



EUROPEAN
COMMISSION



Workshop "The Future of Electric Public Transport", Brussels, 12th March 2013

The Future of EU Funded Research for Public Transport



EU

TRANSPORT RESEARCH

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Urban Mobility objectives in FP7

- A dedicated priority activity of the “Transport” Theme on “**Ensuring Sustainable Urban Mobility**”
- **Objectives/approach:**
 - Improving mobility of people and transport of goods in urban and peri-urban areas (All transport modes and all users)
 - Developing clean, energy efficient, safe and intelligent urban transport systems
 - Technological, economic, regulatory and institutional aspects
 - New and accessible public transport systems

Urban Mobility Research Areas in FP7

Five research areas for ensuring sustainable Urban Mobility :

1. New transport and mobility concepts
2. High quality public transport
 - Increased modal share of public transport
 - More attractive and inclusive urban transport
 - Improved overall performance of public transport
 - Promotion of co-modality
3. Demand management
4. Innovative strategies for clean urban transport
5. Policy support



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EU R&D in Public Transport (buses) under FP7: a strong foundation to build upon

- **High quality public transport vehicles (and interfaces):** EBSF (the European Bus System of the Future), HCV (2nd generation hybrid buses), CITYMOBIL (semi-automated bus).
- **Intermodal transport interchanges and stations:** NODES and CITYHUB.
- **Accessibility for All:** MEDIANE (accessibility tools), ACCESS 2 ALL (guidelines for PT), PUBTRANS4ALL (accessibility in PT system) and METPEX.
- **International cooperation:** TRANSAFRICA (PT in Africa), VIAJEO (traffic management - Brazil, China).
- **The future of bus R&D:** 3iBS for bus road map, dissemination and exploitation.
- **Urban transport innovation deployment (EV, PT, SUMP, ...):** TIDE.





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EBSF Study: Options for Line-Service Bus Systems with Fully Electric Operation for Complete Circulations



In-depth evaluation of different technical options for **fully electric** bus operation

*Various cost elements,
technical/ operational
evaluation, feasibility,
environmental benefits, etc.*



Promising options
if put "in its
conditions"

	Exchange of Batteries in the Bus	Exchange of Trailer	Exchange of Batteries in Trailer
Engineering Bus	++	++	++
Engineering Trailer	/	0 1a)	- 1a)
Engineering Infrastructure	-	-	-
Electrical and mechanical Safety	-	++	++
Reliability of the System 1b)	0	0	0
Freedom in design of the Passenger Compartment	+	++	++
Driving Dynamics	-	0	0
Effort for Standardisation of the System / Adjustment overall System	++	+	-
Techn. Effort of Battery System with Cooling	-	-	-
Reaction at medium-voltage Power Grid	0	0	0
Effort Refurbish Bus	-	++	++
Air Conditioning of the Bus	++	++	++

Legend	++	Very advantageous
	+	Advantageous
	0	Neutral
	-	Disadvantageous
	++	Very disadvantageous



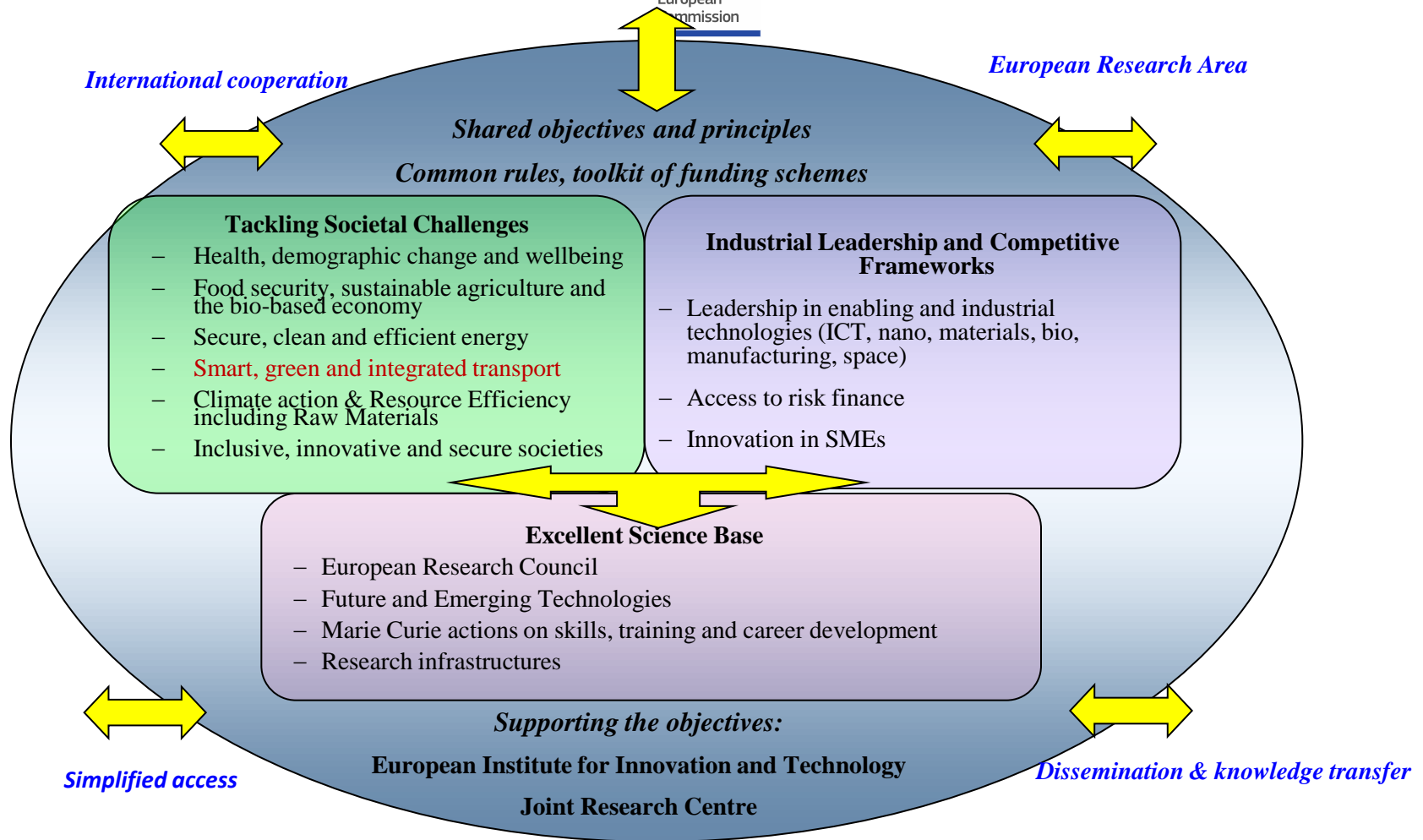
3iBS Coordination and Support Action Innovative, Intelligent, Integrated Bus System

