

BUS FLEET INVESTMENT THROUGH DEPLOYMENT OF LOW EMISSION VEHICLES

Bucharest
24th April 2018

An Overview of considerations for Fleet Investment

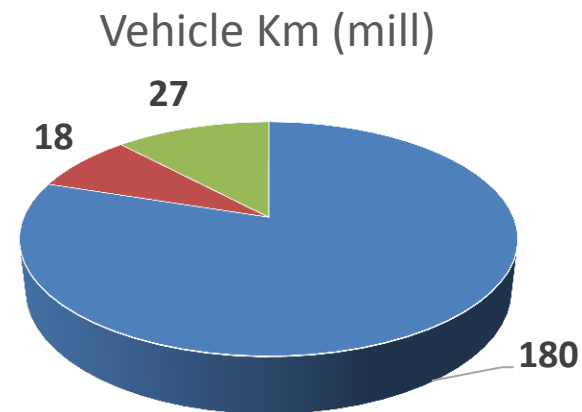
Alan O'Brien
Chartered Engineer
EIB-JASPERS

Context

National fleet of approx. 5,850 vehicles

Dominant use of Diesel Buses (80%)

In 2016, payments of approx. 400m LEI

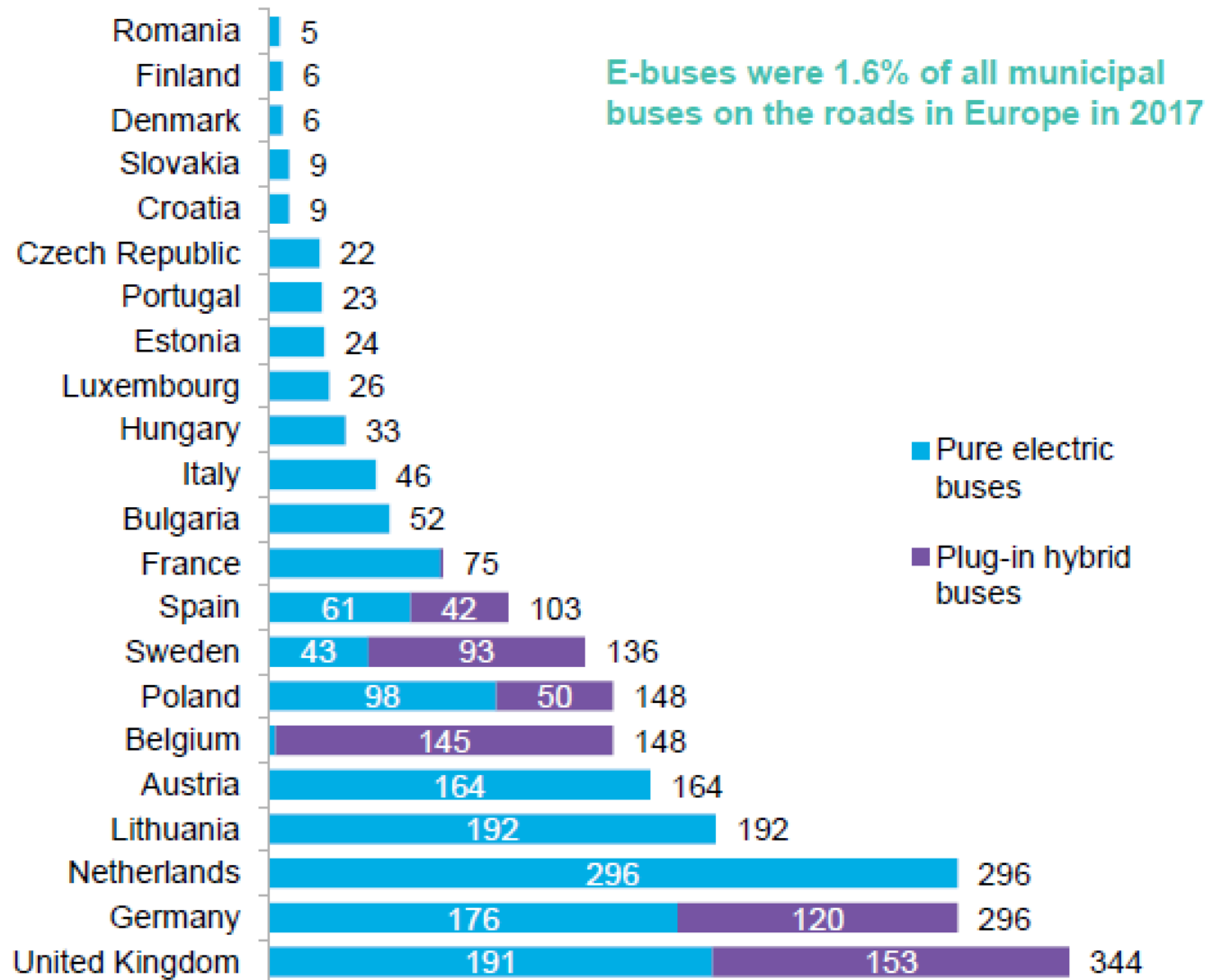


Context

But...LEV is not a new concept

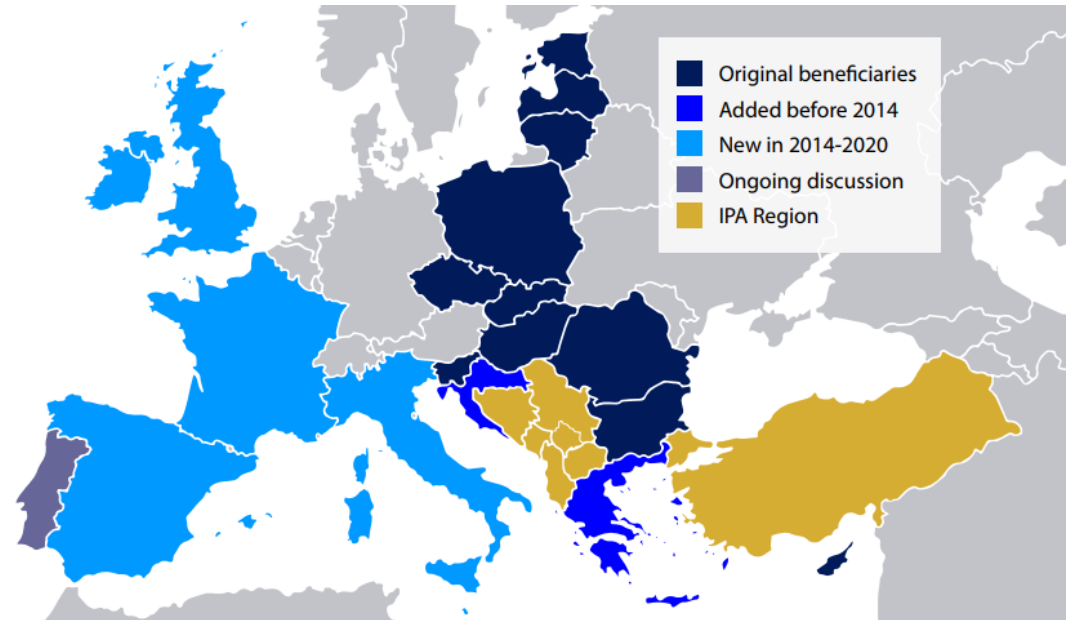


Context



Source: Bloomberg New Energy Finance, EAFO

JASPERS



Established in 2007

Technical Assistance to 17 Member States, plus IPA

Partnership of European Commission, European Investment Bank

‘Regional’ Offices



Components of an LEV Transition

VEHICLES



OPERATIONS



INFRASTRUCTURE



DEFINE THE PROJECT OPTION AND TECHNOLOGY REQUIREMENTS

DEFINE AN INVESTMENT OPTION
Define an investment option in outline, including technology to be adopted, extent of fleet investment, routes to be operated.

Clearly highlight all the other (complementary) interventions needed on the system (e.g. bus lanes, traffic management, integrated fare system, etc.)

STRATEGIC CONSIDERATIONS

Is the project consistent with European transport policies? Does it comply with NTS and National / Regional Energy Strategy? Can synergies or constraints be identified

LOCAL CONSIDERATIONS

Is there a local transport plan in place? What are the main issues with the local public transport / bus offer? How can they be tackled most effectively? Can a renewed bus fleet assist in addressing these issues and how?

ELABORATE ADDITIONAL REQUIREMENTS FOR THE SELECTED OPTION & VEHICLE TECHNOLOGY

INFRASTRUCTURE NEEDS

Identify infrastructure that is required to support the operate the new fleet, with account of associated technology choices

INCLUDE AND COST FOR ANCILLARIES IN THE PROJECT PROPOSAL:

