Horizon 2020 Societal Challenge 4

*Smart, green and integrated transport*

Miriam de Angelis

Horizon 2020 National Contact Point ‘Smart, green and integrated transport’ (Societal Challenge 4)
Agenda

1. Horizon 2020 basics:
   • Tools for participation
   • Rules for participation
   • Structure

2. The ‘Smart green and integrated transport’ Work Programme:
   • The objectives
   • The calls
   • The topics 2019

3. How to find partners: current Partner Searches
4. Korean participation in H2020
5. Where to find support
What is Horizon 2020? 1/2

• H2020 is the EU funding programme supporting Research and Innovation (R&I).

• It is aimed at creating smart, sustainable and inclusive economic growth by taking great ideas from the lab to the market.

• It makes almost €77 billion of funding available over 7 years (2014 to 2020).
What is Horizon 2020? 2/2

• Horizon 2020 supports all stages in the research and innovation chain including non-technological and social innovation and activities closer to the market
• Proposals may bring together different disciplines, sectors and actors to tackle specific challenges - e.g. scientists, industry, SMEs, societal partners, end-users...
• Gender and SME participation: an important element (where relevant)
• It is open to participation by organisations from all over the world.
H2020 open to the world

H2020 is fully open to researchers from public and private organisations from across the world.

• Participants in low-medium income countries enjoy automatic funding.

• Industrialized economies may bring own funds to the projects or may, exceptionally, be granted if:
  • such funding is provided for in a bilateral scientific and technological agreement
  • funding for entities established in these countries are included in the call text
  • the Commission deems the participation of the entity essential for carrying out the project
Participant Portal

The Participant Portal is the single entry point for **the submission and management of H2020 proposals and projects** throughout their lifecycle.

On this site you can find and secure funding for projects under the following EU programmes:

- **2014-2020**: Horizon 2020 - research and innovation framework programme
- **2007-2013**: 7th research framework programme (FP7) and Competitiveness & Innovation Programme (CIP)
- Research Fund for Coal & Steel, COSME, 3rd Health Programme, Consumer Programme

**Non-registered users**

- search for funding
- read the H2020 Online Manual & download the legal documents
- check if an organisation is already registered
- contact our support services or check our FAQs

**Registered users**

- submit your proposal
- sign the grant
- manage your project throughout its lifecycle
- register as expert advising the Commission
RESEARCH & INNOVATION

Participant Portal

EU Programmes 2014-2020

Search Topics

Updates

Calls

H2020

3rd Health Programme

Asylum, Migration and Integration Fund

Consumer Programme

COSME

European Statistics Programme

Hercule III Programme

Internal Security Fund - Borders

Internal Security Fund - Police

Justice Programme

Pilot Projects & Preparatory Actions

Promotion of Agricultural Products

Funding Opportunities

Find the European Union funding opportunities and search for new or closed calls of the programmes described on this page.

See the full list of the Commission funding programmes.

Horizon 2020

Horizon 2020 is the new EU funding programme for research and innovation running from 2014 to 2020 with a €80 billion budget. H2020 supports SMEs with a new instrument that runs throughout various funded research and innovation fields, enhances EU international research and Third Country participation, attaches high importance to integrate social sciences and humanities encourages to develop a gender dimension in project.

Cosme

Programme for the Competitiveness of Enterprises and SMEs (COSME) will run from 2014 to 2020, with a planned budget of €2.3bn. It will facilitate SME access to finance, create supportive environment for business creation, help small businesses operate outside their home countries and improve their access to markets.
Calls for Proposals

Horizon 2020

- Innovation in SMEs
- Societal Challenges
  - Health, demographic change and wellbeing
  - Food security, sustainable agriculture and forestry, marine and maritime and inland water research and the bioeconomy
  - Secure, clean and efficient energy
  - Smart, green and integrated transport
  - Climate action, environment, resource efficiency and raw materials

Status
- Calls with forthcoming topics
- Calls with open topics
- Calls with only closed topics

Sort by
- Call title
- Call identifier
- Publication date

In addition to the search facilities, the full list of H2020 Calls can be found [here](#).
LC-MG-1-10-2019: Logistics solutions that deal with requirements of the 'on demand economy' and for shared-connected and low-emission logistics operations

**Topic:**
LC-MG-1-10-2019

**Publication date:**
27 October 2017

**Focus area:**
Building a low-carbon, climate resilient future (LC)

**Types of action:**
RIA Research and Innovation action

**Deadline Model:**
two-stage

**Opening date:**
05 September 2018

**Deadline:**
16 January 2019 17:00:00

**2nd stage Deadline:**
12 September 2019 17:00:00

**Time Zone:** (Brussels time)
TOPIC: Logistics solutions that deal with requirements of the 'on demand economy' and for shared-connected and low-emission logistics operations

Topic identifier: LC-MO-1-10-2019
Publication date: 27 October 2017
Focus area: Building a low-carbon, climate resilient future (LC)

Types of action: RFA Research and Innovation action
Deadline Models: two stage
Planned opening dates: 03 September 2018

Topic Description
Specific Challenge:
Urban, metropolitan and peri-urban areas are experiencing a huge increase in demand for new logistics solutions that deal with the requirements of the 'on demand economy' and incorporate opportunities for

Topic conditions and documents
A number of non-EU/non-Associated Countries that are not automatically eligible for funding have made specific provisions for making funding available for their participation in Horizon 2020 projects. See the

Partner Search
Organisations are looking for collaborating partners for this topic

LEAPs: Account Administrators or self-registrants can publish partner requests for open and forthcoming topics after logging into the Participant Portal.

Submission Service
The submission system is planned to be opened on the date stated on the topic header.
Fundamental elements of a topic:

- Type of action
- Deadline model
- Opening date
- Deadline(s)
- Specific challenge
- Scope
- Expected impact
### TOPICS basic elements

<table>
<thead>
<tr>
<th>Topic</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Type of action</strong></td>
<td>- Research and Innovation Action (RIA), or Innovation Action (IA), or Coordination and Support Action (CSA), exc.</td>
</tr>
<tr>
<td><strong>Deadline model</strong></td>
<td>- Two-stage or single-stage</td>
</tr>
<tr>
<td><strong>Opening date</strong></td>
<td>- From this date on the project Coordinator can start uploading the proposal on the Participant Portal</td>
</tr>
<tr>
<td><strong>Deadline(s)</strong></td>
<td>- The time by which the proposal must be submitted</td>
</tr>
<tr>
<td><strong>Specific challenge</strong></td>
<td>- Sets the context, the problem to be addressed, why intervention is necessary</td>
</tr>
<tr>
<td><strong>Scope</strong></td>
<td>- Delineates the problem, specifies the focus and the boundaries of the potential action BUT without describing specific approaches</td>
</tr>
<tr>
<td><strong>Expected impact</strong></td>
<td>- Describes the key elements of what is expected to be achieved in relation to the specific challenge</td>
</tr>
</tbody>
</table>
RESEARCH AND INNOVATION ACTION (RIA)

Activities aiming to establish new knowledge and/or to explore the feasibility of a new or improved technology, product, process, service or solution. For this purpose they may include basic and applied research, technology development and integration, testing and validation on a small-scale prototype in a laboratory or simulated environment.

