ESPRIT – a Public Car System

Robert Stüssi, William Rendall, Valery Cervantes, Richard Mounce

(Robert Stüssi, ESPRIT project – Advisory Board, Lisbon, Portugal, rstussi@gmail.com)
(Valery Cervantes, CEA, Commissariat à l'énergie atomique et aux énergies alternatives, Grenoble, France, valery.ceravntes@cea.fr)
(Dr. Richard Mounce, Research Fellow, Centre for Transport Research, University of Aberdeen, UK, r.mounce@abdn.ac.uk)
(William Rendall, ESPRIT project – Advisory Board, Lanzarote, Spain, wrendall@gmail.com)

1 ABSTRACT

The following images and texts taken from the future presentation to be made in April at CORP 2018 conference and used here to constitute a full paper.

Keywords: last-kilometre mobility, car sharing, public car sharing, Horizon 2020, public space

ESPRIT is a disruptive mobility solution that provides a reliable supply of vehicles when and where they are needed, the hardware for a public car system. The ESPRIT project is funded by the Horizon 2020 programme. The project started in 2015 and finishes in autumn 2018. There are 18 EU partners co-ordinated by the CEA (Commissariat à l'énergie atomique et aux énergies alternatives) Grenoble.

Private cars were the dream of the 20th century, but their success has made them the nightmare of the 21st century. However, …

Though urban space was monopolised by private cars, cities are now learning to keep them under control. Here are some before and after photographs of Vienna's main shopping street, Mariahilferstrasse - freed from car traffic in 2012.

One-way carsharing offers the use of a car when required. There are now over a million one-way carsharing members in Germany alone.

Smartphone access technology one vehicle can replace up to 30 private cars. However, one-way carsharing has problems: 1. unreliable vehicle supply, 2. restricted operating areas, 3. dependent on sponsorship, as will be explained ...