- Fuelling and charging (plug in, fast charging) infrastructure
- Maintenance depot
- Safety upgrades
- Utility upgrades

OPERATING NEEDS

Identify resources required to maintain and operate the new fleet, with account of associated technology choices

INCLUDE AND COST FOR OPERATION & MAINTENANCE NEEDS:

- Vehicle and infrastructure (incl. fuelling / charging) maintenance
- Build local capacity, additional staff needs
- Maintenance equipment
- Need for major overhaul and / or replacements

FLEET REQUIREMENTS

Identify the conditions under which the vehicles will be required to operate on the network

DEFINE OUTLINE VEHICLE SPECIFICATION:

- Anticipated demand and capacity requirements
- Network (spatial constraints, gradients, dedicated bus facilities)
- Local conditions (e.g. climate)
- Safety

RISK ASSESSMENT

Consider risks associated with significant change to existing operations

RISK ASSESSMENT:

- Redundancy (should there be a system-wide failure)
- Escalating costs (can these be accommodated)
- Required increase in fleet size (based on operational analysis)
- ...
- How can risks be mitigated

Some Key Questions

Vehicle Range – how have buses performed?

Refueling Infrastructure – any challenges in delivering?

Solutions for dealing with fleet maintenance?

Capital and Operating Costs?

The need for market involvement and early testing?



Introducing our Speakers



JASPERS Luxembourg

100 Boulevard K. Adenauer
L-2950 Luxembourg
Tel. +352 4379 83511

JASPERS Bucharest Office

Vasile Lascar Street, 31
020492 Bucharest, Romania
Tel: + 40 21 208 64 01

JASPERS Office Vienna

Mattiellistrasse 2-4
A-1040 Wien, Austria
Tel: + 43 1 505 36 76

JASPERS Office Warsaw

Plac Pilsudskiego 1
PL-00 078 Warsaw, Poland
Tel: + 48 22 310 0510

<http://www.jaspers-europa-info.org>

www.jaspersnetwork.org

jaspers@eib.org

jaspersnetwork@eib.org