Projects may contain closely connected but limited demonstration or pilot activities aiming to show technical feasibility in a near to operational environment.

INNOVATION ACTION (IA)

Action primarily consisting of activities directly aiming at producing plans and arrangements or designs for new, altered or improved products, processes or services. For this purpose they may include prototyping, testing, demonstrating, piloting, large-scale product validation and market replication.

COORDINATION AND SUPPORT ACTION (CSA)

Actions consisting primarily of accompanying measures such as standardisation, dissemination, awareness-raising and communication, networking, coordination or support services, policy dialogues and mutual learning exercises and studies, including complementary activities of strategic planning, networking and coordination between programmes in different countries.

RULES FOR PARTICIPATION
Minimum Conditions for participation (art.9, RfP)

Most topics require the participation of several organisations in the proposal. Namely,

**IA, RIA**
- Require

At least 3 **LEGAL ENTITIES** independent of each other and established in different Member States or associated countries.

**CSA, ERC and Marie S. Curie Actions**
- Require

(At least) 1 **LEGAL ENTITY**

**ADDITIONAL/SPECIAL CONDITIONS** might be identified in the work programme (n. of participants, type of entities, etc...).
Horizon2020 main structure

**Excellent Science**
- European Research Council
  - Frontier research by the best individual teams
- Future and Emerging Technologies
  - Collaborative research to open new fields of innovation
- Marie Skłodowska Curie actions
  - Opportunities for training and career development
- Research infrastructures (including e-infrastructure)
  - Ensuring access to world-class facilities

**Industrial Leadership**
- Leadership in enabling and industrial technologies
  - Nanotechnologies, Advanced Materials, Advanced Manufacturing and Processing, and Biotechnology;
  - Information and Communication Technologies (ICT);
  - Space
- Access to risk finance
  - Leveraging private finance and venture capital for research and innovation
- Innovation in SMEs
  - Fostering all forms of innovation in all types of SMEs

**Societal Challenges**
1. Health, demographic change and wellbeing
2. Food Security, Sustainable Agriculture and Forestry, Marine, Maritime and Inland Water Research and the Bioeconomy
3. Secure, clean and efficient energy
4. Smart, green and integrated transport
5. Climate action, environment, resource efficiency and raw materials
6. Inclusive, innovative and reflective societies
7. Secure society
SOCIETAL CHALLENGE 4
‘SMART GREEN AND INTEGRATED TRANSPORT’
Societal Challenge 4 (SC4)
Smart, green and integrated transport

**Overall objective:**
✓ Building a transport system beneficial for all citizens, the economy and the society

**Specific objectives:**
✓ Targeted efforts to develop and validate solutions that can be rapidly deployed
✓ Address in a systemic way transport means, infrastructure and operation models
✓ Integrate them in a user-friendly system of smart and connected mobility
✓ Reducing transport impact on climate and environment
✓ Strong user-centred approach
'Smart green and integrated transport’ (SC4) - Work Programme 2018-2020

Calls

1. Mobility for Growth
2. Automated Road Transport
3. Green Vehicles

- Low-carbon & sustainable transport
- Safe, integrated and resilient transport system
- Global leadership and competitiveness [2018]
- Accounting for the People
- Blue Growth
Call «Mobility for Growth»
## Low-carbon & sustainable transport: topics and budget

<table>
<thead>
<tr>
<th>Topic</th>
<th>Title</th>
<th>Action type</th>
<th>Stages</th>
<th>Deadline(s)</th>
<th>Call budget 2019 (mil €)</th>
<th>Suggested EU contribution per proposal (mil €)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LC-MG-1-5-2019</td>
<td>Advancements in aerodynamics &amp; innovative propulsion systems for <strong>quieter &amp; greener aircrafts</strong></td>
<td>RIA</td>
<td>2</td>
<td>16 Jan 2019 (1st Stage) 12 Sep 2019 (2nd Stage)</td>
<td>15</td>
<td>3-5</td>
</tr>
<tr>
<td>LC-MG-1-8-2019</td>
<td>Retrofit Solutions and Next generation propulsion for <strong>Waterborne Transport</strong></td>
<td>IA</td>
<td>2</td>
<td>16 Jan 2019 (1st Stage) 12 Sep 2019 (2nd Stage)</td>
<td>15</td>
<td>3-5</td>
</tr>
<tr>
<td>LC-MG-1-9-2019</td>
<td>Upgrading <strong>transport infrastructure</strong> in order to monitor noise and emissions <strong>Cooperation with the US is encouraged</strong></td>
<td>RIA</td>
<td>2</td>
<td>16 Jan 2019 (1st Stage) 12 Sep 2019 (2nd Stage)</td>
<td>7</td>
<td>4-7</td>
</tr>
<tr>
<td>LC-MG-1-10-2019</td>
<td><strong>Logistics solutions</strong> that deal with requirements of the 'on demand economy' and for shared-connected and low-emission logistics operations <strong>Cooperation with any third country is encouraged</strong></td>
<td>RIA</td>
<td>2</td>
<td>16 Jan 2019 (1st Stage) 12 Sep 2019 (2nd Stage)</td>
<td>10</td>
<td>2-4</td>
</tr>
<tr>
<td>LC-MG-1-6-2019</td>
<td><strong>Aviation operations impact on climate change</strong> <strong>Cooperation with China is encouraged</strong></td>
<td>RIA</td>
<td>1</td>
<td>25 Apr 2019</td>
<td>10</td>
<td>2-3</td>
</tr>
<tr>
<td>LC-MG-1-7-2019</td>
<td>Future propulsion &amp; integration: towards a <strong>hybrid/electric aircraft</strong> <strong>Cooperation with Canada and Japan is encouraged</strong></td>
<td>RIA</td>
<td>1</td>
<td>25 Apr 2019</td>
<td>15</td>
<td>3-5</td>
</tr>
<tr>
<td>LC-MG-1-11-2019</td>
<td>Structuring R&amp;I towards <strong>zero emission waterborne transport</strong></td>
<td>CSA</td>
<td>1</td>
<td>25 Apr 2019</td>
<td>1</td>
<td><strong>Up to 1</strong></td>
</tr>
</tbody>
</table>