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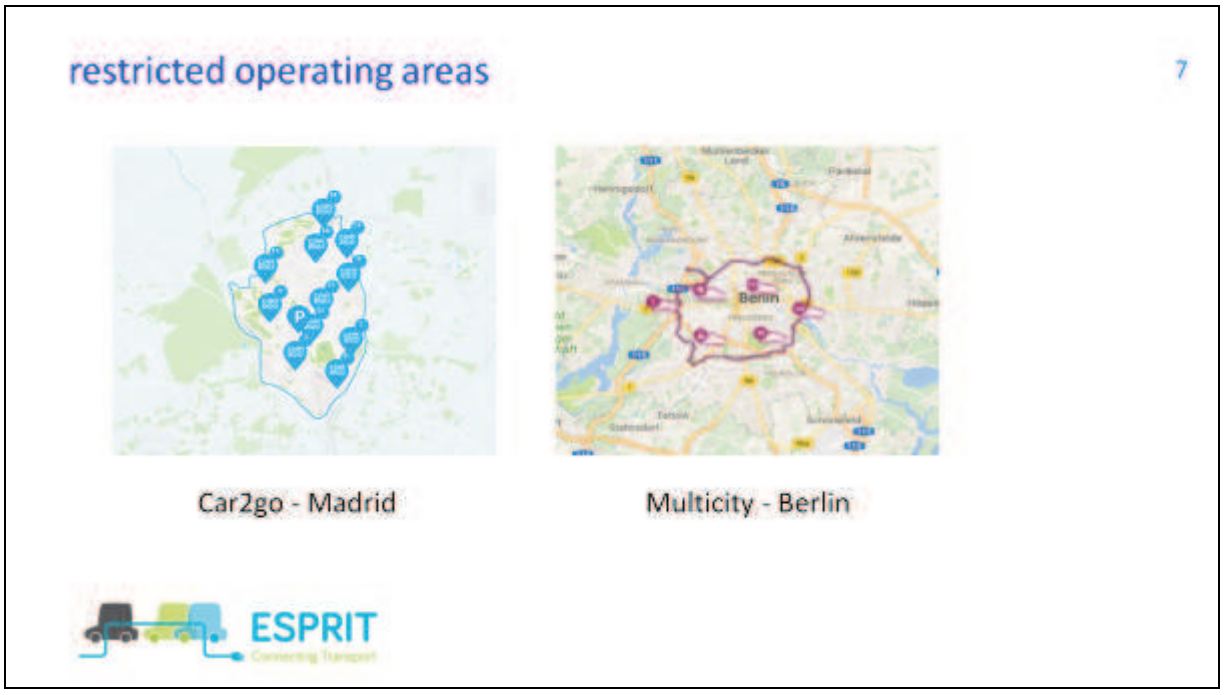
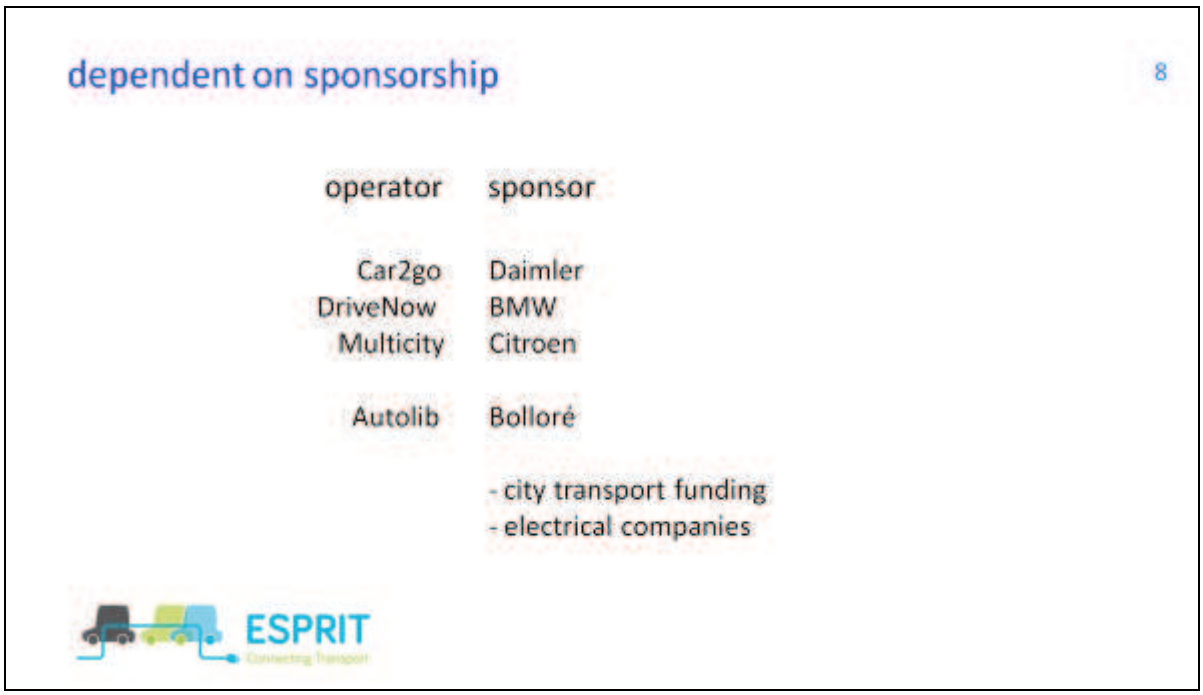
During the morningDuring morning rush hour in Paris, the nearest available Autolib car to Châtelet station is sometimes up to a kilometre away. Iin the evening rush hour in Amsterdam clusters of Car2go cars are left around the central stations by people taking their train home, leaving other areas without any vehicles available.



About one relocator is employed for every five one-way carsharing vehicles, driving them one-by-one to where they are needed. This logistic difficulty therefore limits one-way carsharing to central city districts only.



Due to limited supply or cars when they are most needed and the restricted operating areas, one-way carsharing is not commercially viable and only exist with sponsorship by manufacturing OEMs, city transport funding and electrical companies.

ESPRIT offers: 1. efficient vehicle distribution , 2. extensive operational areas and 3. viability for all operators.

