Electromobility: is it really a revolution for Public Transport?

- More than 50% of PT already electrified
- Electrification already produced a revolution in Public Transport..
- From horses-powered to electric trams
- UITP was there:
  - The high cost of horses’ maintenance vs. electricity traction was one of the key topics discussed at UITP’s Berlin Congress in **1886**.
Great Interest from Urban Mobility Actors

Future plans for propulsion technology change

Source: 3iBS Project (DG-R&I)
70,000 bus / 130 M habitants
www.3ibs.eu
So…what’s the problem?

Large set of available solutions

Options for Electrified Buses

No “one-fits-all”
Technologies have “best operational conditions”
ZeEUS – Zero Emission Urban Bus Systems

Evaluate the economic, environmental and societal feasibility of high capacity electric urban bus systems through demonstrations

Provide decision makers with Guidelines and Tools to support decision on “if” “how” and “when” to introduce electric buses in the core bus network

Facilitate the market uptake of high capacity urban electric buses

40 partners, 10 Countries, Coordinator: UITP
Total budget: 22Meuro / EU funding 13.5 Meuro
42 Months (until March 2017) www.zeeus.eu
ZeEUS Philosophy

Extend fully-electric solution to the core part of the urban bus network

Consolidated solutions for electric bus systems are already today in the streets.

- Full-size trolley-buses
- Full electric battery mini/midi vehicles
- Full-size diesel-hybrid buses

The market for these solutions has been already developed

ZeEUS looks to the next challenge

- Vehicles of larger capacity (12m and more / double deckers)
- Urban-optimised mobility concepts and infrastructure

From plug in hybrid to full electric

System Approach adopted (EBSF)

- Vehicle – Grid Interaction
ZeEUS - Guidelines & Tools for Pre-Commercial Support 1/2

ZeEUS Observatory
Monitor of EU/world/National activities: on-going pilots, demonstrations, tenders, regulations, new technological or behavioral developments

ZeEUS User Group
Cities interested in e-buses but not yet moving to

ZeEUS Vision: “why” electric buses?
ZeEUS Electrification Roadmap: research and implementation

Standardisation
- ZeEUS Standardisation Steering Group
  Harmonise EU activities on eBus standards & support CEN/CENELEC
  Link with EC directive on “Deployment of Alternative Fuels Infrastructure”
- Contribute to E-SORT development and validation
  New chapter of UITP SORT cycle for full-electric buses

Regulatory frame
- Link with EU Directive on “Deployment of alternative fuels infrastructure”
- Guidelines for including electric buses infrastructure in National Policy Frameworks (NPF)
ZeEUS - Guidelines & Tools for Pre-Commercial Support 2/2

Funding schemes, tools and procurement guidelines
- Interaction with EIB and other funding entities
- Synergies with Structural and Regional Funds
- Update of UITP tender structure including eBus

Strategy for optimised interaction with the power grid
- Optimised overnight charging strategy / business model
- Strategy for re-using existing PT power network for fast charging at bus-terminal / stop

Introduction of electric Buses in urban fleets
- Recommendations for urban / spatial planning
- Operational concepts and migration scenarios

Education modules and workshops for university

Training for drivers and maintenance staff