**Opening date: 5 Sep 2018**

**Opening date: 4 Dec 2018**
Safe, integrated and resilient transport system: topics and budget

<table>
<thead>
<tr>
<th>Topic</th>
<th>Title</th>
<th>Action type</th>
<th>Stages</th>
<th>Deadline(s)</th>
<th>Call budget 2019 (mil €)</th>
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<tbody>
<tr>
<td>MG-2-6-2019</td>
<td>Moving freight by Water: Sustainable Infrastructure and Innovative Vessels</td>
<td>RIA</td>
<td>2</td>
<td>16 Jan 2019 (1° Stage) 12 Sep 2019 (2° Stage)</td>
<td>30</td>
<td>5-10</td>
</tr>
</tbody>
</table>
| MG-2-7-2019 | Safety in an evolving road mobility environment  
Cooperation with any third country is encouraged                                                                                      | RIA         | 2      | 16 Jan 2019 (1° Stage) 12 Sep 2019 (2° Stage)                             | 8                          | 4-8                              |
| MG-2-8-2019 | Innovative applications of drones for ensuring safety transport                                                                                              | RIA         | 2      | 16 Jan 2019 (1° Stage) 12 Sep 2019 (2° Stage)                             | 15                         | 3-5                              |
| MG-2-9-2019 | Integrated multimodal, low-emission freight transport systems and logistics  
Cooperation with Canada, China, Japan, Latin America and the US is encouraged                                                   | RIA         | 2      | 16 Jan 2019 (1° Stage) 12 Sep 2019 (2° Stage)                             | 14                         | 3-7                              |

Opening date: 5 Sep 2018
# Accounting for the People: topics and budget

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<th>Deadline(s)</th>
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<th>Suggested EU contribution (mil €)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MG-4-4-2018-2019</td>
<td>Support for <em>dissemination events</em> in the field of Transport Research</td>
<td>CSA</td>
<td>1</td>
<td>16 Jan 2019</td>
<td>0,7</td>
<td>0,4-0,7</td>
</tr>
<tr>
<td><strong>Opening date: 5 Sep 2018</strong></td>
<td></td>
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<td></td>
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</tr>
<tr>
<td>MG-4-5-2019</td>
<td>An inclusive <em>digitally interconnected transport</em> system meeting citizens' needs</td>
<td>RIA</td>
<td>1</td>
<td>25 Apr 2019</td>
<td>7</td>
<td>1-3</td>
</tr>
<tr>
<td><strong>Opening date: 4 Dec 2018</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MG-4-6-2019</td>
<td>Supporting <em>Joint Actions on sustainable urban accessibility</em> and connectivity Cofund</td>
<td>ERA-NET-Cofund</td>
<td>1</td>
<td>25 Apr 2019</td>
<td>5</td>
<td>4-5</td>
</tr>
</tbody>
</table>
# Blue Growth: topics and budget

<table>
<thead>
<tr>
<th>Topic</th>
<th>Title</th>
<th>Action type</th>
<th>Stages</th>
<th>Deadline(s)</th>
<th>Call budget 2019 (mil €)</th>
<th>Suggested EU contribution (mil €)</th>
</tr>
</thead>
</table>
| MG-BG-02-2019 | **Ship emission control** scenarios, marine environmental impact and mitigation  
*Cooperation with any third country is encouraged*                                                                                           | RIA         | 1      | 25 Apr 2019   | 8                        | Up to 8                          |

Opening date: 4 Dec 2018
Call «Digitising and Transforming European Industry and Services: Automated Road Transport »
Automated Road Transport – ART call

- Large-scale/cross-border demos to promote market introduction of highly automated driving systems
- Trials on sustainable automated functions in real driving conditions - various traffic scenerios and urban areas
- Regulatory framework, certification procedures and standards
- New concepts for shared, connected and automated mobility
- ART-related cross-cutting issues: safety, users' needs, business models,
### Automated Road Transport: topics and budget

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<tr>
<th>Topic</th>
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<th>Suggested EU contribution (mil €)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DT ART-03-2019</strong></td>
<td>Human centred design for the new <strong>driver role in highly automated vehicles</strong>&lt;br&gt;Cooperation with Australia, Japan, Singapore, Korea and the US is encouraged</td>
<td>RIA</td>
<td>1</td>
<td>25 Apr 2019</td>
<td>8</td>
<td>4-8</td>
</tr>
<tr>
<td><strong>DT ART-04-2019</strong></td>
<td>Developing and testing <strong>shared, connected and cooperative automated vehicle fleets</strong> in urban areas for the mobility of all Cooperation with Australia, Japan, Singapore, Korea and the US is encouraged</td>
<td>IA</td>
<td>1</td>
<td>25 Apr 2019</td>
<td>30</td>
<td>15-30</td>
</tr>
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</table>

**Opening date:** 4 Dec 2018
Call “Building a low-carbon, climate resilient future: Green Vehicles”
Green Vehicles—GV call

- 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
Automated Road Transport: topics and budget

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<th>Deadline(s)</th>
<th>Call budget 2019 (mil €)</th>
<th>Suggested EU contribution (mil €)</th>
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</thead>
<tbody>
<tr>
<td>LC-GV-03-2019</td>
<td>User centric charging infrastructure</td>
<td>IA</td>
<td>1</td>
<td>25 Apr 2019</td>
<td>35</td>
<td>8-15</td>
</tr>
<tr>
<td>LC-GV-05-2019</td>
<td>Urban mobility and sustainable electrification in large urban areas in developing and emerging economies Cooperation with Africa, Asia and Latin America is encouraged</td>
<td>IA</td>
<td>1</td>
<td>25 Apr 2019</td>
<td>18</td>
<td>15-18</td>
</tr>
</tbody>
</table>

Opening date: 4 Dec 2018
DT-ART-03-2019: Human centred design for the new driver role in highly automated vehicles

Specific Challenge:

• Certain automated driving conditions still require the driver to be prepared to assume control (SAE automation level 3 and lower) while in highly automated driving conditions (SAE automation level 4) driver intervention won’t be required during defined use cases.

• This means that during a single trip there will be a coexistence of different automated driving functions demanding various degrees of human attention. When a vehicle is in highly automated driving mode the driver may take on different behaviours.

• Solutions need to be developed to ensure both a safe transfer between use cases with different automation levels and that drivers always have a very clear understanding about the degree of automation enabled in each situation.

Scope:

Proposals should focus on the design of safe human-machine interfaces for vehicles with highly automated driving functions and the safe and controlled transfer between use cases of different SAE automation levels (between level 4 to/from levels 3 or 2) for all types of drivers. Proposals should consider all the following aspects:

• Driver roles in use cases of SAE automation lvl 4. Upgrade of models for driver behavior/reaction, awareness, readiness and monitoring. Driver generational effects and cultural factors.

• Relationship between the driver and the vehicle (e.g. mutual cooperation or handover).

• Solutions making it clear to the driver what is the operational capability (authority) of the automated mode or modes currently enabled, as well as ensuring safe and reliable function (re-)allocation and corresponding driver/operator readiness.

• Demonstration of concept functionality in real world situations.