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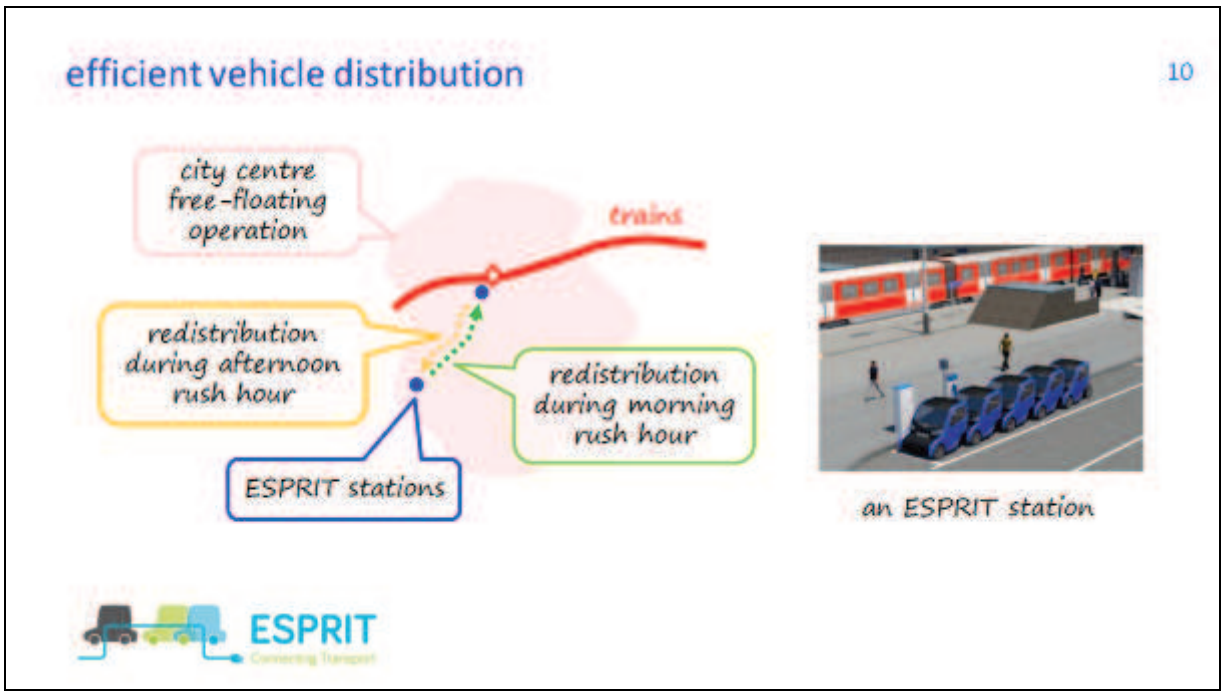
