Transport Systems Catapult

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Description of the Organization

❑ *The [Transport Systems Catapult](TSC) **elite technology and innovation centres**, UK.*
*-research and applications in **Intelligent Mobility**, using new and emerging technologies to transport people and goods more **smartly, efficiently and sustainably**.*

❑ *Current H2020 Project involvement: **ITS-Observatory** (2015-2017); **ANIMA**, Aviation Noise (2017-2021); **GALILEO 4 MOBILITY** supporting Mobility as a Service (2017-2021)*

Description of the company research interest

- ❑ Main areas of focus are:
  - – ***Big data*** *Platform*
  - – ***Connected and Autonomous Vehicles***
  - – *Mobility as a Service (**MaaS**)*
- ❑ Main operational and capabilities fields:
  - – ***Modelling and Visualisation*** *(Transport and Environmental modelling, Virtual Reality, Visualisation)*
  - – ***Systems Engineering***
  - – ***Customer Experience*** *(user perception, behaviour and needs)*
  - – ***Data science and Artificial Intelligence***
  - – ***ICT*** *and software development*
- ❑ **Relevant areas to focus on this H2020** round of calls: **Air Quality & Emissions, Human factors, Road Safety, Science Data platform and analytics, Connected and Autonomous Vehicles, Mobility as a Service (MaaS), Aviation Impacts.**

Description of specific research interest
Decarbonising Transport, Air Quality & Sustainability

a) **Measurement, assessment and analysis of real-world vehicle emissions** : remote sensing of road vehicle;

b) Use of **telematics** to assess and explore **driving behaviour**;

c) Air Quality **control strategies** using technologies to implement **geofencing** zones

d) **City Modelling for Air Quality,** a unique **toolset** able to predict total tailpipe emissions

e) Collaboration with the wider **Academia** on Air Quality **monitoring & modelling**

f) Treating **decarbonisation and clean air** as two problems with comparable solutions: *toward cleaner urban mobility systems*

Researching tools and mechanisms to improve Air Quality in urban area-ROMANA
(LC-MG-1-1-2018)

Objectives:
- to identify **new** implementation **approaches** to AQ regulation
- to support <u>local authorities</u> and other regulatory bodies with appropriate and advanced **tools**
- Provide technical evidence to **assess gaps**

Expected results
- improved **methodologies & mechanisms** for monitoring and detection of emissions: Manchester and…Istanbul?;
- a **toolset** to inform <u>policy makers</u> of a new-better prediction of total tailpipe emissions related to agglomerations and large cities; use of **City Modelling for Air Quality toolset** as base platform
- a **public awareness scheme** based on patterns that deliver best performance
- Illustrate the implementation of **SDG 11**: *"Make cities and human settlements inclusive, safe, resilient and sustainable"*

Consortium - profile of known partners *(if any)*

No	Partner Name	Type	Country	Role in the Project
01	**BOSCH Global**/ **United Technologies Research Centre**	IND/RTD	Germany/ Ireland	Coordinator (?); new techniques
02	**TSC**	RTD	UK	WP leader-mobility solutions modelling/prediction tools
03	**BEIA**	SME	Romania	Task leader- data assessment & dissemination
04	**TfGM (Transport for Greater Manchester)**	Transport Authority	**UK**	WP leader policy & regulations
05	**University of Enna**	Academia	**Italy**	Task- monitoring & assessment
06	**Newcastle University**	Academia	**UK**	WP –scenario development
07	**Emissions Analytics**	SME	UK	PEMS monitoring
08	**Tsinghua University**	Academia	China	Task leader-dissemination

Consortium - required partners

No	Expertise	Type	Country	Role in the project
01	**Mobility solutions; monitoring techniques**	RTD/IND	Turkey	Task leader
02	***Modelling, tools, data assessment***	RTD	N Europe	WP Leader/task
03	**Dissemination, public awareness**	Authority	EU- Associated country (Turkey)	WP Leader
04	***Case-study management***	Transport Authority	S Europe/ INCO	WP leader
05	**Scenario development**	SME	?	Task leader
06	***Measurement & data assessment***	SME	?	Task leader
07	**Surveys & communication**	Local Authority	?	WP leader

International Brokerage Event. Brussels 26-27/10/2017

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https://ts.catapult.org.uk/current-projects/land-and-sea/
https://ts.catapult.org.uk/ (Vision)