Type of action: RIA
Suggested EU contribution: between EUR 4 and 8 million
Topic budget: EUR 8 million
Opening date: 4 Dec. 2018
Deadlines: 25 Apr 2019
DT-ART-04-2019: Developing and testing shared, connected and cooperative automated vehicle fleets in urban areas for the mobility of all

Specific Challenge:

• Shared automated vehicle pilots are emerging in several urban environments around the world, but they are mostly small-scale and involve either on-demand ride services or low-speed shuttles operating in controlled environments.

• In order to accelerate the uptake of mobility services based on shared, connected and cooperative automated vehicles, there is a need for demonstrating these services in real life conditions to test their performance, safety and viability and to prove that they are attractive for and accepted by users.

• Furthermore, the potential impacts on reducing CO2 emissions and pollutants, safety and overall transport system costs need to be assessed.

Scope:

Proposals should consider all the following aspects:

• Analyse the new, emerging business/operating models and related technologies for shared, connected and cooperative automated vehicle fleets that are complementing existing high-capacity public transportation systems.

• Design innovative shared, connected, cooperative and automated vehicle concepts (road vehicles at SAE level 4 and higher) and the associated new business/operating models addressing user and customer needs, including cultural aspects, for mobility of people and/or delivery of goods. The potential of combining automated urban delivery and people transportation should be addressed.

• Test robustness, reliability and safety of shared highly automated (electrified) vehicle fleets that are operating in semi-open or open environments focusing on the interaction with other road users (incl. pedestrians, cyclists) and public transport systems. Fleet tests should consider the entire "functional urban area" and include feeder services and other collective transport options in peri-urban and low-density urban areas.

• Vehicles should use connectivity technologies to allow communication and cooperation between vehicles, infrastructure and with other road users and to enable automated, smart mobility services, innovative fleet management concepts and higher performance of automated vehicle functions. The development of solutions for the next generation of cooperative services by efficiently combining C-ITS and automation for traffic flows would be an asset.
DT-ART-04-2019: Developing and testing shared, connected and cooperative automated vehicle fleets in urban areas for the mobility of all

**Scope:**

- Identify and provide for the needs of vulnerable road users.
- Develop architecture, functional and technical requirements for ICT technologies, for secure data collection and processing needed for the operation of connected and cooperative automated vehicles. Develop ways to enhance the optimised use of big data in (road) transport for implementing smart and safe mobility solutions, innovative traveller services and (city) traffic management.
- Fulfil all security requirements to protect the shared automated vehicles to any threats and avoid any conscious manipulations of the information enabling automated driving.
- Assess and demonstrate benefits of the pilot implementation on energy efficiency, traffic flow, safety, user appreciation etc, based on holistic modelling solutions.

**Type of action:** IA

**Suggested EU contribution:** between EUR 15 and 30 million

**Topic budget:** EUR 30 million

**Opening date:** 4 Dec. 2018

**Deadlines:** 25 Apr 2019

LC-GV-05-2019: InCo flagship on “Urban mobility and sustainable electrification in large urban areas in developing and emerging economies”

Specific Challenge:

• Cities are responsible for three-quarters of the global energy consumption as well as approximately 80% of the global greenhouse gas emissions. The trend towards urbanisation and the associated increase of personal and freight transport creates massive challenges.

• This is why urbanisation requires integrated mobility solutions that bring together technology opportunities with local and national policy.

• Whereas environmental issues are very high on urban mobility agendas, the importance of transport in urban social and economic structures is often neglected in discussions.

Scope:

Proposals should address all of the following activities:

• Development of a toolbox for advanced management strategies towards a more efficient private and public electric mobility: E-mobility management strategies, to increase mobility and energy efficiency, emission reduction and user acceptance of electrified vehicles.

• Comparative demonstration activities and pilots in cities will include at least one demonstrator in the following regions: Europe, Asia, Africa and CELAC (leading to a minimum of 4 city demonstrators), involving local partners. Innovative concepts for electrified road public transport (passenger and freight), jointly designed through International Partnerships.

• Development of implementation concepts to scale up the demonstration activities and exploration of the sustainable mobility planning.

Type of action: IA

Suggested EU contribution: between EUR 15 and 18 million

Topic budget: EUR 18 million

Opening date: 4 Dec. 2018

Deadlines: 25 Apr 2019

So, summarizing...
Before you can start writing your proposal, you will have to find a call, select partners and plan your project:

1. Call And Topic Specific Documents

Choose your call and the relevant topic, and then read carefully the related documents or templates that are available on the given call and topic page on the Funding Opportunities page of the Participant Portal: general documents are listed on the Call Documents page, while topic specific documents are available on each topic's page under "Topic Conditions and Documents". They may include a specific Guide for Applicants.

2. Select Your Partners For The Project

Most calls require the participation of several participants in the proposal. Partner search is facilitated by National Contact Points or by the partner search web page.

3. Plan Your Project
OPEN PARTNER SEARCHES FROM EU
The following well-established European organisations are interested in collaborating with Korean research institutions/universities/companies. If you find their profiles interesting and would like to cooperate with them in R&I projects, you can contact them directly.
Politecnico di Milano (POLIMI)

<table>
<thead>
<tr>
<th>POLIMI DESCRIPTION</th>
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<tbody>
<tr>
<td>Politecnico di Milano is a scientific-technological University, which trains engineers, architects and industrial designers. The University has always focused on the quality and innovation of its teaching and research developing a fruitful relationship with business and manufacturing worlds, as well as the public and third sectors, by means of experimental research and technological transfer. With 272 projects, 9 ERC Grants, 25,6% success rate and 90 million euro total EU funding, POLIMI is the top Italian university for projects funded by the European Commission under the Seventh Framework Programme for Research and Development. Since the Horizon 2020 Programme started, 96 more projects have been funded, which illustrates POLIMI’s capacity for planning and managing research.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>POLIMI CONTACTS</th>
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<tbody>
<tr>
<td>Organisation Name</td>
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<tr>
<td>Type of organisation</td>
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<tr>
<td>City</td>
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<tr>
<td>Country</td>
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<tr>
<td>www address</td>
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<tr>
<td>Contact person (name and surname)</td>
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<tr>
<td>DT-ART-03-2019: Human centred design for the new driver role in highly automated vehicles</td>
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<tr>
<th>THE PROPOSAL</th>
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<tbody>
<tr>
<td>The research project will deal with the interaction of drivers and semi-automated cars in a connected vehicles environment, with focus on the urban environment. The main issues will be:</td>
</tr>
<tr>
<td>- Design and testing of control handover strategies between car and driver</td>
</tr>
<tr>
<td>- Identification of use cases for the transition between SAE level 4 and lower levels, including driver cultural, gender, age an other candidate modifying factors</td>
</tr>
<tr>
<td>- Human-machine interface design and functional validation across use cases</td>
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<tr>
<td>- Analysis of the emerging behaviour in urban traffic due to SAE level 3-4 automation features</td>
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<th>POLIMI IS LOOKING FOR...</th>
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<tr>
<td>Type of organisation</td>
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<tr>
<td>Expertise needed</td>
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<tr>
<td>Keywords describing the expertise</td>
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</table>
Politecnico di Milano (POLIMI)

**POLIMI DESCRIPTION**

Politecnico di Milano is a scientific-technological University, which trains engineers, architects and industrial designers. The University has always focused on the quality and innovation of its teaching and research developing a fruitful relationship with business and manufacturing worlds, as well as the public and third sectors, by means of experimental research and technological transfer.