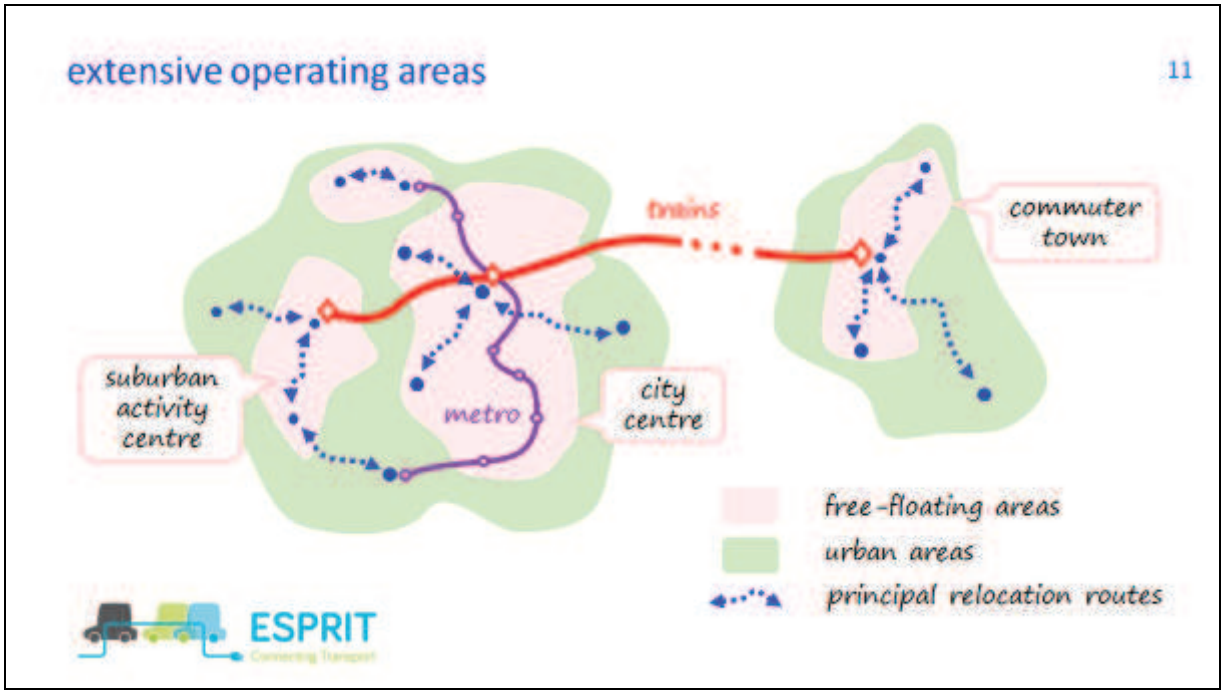
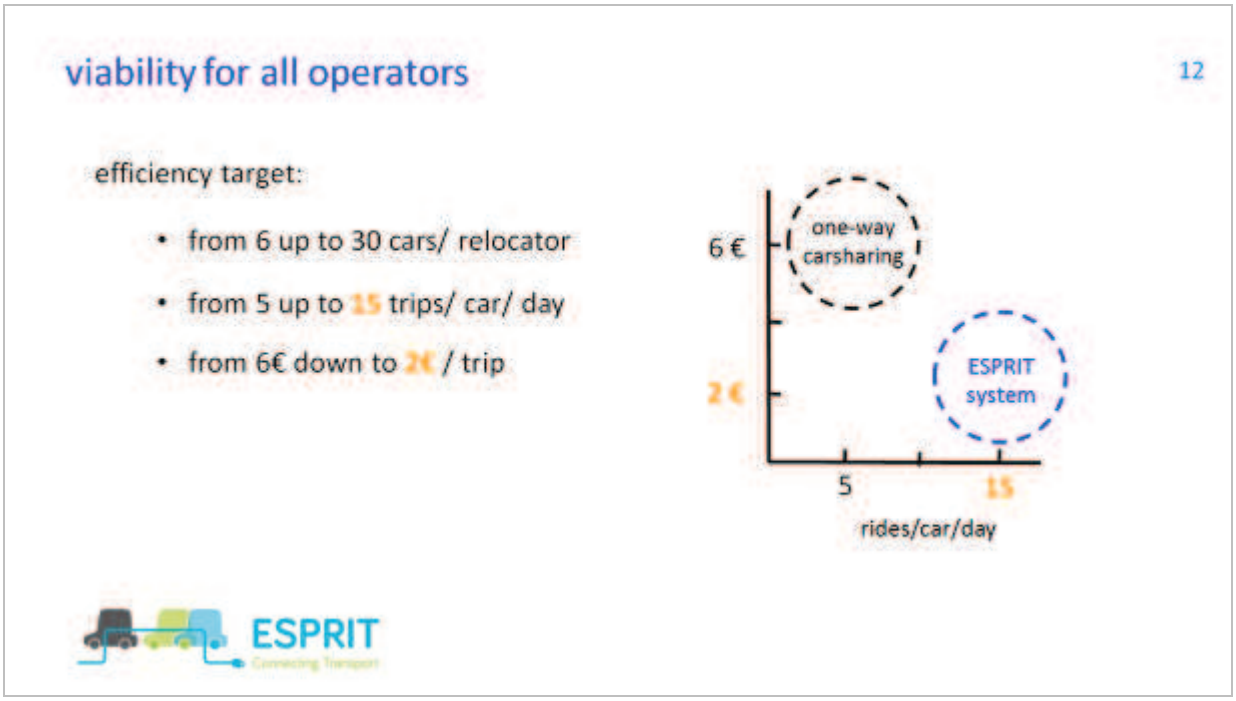


