG-3-3-2018 (RIA)

“Driver” behaviour and acceptance of connected, cooperative and automated transport

Challenge:

Study of public acceptance of connectivity and automation, the development of user-friendly and appropriate HMI, “driver”/vehicle interaction and ethical decision making, to “driver” training and certification for new technologies/levels of automation...

Scope:

Public acceptance of higher levels of connectivity/automation and different user-groups, analysis of driver behaviour/reaction, safety impacts, HMI analysis...

Expected Impact:

Integration of higher levels of connectivity/automation / Increase of safety and security

Contribution attendue par proposition: 3-4M€ (Budget total : 12M€)

CALL “AUTOMATED ROAD TRANSPORT”

(H2020-DT-ART-2018-2019-2020)

OBJECTIFS :

**Accroître la sécurité, l’efficacité,
le confort de l’utilisateur et
l’habitabilité des villes**



ART est une action du domaine clé « *numériser et transformer l’industrie et les services* », en lien avec la navigation par satellite, Big Data, IoT, IA...

APPELS “ART” CONCERNANT LA VILLE

TOPIC	TITRE	TYPE	Budget (M €)	
			2018	2019
AUTOMATED ROAD TRANSPORT				
DT-ART-02-2018	<i>Support for networking activities and impact assessment for road automation</i>	RIA CSA	6 3	
DT-ART-04-2019	<i>Developing and testing shared, connected and cooperative automated vehicle fleets in urban areas for the mobility of all</i>	IA		30

CALL “AUTOMATED ROAD TRANSPORT”

DT-ART-02-2018 (RIA+CSA)

*Support for networking activities and impact assessment
for road automation*

Challenge:

Deployment of connected and automated vehicles



Scope:

- *Assessment of impacts, benefits and costs of connected, cooperative and automated driving systems (RIA)*
- *Networking activities to support connected, cooperative and automated driving (CSA) → US, Japan, South Korea, Singapore, Australia*

Expected impact:

Best implementation of the connected, cooperative and automated driving systems (socio-economic, environmental benefits, acceptability ...)

Contribution attendue par proposition : RIA : 4-6M€ (Total 6M€)

CSA : 2-3M€ (Total 3M€)

CALL “AUTOMATED ROAD TRANSPORT”

DT-ART-04-2019 (IA)

Developing and testing shared, connected and cooperative automated vehicle fleets in urban areas for the mobility of all

Challenge:

Development of shared automated vehicle pilots



Scope:

New business/operating models - Test robustness, reliability and safety of shared highly automated vehicle fleets - automated, smart mobility services, innovative fleet management concepts ...

→ US, Japan, South Korea, Singapore, Australia

Expected impact:

Test the overall mobility impact

Contribution attendue par proposition: 15-30M€ (Budget total : 30M€)

CALL "GREEN VEHICLES"

(H2020-GV-2016-2017)

OBJECTIFS : Transport propre et société décarbonée



Les appels sont ciblés sur les aspects critiques de l'introduction massive des véhicules électriques:

- Avancées sur les batteries électriques
- Supports pour la 3^{ème} génération des véhicules électriques (concepts, composants, architectures ...)
- Amélioration de l'alimentation électrique
- Amélioration de la compétitivité des entreprises européennes
- Dimension urbaine de l'introduction des véhicules électriques

APPELS CONCERNANT LA VILLE INNOVANTE

TOPIC	TITRE	TYPE	Budget (M €)	
			2018	2019
GREEN VEHICLE				
LC-GV-03-2019	<i>User centric charging infrastructure</i>	IA		35
LC-GV-05-2019	<i>InCo flagship on “Urban mobility and sustainable electrification in large urban areas in developing and emerging economies”</i>	IA		18
LC-GV-09-2020	<i>Next generation electrified vehicles for urban use</i>	To be defined		

CALL “GREEN VEHICLES”

LC-GV-03-2019 (IA)

User centric charging infrastructure

Challenge:

Support the accelerated deployment of recharging infrastructure

Scope:

Charging options - Attractive and convenient charging infrastructure access with connected vehicle systems avoiding waiting times – payment systems – parking habits – superfast charging systems – scalable charging infrastructures – cheap lower power DC charging ...

Expected impact:

Wide user acceptance – legal gaps relative to infrastructures – integration of high-power charges – standardisation

Contribution attendue par proposition: 8-15M€ (Budget total : 35M€)

CALL “GREEN VEHICLES”

LC-GV-05-2019 (IA)

InCo flagship on “Urban mobility and sustainable electrification in large urban areas in developing and emerging economies”

Challenge:

Integrated mobility solutions

Scope:

Engagement in urban electrification with European, Asian (e.g. China), CELAC (Community of Latin American and Caribbean States) and African research partners, government agencies and urban authorities, private sector and civil society

Expected impact:

Quantification of the potential reduction of greenhouse gas / pollutant emissions / traffic congestion - Reference models of the mobility system

Contribution attendue par proposition: 15-18M€ (Budget total : 18M€)

**INCO
Conditions
spécifiques !**



Merci



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ETNA PLUS (Recherche partenaires) :
<http://www.transport-ncps.net>