With 272 projects, 9 ERC Grants, 25,6% success rate and 90 million euro total EU funding, POLIMI is the top Italian university for projects funded by the European Commission under the Seventh Framework Programme for Research and Development. Since the Horizon 2020 Programme started, 96 more projects have been funded, which illustrates POLIMI’s capacity for planning and managing research.

**TOPIC OF INTEREST**

LC-GV-05-2019: InCo flagship on “Urban mobility and sustainable electrification in large urban areas in developing and emerging economies”

**THE PROPOSAL**

The proposal refers to electric traction power systems.

**POLIMI IS LOOKING FOR**

**Type of organisation**

Korean research or industrial partner

**Expertise needed**

The required experience is in electronic converters, both for mass transport (railway, tramway and subway sectors, as well as in the electric buses sector) and for private mobility (charging systems and on communication systems for automotive).

The partner should have the capability to produce prototypes, in particular power converters, for electric traction to be applied both in stationary applications and on board vehicles, such as motor drives, AC/DC converters, etc.

In the field of the application of Computational Intelligence techniques, such as Neural Networks and Evolutionary Optimization algorithms, the expertise required is the capability of creation a model of the system and a prototype. In particular it is important to be able to:

1. Create a properly scaled physical model aimed to both validate the model parameters and, possibly, train Neural Network surrogate models. This phase is important in the optimization because the accuracy of the model is a key factor in the process. Moreover, it is possible to test more sophisticated optimization systems with the use of hardware-in-the-loop;
2. Prototype the final proposed solution in order to evaluate the effective performances of the designed system. This phase can be important also to refine the objectives used in the optimization, combining the industrial experience with systems for the codification in a Fuzzy Logic manner of subjective evaluations.

**Keywords describing the expertise**

Railway applications, automotive, motor drives, power electronics, prototyping, modelling
UNIVAQ offers a valuable expertise in the fields of Information and Communication Technologies, biotechnologies, sciences, economics, engineering, education, humanities, medicine, and psychology. With 7 departments, the University of L'Aquila offers 66 degree courses (divided between first and second level degrees), 8 research doctorate programmes, specialisation schools, specializing-master courses and vocational courses. Many members of its distinguished faculty of about 600 professors and researchers have received international recognition and are considered leaders in their fields of research.

UNIVAQ has a long experience in R&I with 58 R&I projects funded by the European Commission, including 30 FP7 and 19 H2020 projects.

THE PROPOSAL

The proposal aims at designing, prototyping and pre-industrially developing a novel urban electric light rail train hydrogen powered.

A zero emission light hybrid electric (LHE) train able to work along the current sub-urban non-electrified rail lines is proposed. It is based on advanced and environmental friendly hybrid propulsion system that offers the opportunity to increase the power-train efficiency so that the fuel consumption is minimised.

A novel hybrid power unit (HPU) consisting of hydrogen FCs and a set of high speed flywheel energy storage system (FESS) for LHE train is proposed with the aim to i) increase the energy efficiency; ii) avoid energy dissipation devices; iii) avoid the chemical batteries for traction; iv) use a green fuel that can be generated from renewable energies.

An adaptive control strategy of the power-train components has been developed to manage the power flows with the aim to reduce the fuel consumption. More in detail, the FC stack is set to work at a limited number of different constant power values in order to better adapt the HPU power flow to the load.

Read the full proposal outline here.
IEIIT-CNR DESCRIPTION

IEIIT is a research structure of CNR, the National Research Council of Italy, established on October 12th, 2001. IEIIT carries out advanced scientific and technological research in the area of Information Engineering covering fields of telecommunications, computer and systems engineering, applied electromagnetics, electronics, control, robotics and bioengineering. The IEIIT has more than 40 years of scientific activity in the ICT domain in cooperation with national and international research institutions and universities, within the framework of scientific programs and projects supported by national and international agencies, public and private organizations and medium and large enterprises.

In its laboratories IEIIT develops soft products (simulation models, design methods, synthesis techniques) and hard products (new architectures of devices, sensors and systems) with industrial and social applications, telecommunications, terrestrial and space scientific observations.

IEIIT-CNR CONTACTS

<table>
<thead>
<tr>
<th>Organisation Name</th>
<th>Institute of Electronics, Computer and Telecommunication Engineering - National Research Council of Italy</th>
</tr>
</thead>
<tbody>
<tr>
<td>Type of organisation</td>
<td>Public Research Body</td>
</tr>
<tr>
<td>City</td>
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</tr>
<tr>
<td>Country</td>
<td>Italy</td>
</tr>
<tr>
<td>www address</td>
<td><a href="http://www.ieiit.cnr.it">http://www.ieiit.cnr.it</a></td>
</tr>
<tr>
<td>Contact person (name and surname)</td>
<td>Diego Ettore Liberati, PhD, Research Director <a href="https://it.linkedin.com/in/diego-ettore-liberati-850884">https://it.linkedin.com/in/diego-ettore-liberati-850884</a> <a href="http://www.deib.polimi.it/eng/people/details/240576">http://www.deib.polimi.it/eng/people/details/240576</a></td>
</tr>
<tr>
<td>Telephone</td>
<td>+39 3480569317</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:Diego.liberati@polimi.it">Diego.liberati@polimi.it</a></td>
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IEIIT-CNR IS LOOKING FOR...

## TOPIC OF INTEREST

<table>
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<tr>
<th>LC-GV-05-2019: InCo flagship on “Urban mobility and sustainable electrification in large urban areas in developing and emerging economies”</th>
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UNISA CONTACTS

<table>
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<tr>
<th>Organisation Name</th>
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<td>Country</td>
<td>Italy</td>
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<tr>
<td>www address</td>
<td><a href="http://www.unisa.it">www.unisa.it</a></td>
</tr>
<tr>
<td>Contact person (name and surname)</td>
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<tr>
<td>Email</td>
<td><a href="mailto:pciambelli@unisa.it">pciambelli@unisa.it</a></td>
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</table>

UNISA DESCRIPTION

The origins of the University go back to the VIII century AD thanks to the foundation of the celebrated Salerno medical school, an authoritative, prestigious, sanitary institution, and remained important still today. UNISA has 68 projects funded by the European Commission, including 22 projects funded by H2020.