ESPRIT cars can be redistributed in road trains of up to 8 vehicles at a time, enabling a balancing of car supply, in particular during rush hours between train stations and work places.



The ESPRIT redistribution system allows extensive operating areas, with station-based operation through all urban areas and the option of free-floating operation in those of high demand.



The combination of efficient vehicle supply and extensive operating areas should make it possible to increase the ratio of cars per relocator from 6 up to 30 cars, the number of trips made per vehicle increase from 5 up to 15 per day and the fares to therefore be reduced from EUR 6 down to EUR 2, thereby creating service fidelity and commercial viability for all operators, i.e. without the need for sponsorship.

The efficient vehicle supply, extensive operational areas and viability for all operators makes possible:

- a public car system.

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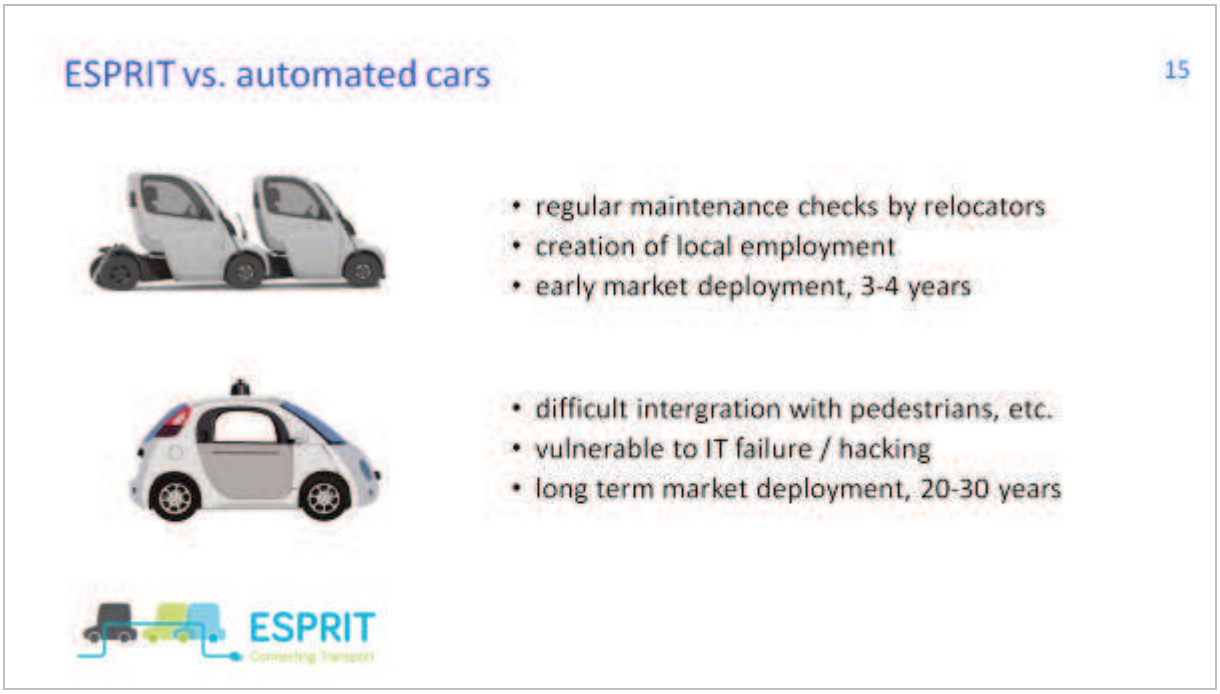
Demonstrations of ESPRIT car road trains and test driving will be made in the 3 collaborating towns, Lyon, Glasgow and L'Hospitalet (Barcelona) in the autumn of this year.



co-authors and project partners

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co-authors:

William Rendall, ESPRIT Advisory Board member,

Valery Cervantes, ESPRIT project co-ordinator,
CEA (Alternative and Atomic Energy Commission) Grenoble

Richard Mounce, ESPRIT partner,
Centre for Transport, University of Aberdeen

project partners:

ESPRIT

website: http://www.esprit-transport-system.eu

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