



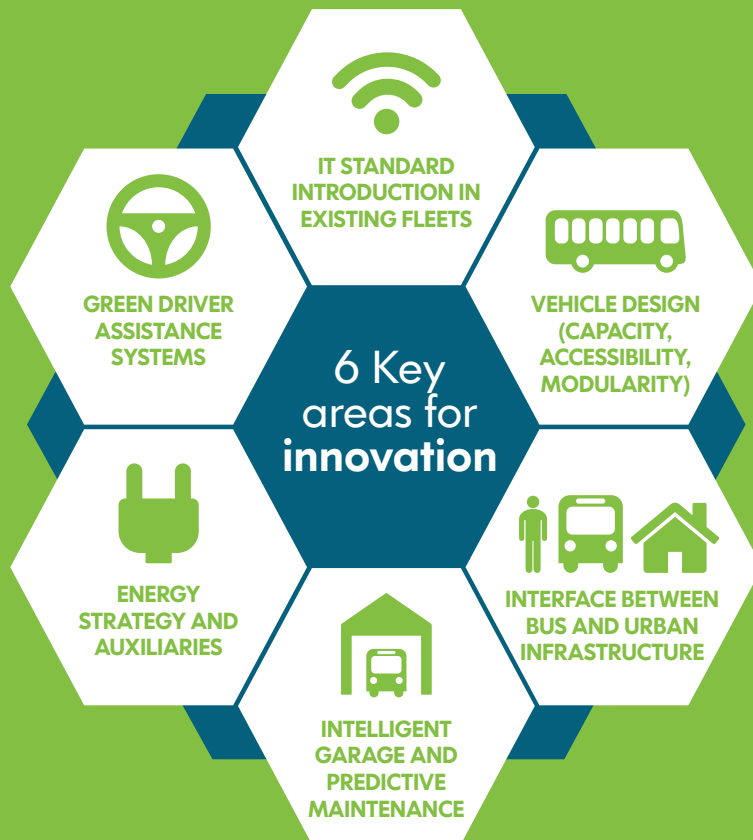
**EUROPEAN BUS SYSTEM
of the FUTURE 2**

**Advanced solutions for improved
efficiency and attractiveness of
urban bus systems**



EBSF_2 Vision

EBSF_2 tests and evaluates innovative solutions for urban and suburban bus systems through demonstrations in real service. The ultimate goal is to improve the efficiency of operations, mainly in terms of costs and energy consumption and to raise the image of the bus for the users.



10 Public transport operators and authorities

150 Buses

31 Technological solutions tested onboard

12 Demonstration sites

4 Bus manufacturers

42 Partners

12.4M€ supported by a 10M€ funding from the European Union's Horizon 2020 research and innovation programme

Innovations developed in 12 cities

Barcelona



Improving the overall efficiency of full electric buses in urban areas through technological solutions for on-board auxiliaries, climate system, thermal management and driver assistance system.

Dresden



Coupling articulations and folding bellows provide the opportunity to combine bus segments and hence to better adapt the bus capacity to the actual passenger demand.

London



Demonstrating a practical implementation of on-board bus equipment, from multiple suppliers, using open interfaces to provide cost-effective interoperability with several service control systems.

Lyon



Increasing the attractiveness of hybrid bus systems in urban areas, by means of new technologies on vehicles and infrastructure in combination with operational best practices.

Gothenburg



Improving the attractiveness of electric bus systems through innovative design for vehicles and bus stops. Developing energy-efficient heating solution for electric buses.

Helsinki



Developing the energy efficiency of battery-electric buses using driving guidance system and optimal auxiliary usage. Improving the attractiveness of public transport systems and the economic performance of the operator.

Madrid



A new indicator for diesel buses' driving efficiency as well a new method to evaluate the driving style compliancy with fuel savings targets.

Paris Area



Open IT standard protocols to enable interoperability for tele-diagnostic systems in a multi-supplier environment, hence reducing the operating and maintenance costs while increasing the quality of service for passengers.

Paris City



Testing autonomous parking procedures of one hybrid bus in an underground bus depot. Investigating new co-design methods for urban bus terminals.

Ravenna



Predictive maintenance solutions combined with budget management to extend the life of engine components, reduce failures, foresee and optimise the expenditure items for the maintenance of the whole fleet.

San Sebastián



Increasing the usability and efficiency of on-board driver assistance systems. Simplifying and automating the reporting procedures of maintenance tasks. Exploring new bus layout designs to increase accessibility.

Stuttgart



Demonstration of an innovative system for heating, ventilation and air conditioning for city buses with the objective to reduce energy consumption compared to a belt-driven system.

Partners:

ACTIA, ASSTRA, CEA, CEIT, CHALMERS, CRTM, RINA Consulting, DICEA, DBUS, DIGIGROUP Informatica, DIGIMOBEE, EVOBUS, FIT, FRAUNHOFER, HOGIA, HÜBNER, INEO, INIT, IRIZAR, IVECO, KEOLIS, MEL-SYSTEMS, PILOTFISH, PLUSERVICE, POLIS, RATP, RUPPRECHT Consult, SSB, START ROMAGNA, SYTRAL, TEKIA, TFL, TIS PT, TMB, TRAPEZE, UPM, UTP, VBC, VDV, VTAB, VTT

Duration:

36 months (May 2015 – April 2018)

Project coordinator:

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RESEARCH & INNOVATION



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