UNISA IS LOOKING FOR...

| Type of organisation          | Korean university or research institute. |
| Expertise                    | Developing and validating new methods to evaluate risk related to accidents in road tunnels, taking into account the effect of the presence of highly automated vehicles (HAV) together with traditional vehicles. Comparing accident consequences of current and future scenarios including HAVs through CFD modelling. Developing and validating new models for evacuation process with specific reference to human behaviour. Upgrade of comprehensive models for driver behaviour/reaction, awareness, readiness and monitoring. |
| Keywords describing the expertise | Risk analysis in road tunnels. Modelling collisions in tunnels. Evacuation process modelling. |

TOPIC OF INTEREST

| DT-ART-03-2019: Human centred design for the new driver role in highly automated vehicles |
| MG-2-7-2019: Safety in an evolving road mobility environment |

THE PROPOSAL

Details are available here: http://download.apre.it/UNISAforsafetransport.pdf
# GROUPE RENAULT DESCRIPTION

Groupe Renault is a French multinational automobile manufacturer established in 1899. The company produces a range of cars and vans, and in the past has manufactured trucks, tractors, tanks, buses/coaches and autorail vehicles.

According to the Organisation Internationale des Constructeurs d'Automobiles, in 2016 Renault was the ninth biggest automaker in the world by production volume. The Renault–Nissan–Mitsubishi Alliance is the fourth-largest automotive group. The Group is highly involved in H2020 with more than 100 projects funded by the European Commission.

## GROUPE RENAULT CONTACTS

<table>
<thead>
<tr>
<th>Organisation Name</th>
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<tr>
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<tr>
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<tr>
<td>Country</td>
<td>France</td>
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<tr>
<td>www address</td>
<td><a href="http://www.renault.com">www.renault.com</a></td>
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</table>

## TOPIC OF INTEREST

**LC-GV-05-2019**: InCo flagship on “Urban mobility and sustainable electrification in large urban areas in developing and emerging economies”

## THE PROPOSAL

Dynamic wireless charging infrastructure: demonstrator, business model, scaling

## GROUPE RENAULT IS LOOKING FOR...

<table>
<thead>
<tr>
<th>Type of organisation</th>
<th>Korean OEM, tear 1 suppliers, institutes, universities</th>
</tr>
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</table>
| Expertise | • Wireless transfer technology, Road Infrastructure, Energy management  
• Energy / mobility simulation  
• Business model  
• Life Cycle Assessment |

Keywords describing the expertise
DEIB CONTACTS

<table>
<thead>
<tr>
<th>Organisation Name</th>
<th>Politecnico di Milano - Dept of Electronics, Information and Bioengineering (mOve research group)</th>
</tr>
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<tbody>
<tr>
<td>Type of organisation</td>
<td>Public University</td>
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<td>Italy</td>
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<td><a href="https://www.deib.polimi.it/eng/home-page">https://www.deib.polimi.it/eng/home-page</a> web page of the research group interested in the call: <a href="https://www.move.deib.polimi.it/">https://www.move.deib.polimi.it/</a></td>
</tr>
<tr>
<td>Contact person (name and surname)</td>
<td>Mara Tanelli</td>
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<td>Telephone</td>
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<tr>
<td>Email</td>
<td><a href="mailto:Mara.tanelli@polimi.it">Mara.tanelli@polimi.it</a></td>
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DEIB DESCRIPTION

The mOve research group is focused on the design of control systems, data-based identification of black-box models, development of control-oriented dynamic models, and control-oriented analysis and digital filtering. The application fields of the group span over a broad range of vehicle systems: chassis control, energy optimization, supervisory coordination and control of fleets of vehicles. Being usually involved both in applied research projects and on basic research on new theory and methods, the mOve group fosters the continuous cross-feeding between theory and applications. We work in cooperation with world-class leading companies and have solid experience in the transfer of theoretical research and innovative design methods into product and process innovation.

TOPICS OF INTEREST

DT-ART-03-2019: Human centred design for the new driver role in highly automated vehicles

DEIB IS OFFERING...

Expertise offered active driving-style assessment, proposing innovative methods for complex risk and energy-based profiling of drivers, using many different measurements, both vehicle- and smartphone-based (e.g., accelerometers, gyroscopes and GPS sensors).

Keywords Vehicle dynamics; Vehicle control; Data analysis; Model estimation; Driving-style estimation: Driver modelling
**UNIBO CONTACTS**

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<tr>
<th>Organisation Name</th>
<th>University of Bologna</th>
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<td>www address</td>
<td><a href="http://www.unibo.it">www.unibo.it</a></td>
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<tr>
<td>Contact person</td>
<td>Antonella Munna</td>
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<tr>
<td>(name and surname)</td>
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<tr>
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<td>+39 0512098857; mob.  +39 3355469178</td>
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<tr>
<td>Email</td>
<td><a href="mailto:antonella.munna@unibo.it">antonella.munna@unibo.it</a></td>
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**UNIBO DESCRIPTION**

The Alma Mater Studiorum (UNIBO), the oldest university in the Western world, paves the way for innovation through an increasingly rich programme catalogue, cutting-edge research and a constant and increasingly broad international perspective. Research and Innovation are a priority of the University mission.

Thanks to its scientific excellence and a central Project Management support working closely, UNIBO has gained a considerable experience in international and European research projects, successfully participated in FP7: with 274 projects funded in 2007-2013; (58 of them as coordinator) and 87,8ML Euros of funding.

In Horizon 2020, UNIBO is so far involved in 171 funded projects (43 as coordinator) with about 64ML Euros of funding. UNIBO is also partner of the EIT Knowledge & Innovation Communities (“EIT DIGITAL”, “Climate KIC”, “EIT Raw Materials”) and many of the most important EU initiatives related to the Horizon 2020 framework program (ie. ETPs, EIPs, JPIs, etc.).

**TOPICS OF INTEREST**

**DT-ART-03-2019**: Human centred design for the new driver role in highly automated vehicles

**DT-ART-04-2019**: Developing and testing shared, connected and cooperative automated vehicle fleets in urban areas for the mobility of all

**UNIBO IS OFFERING…**

- Multi-level simulation of complex network scenarios (DEP. OF COMPUTER - SCIENCE AND ENGINEERING);
- Human Machine Interfaces (DEP. OF INDUSTRIAL ENGINEERING);
- Human Factors (DEP. PSYCHOLOGY);
- Modelling future transport scenarios;
- Creation of large-scale, multi-modal micro-simulation networks;
- Implementation of on-demand transport services based on autonomous vehicles, including empty vehicle management and freight delivery;
- Electric vehicles including charging; activity based demand modelling by combining big data from different sources (GPS traces, flow measurements, surveys, geo-referenced land-use-data, socio-economic statistics, etc.);
- Transport impact analysis.
- External expertise to advise on EU research and innovation policy (DEP. OF CIVIL, CHEMICAL, ENVIRONMENTAL AND MATERIALS ENGINEERING);
- Multi-level simulation of complex network scenarios (DEP. OF COMPUTER SCIENCE AND ENGINEERING)
UNIMORE CONTACTS