- **Stimulated coordinated research in Europe:**
 - Maintain research Roadmap + suitable funding frames in view of H2020
- **Support bus sector innovation:**
 - Translate PT sector strategies into plans for innovation
 - Stimulate exchanges between worldwide experts about innovation in bus systems
- **3iBS topics for Urban Bus Systems:**
 - Accessibility and safety
 - Bus service operations during Special events
 - Intermodality
 - Level of service
 - Modularity internal and external
 - **Energy sustainability**
 - IT Standardisation

Future opportunities on urban transport

- ***FP7- SST Call 2013 (10 July 2012 – 14 November 2012):***

- **SST.2013.2-1.** Next generation of train control systems in the domain of urban and main European railway systems, inc. ERTMS/CBTC (CP – Level 2). < € 7 Mio.
- **SST.2013.3-1.** Managing integrated multimodal urban transport network (CP-IP Level 2). < € 9 Mio.
- **SST.2013.3-2.** Implementing innovative and green urban transport solutions in Europe and beyond: LAC, China, Singapore and Mediterranean partner countries ; including PT(CSA-CA – Level1). < € 2 Mio
- **SST.2013.3.3-3.** Capitalising CIVITAS knowledge and experience (CSA-CA). < € 4 Mio.
- **GC.SST.2013-4.** Demonstration of electric buses as urban PT (CP). < € 13.5 Mio.



Horizon 2020 – Objectives and structure



Smart, Green and Integrated Transport

4 priorities:

1. Resource efficient transport that respects the environment

It includes a specific activity urban mobility:

"Improving transport and mobility in urban areas".

2. Better mobility, less congestion, more safety & security.
3. Global leadership for the European transport industry.
4. Socio-economic research & forward looking activities for policy making.

Green Vehicles in Horizon 2020 as a PPP



The EGCI Public Private Partnership is proposed by industry to be continued in Horizon 2020:

Road Transport (ERTRAC Scope)

EGVI (inc. buses)

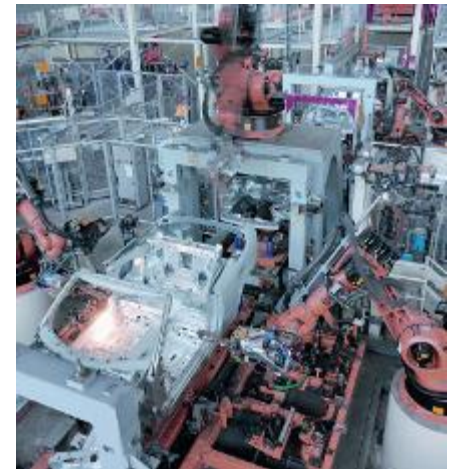
Energy efficiency

Electrification & Hybridization
Adaptation to renewable fuels
Functionality improvement
Reduction of Complexity
Lightweight, Thermal
Management

Safety, Noise, Performance,
Infrastructures,
Pure ICE's, Fuels,
H₂ & FC,

Mobility Systems

Multi-modal, logistics for
passengers and goods





Transport Research Arena

TRA 2014 (Transport Research Arena), European Conference on Transport Research, will take place in **CNIT Paris – La Défense, April 14-17, 2014**

Theme and Slogan of TRA 2014 are:
Transport Solutions : from Research to Deployment
Innovate Mobility, Mobilise Innovation!

TRA integrates all surface transport modes and wishes to reach diverse actors: research, industry, policy makers and users.

Submit an abstract to the call for papers before March 29, 2013
on the following website : <http://tra2014.sciencesconf.org/>

Thank you for your attention