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<tr>
<th>Organisation Name</th>
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<td>www address</td>
<td><a href="http://www.unimore.it">www.unimore.it</a></td>
</tr>
<tr>
<td>Contact person</td>
<td>Prof. Enrico Stallo</td>
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<td>Telephone</td>
<td>+39 059 2056144</td>
</tr>
<tr>
<td>Email</td>
<td><a href="mailto:enrico.stallo@unimore.it">enrico.stallo@unimore.it</a></td>
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UNIMORE DESCRIPTION

UNIMORE is committed to high-quality research. It is ranked among the top 8 comprehensive universities in Italy for its high level of research, according to the most recent assessment of the Italian Ministerial Committee for the Evaluation of Research (CIVR). Ongoing research is conducted by 21 university departments, by 11 integrated medical departments, and by numerous departmental and interdepartmental centers. UNIMORE offers cutting-edge facilities for technology transfer in the sectors of mechanical engineering, mechatronics, advanced materials, ICT in business applications, and regenerative medicine. The university has a strategic commitment to promote research in the following seven major areas:

- Advanced Mechanics and Automotive Design: Innovation in Product Development, Materials and Manufacturing
- Smart ICT for smart social worlds
- Stem cells and regenerative medicine
- Nano- and emerging materials and systems for sustainable technologies
- Genomic and molecular medicine
- Environments, Food And Health
- Models and methods for economic analysis: growth, business cycle, financial stability, public policies and innovation

UNIMORE has 116 projects funded by the European Commission, including 44 projects funded by H2020.

TOPICS OF INTEREST

LC-GV-05-2019: InCo flagship on “Urban mobility and sustainable electrification in large urban areas in developing and emerging economies”

UNIMORE IS OFFERING...

- This research group interests include heat transfer phenomena in general and thermal management of high heat flux devices, like electric motors, power electronics, batteries and also thermal management of fourth generation nuclear plants.
- The expertise of the research group within these topics include collaboration with worldwide renown car manufacturers and race car teams, as well as electric motor designers and manufacturers. In the context of those collaborations the role of the present research group is to perform sensitivity analysis, optimization and to devise new effective thermal management techniques for specific applications.
- In addition the research group belongs to a well established community of researchers from universities and research centers in Europe which work in the thermal-hydraulics of nuclear plants through a series of FP7 and h2020 EU funded research projects (THINS, SESAME).

Keywords

Thermal management, electric motors, power electronics, battery packs
UNIVERSITÀ DEGLI STUDI DI ROMA SAPIENZA – THE INDUSTRIAL NEUROSCIENCE LABORATORY

DESCRIPTION
With over 700 years of history, Sapienza has the mission to contribute to the development of a knowledge society through research, excellence, quality education and international cooperation. With 368 R&I projects funded by the European Commission the scientific research activity at Sapienza covers an extremely broad spectrum of disciplines, reaching levels of excellence in many areas, including archaeology, physics and astrophysics, humanities and cultural heritage, the environment, nanotechnologies, cell and gene therapy, design, aerospace, social and economic sciences. Nobel Prize winners and internationally renowned scientists have taught or studied at Sapienza. The Industrial Neuroscience Laboratory of Sapienza University aims to create new brain technologies and to deeply investigate fields such as:

- NeuroMarketing
- Cognitive States in Operative Environments
- Neuroaesthetic
- Clinical Area.

Team skills in the research field are well known worldwide thanks to the many scientific articles published on the most respected international scientific journals.

CONTACTS

<table>
<thead>
<tr>
<th>Organisation Name</th>
<th>Università degli Studi di Roma Sapienza Industrial Neuroscience Laboratory</th>
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<tbody>
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</tr>
<tr>
<td>Contact person</td>
<td>Prof. Fabio Babiloni</td>
</tr>
<tr>
<td>(name and surname)</td>
<td><a href="mailto:Fabio.babiloni@uniroma1.it">Fabio.babiloni@uniroma1.it</a></td>
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TOPICS OF INTEREST

| DT-ART-03-2019: Human centred design for the new driver role in highly automated vehicles |
| DT-ART-04-2019: Developing and testing shared, connected and cooperative automated vehicle fleets in urban areas for the mobility of all |
| LC-GV-05-2019: InCo flagship on “Urban mobility and sustainable electrification in large urban areas in developing and emerging economies” |

THE LABORATORY OF INDUSTRIAL NEUROSCIENCE IS OFFERING...

Expertise offered
The Laboratory of Industrial Neuroscience lead by prof. Babiloni at the University Sapienza of Rome has investigated the cerebral and emotional reaction of persons, pilots, air traffic controllers in Horizon2020 research programs in the transport domain. The laboratory has patented technology to measure real-time cerebral workload and pleasantness during drive and guide of cars, aircrafts, and during working activities. Prof. Babiloni featured hundred of scientific publications since 1990 on the theme of signal processing of cerebral activity in humans.

Keywords
Cerebral workload, emotions, passive brain computer interface, EEG, EKG, GSR
BrainSigns is a spin-off company of the "Sapienza" University of Rome. The company develops innovation based on scientific knowledge in the recording and analysis of signals produced by the functioning of the brain within different research areas. BrainSigns srl received the Seal of Excellence by the European Commission for its R&I activity. The company is active in several EU-Horizon 2020 projects related to the measurements and analysis of cerebral and emotional activity in humans during drive of cars or piloting aircrafts and other transport systems. Please check the participation of the company to the research in these areas at the http://humanfactors.brainsigns.com

### BRAINSIGNS CONTACTS

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<tr>
<th>Organisation Name</th>
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<tr>
<td>www address</td>
<td><a href="Http://humanfactors.brainsigns.com">Http://humanfactors.brainsigns.com</a></td>
</tr>
<tr>
<td>Contact person (name and surname)</td>
<td>Prof. Fabio Babiloni</td>
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<tr>
<td>Email</td>
<td><a href="mailto:Fabio.babiloni@uniroma1.it">Fabio.babiloni@uniroma1.it</a></td>
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### TOPICS OF INTEREST

**DT-ART-03-2019**: Human centred design for the new driver role in highly automated vehicles

**DT-ART-04-2019**: Developing and testing shared, connected and cooperative automated vehicle fleets in urban areas for the mobility of all

**LC-GV-05-2019**: InCo flagship on “Urban mobility and sustainable electrification in large urban areas in developing and emerging economies”

### BRAINSIGNS SRL IS OFFERING...

**Expertise offered**
Measurements and analysis of cerebral and emotional activity in humans during drive of cars or piloting aircrafts and other transport systems.

**Keywords**
Cerebral workload, emotions, passive brain computer interface, EEG, EKG, GSR
University of Naples “Federico II”- Dept. of Civil, Architectural and Environmental Engineering (DICEA)

**DESCRIPTION**

University of Naples “Federico II” was founded in 1224. With over 800 years of history, 4000 active researchers the University of Naples Federico II has a high impact scientific production within the context of national and international research. Over 28,000 research products have been authored or co-authored by members of the University often in cooperation with other private and public research institutions in Italy and abroad. The research activities put the University at the forefront of all areas of Knowledge: from Theoretical and Applied Science to Life Sciences, from Humanities to Engineering, from Architecture to Law: all 26 departments of the University have a significant research output with a remarkable degree of continuity in time.

**TOPICS OF INTEREST**

- **DT-ART-03-2019**: Human centred design for the new driver role in highly automated vehicles
- **DT-ART-04-2019**: Developing and testing shared, connected and cooperative automated vehicle fleets in urban areas for the mobility of all
- **LC-GV-05-2019**: InCo flagship on “Urban mobility and sustainable electrification in large urban areas in developing and emerging economies”

**DICEA CONTACTS**

<table>
<thead>
<tr>
<th>Organisation Name</th>
<th>University of Naples “Federico II” – Department of Civil, Architectural and Environmental Engineering (DICEA)</th>
</tr>
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<tbody>
<tr>
<td>Type of organisation</td>
<td>Public University</td>
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<tr>
<td>City</td>
<td>Naples</td>
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<tr>
<td>Country</td>
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<tr>
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**DICEA IS OFFERING…**

**Expertise offered**

The DICEA research group is ranked 1st in Italy in the field of Transportation Engineering. It has experience concerning Traffic Simulation, Driving Behaviour, Intelligent Transportation Systems, with particular reference to the Connected and Autonomous Vehicle technologies design, testing and evaluation, and more generally to the adoption on new technologies in the transportation field.

With reference to the ART-03 call the DICEA research group makes available its expertise with driving simulators, driving behaviour, and virtual validation tools generally used in the automotive field (Matlab/Simulink, IPG-CarMaker, Vi-CarRealTime, Labview).

With reference to the ART-04 call the DICEA research group makes available its expertise on modelling of transport networks, mobility services and transport demand.

With reference to the LC-GV-05 call the DICEA research group makes available its expertise on modelling of transport networks, and demand supply interaction, transport planning, and scenario assessment of transport technologies implementation.

**Keywords**

Transportation Engineering; Driving Simulator; Traffic Simulator; Driving Behaviour; Connected and Autonomous Vehicles; V2X; Mobility As A Service; Intelligent Transportation Systems.
University of Naples “Federico II”- Dept. of Electrical Engineering and Information Technology (DIETI)

**DIETI CONTACTS**

<table>
<thead>
<tr>
<th>Organisation Name</th>
<th>University of Naples Federico II - Dept. of Electrical Engineering and Information Technology (DIETI)</th>
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<tr>
<td>Type of organisation</td>
<td>University</td>
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<td>City</td>
<td>Naples</td>
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<td>Country</td>
<td>Italy</td>
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<tr>
<td>www address</td>
<td><a href="http://www.unina.it">www.unina.it</a>; <a href="http://www.dieti.unina.it/">www.dieti.unina.it/</a></td>
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**DIETI DESCRIPTION**

University of Naples “Federico II” was founded in 1224. With over 800 years of history, 4000 active researchers the University of Naples Federico II has a high impact scientific production within the context of national and international research. Over 28,000 research products have been authored or co-authored by members of the University often in cooperation with other private and public research institutions in Italy and abroad. The research activities put the University at the forefront of all areas of Knowledge: from Theoretical and Applied Science to Life Sciences, from Humanities to Engineering, from Architecture to Law: all 26 departments of the University have a significant research output with a remarkable degree of continuity in time.

In the Dept. of Electrical Engineering and Information Technology (DIETI) the research team guided by Prof. Stefania Santini is currently working on autonomous vehicles and on cooperative driving for urban and extra-urban traffic scenarios that include platooning, pass intersections, crossing without traffic lights. The traffic scenarios include also autonomous vehicles in the presence of driver and manually-driven vehicles and infrastructures.

**TOPICS OF INTEREST**

- Design, Deployment and testing of control algorithm for Autonomous Ground Vehicles;
- Highly automated driving functions for safe and controlled transfer;
- Safe Autonomous transport via V2V and 5G communication;
- Cyber-secure resilient control for Vehicular Networks;
- Collaborative Driving of Connected Autonomous Ground Vehicles also in the presence of communication impairments (algorithms design, experimental implementation and validation),
- connected and cooperative control of fleets of electrical and hybrid vehicles in automated/mixed environments.
- High-fidelity simulations of fleets of connected vehicles (networking protocols and cooperative maneuvers simulators)
- Equipping autonomous cars for experimental activities;
- Distributed and delocalized management of vehicles at intersections in urban environments,
- Path planning and trajectory prediction,
- Cloud-based service development for fleet management and traffic monitoring.

The Research Unit is composed by experts in Automatic Control, Communication Networks and Computer Science.

Moreover, the University of Naples also has a Living Lab (a real-world testing area located at Naples, Italy) for tests in real traffic conditions (its a 2.5 km urban way, not located in private dedicated zone). A list of recent publications on the topics is available [here](http://example.com). A video showing some evidence of experimental results achieved leveraging our control algorithms for cooperative crossing at the intersection without any traffic light (jointly with Chalmers University at Asta Zero) is available [here](http://example.com).

**Keywords**

Networked Control, MAS, Cooperative Control, Resilient Control, Automated and Autonomous Vehicles, Coordination of Fleets, C-ITS.
Korean participation in H2020 proposals (transport)
Where can I find support?
European Transport Network Alliance

The network of National Contact Points (NCP) for the H2020 Societal Challenge 4 “Smart, green and integrated transport”.

Miriam de Angelis, APRÉ Brussels 14.12.2017
Who are the HORIZON 2020 – Transport National Contact Points (NCPs)?

NCPs provide *guidance, practical information and assistance on all aspects of participation in Horizon 2020.*

NCPs basic services:
- Guidance on choosing relevant H2020 topics and types of action
- Advice on administrative procedures and contractual issues
- Training and assistance on proposal writing
- Distribution of documentation (forms, guidelines, manuals etc.)
- Assistance in partner search

In H2020, NCPs are *organized in networks* according to the theme they cover.

**Find your NCP here:**
ETNA 2020 SERVICES FOR STAKEHOLDERS

Web-based tools on the ETNA2020 website

Training

Brokerage Events

Profiles database/ Matching tool

Factsheets/guides on HORIZON 2020 transport related issues
ETNA 2020 INFORMATION

www.transport-ncps.net

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ETNA-2020 strives to be a bridge between the Smart, Green and Integrated Transport and all the research and business stakeholders in the transport sector, including all the transport modes and several cross-cutting areas, C, Safety.

Aiming at providing information on H2020 transport-related calls & the project services

WEBSITE, NEWSLETTER, TWITTER, DISSEMINATION EVENT

twitter.com/ETNA2020network

etna2020@apre.it
Thank You!

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