

Current situation of trolleybus in the world

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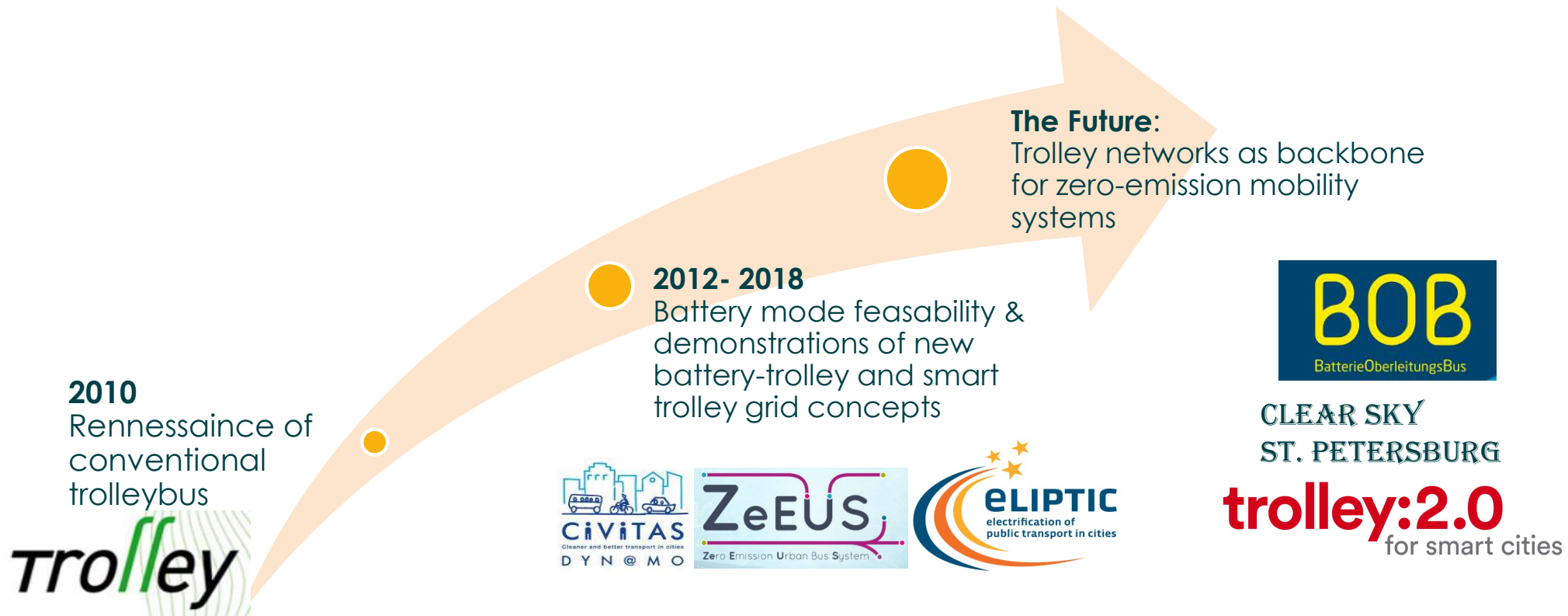
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30th meeting of UITP Trolleybus Committee
St.Petersburg – May 23, 2019

Global overview

OUR INNOVATION PATH OF TROLLEYBUS SYSTEMS



> GLOBAL OVERVIEW

6 systems,
56 lines, 886
vehicles

2 systems, 20
lines, + 400
buses

7 systems, 15
lines, 251
buses

Ukraine: 43
systems

90 systems,
523 lines,
5.174 buses

Russia: 83 systems,
another 8 systems in
Central Asia

East Asia: 34
systems
(PRC: 13, PRK:
19, JP: 2)

Middle
East: 3
systems

> CHINA

New or extended trolley or IMC-systems



Beijing

Meanwhile 30 lines fully equipped with battery trolleys



Shanghai

New Trolley-BRT line introduced



Guangzhou

Line extensions and battery trolleys



Hangzhou

New trolley line

> RUSSIA

New or extended trolley or IMC-systems



St. Petersburg

115 new IMC
vehicles in 2017/18



Irkutsk

5 new low-floor
vehicles



Kazan

Constant fleet
renovation



Maikop

5 new vehicles in
service

> NORTH & SOUTH AMERICA

New or extended trolley/ IMC systems



Seattle

Seattle 95 (+60)
vehicles



San Francisco

SF 240 (+90) vehicles



Mendoza

New vehicles and
lines



Rosario

Restart of line M



Sao Paulo

Constant renovation
of grid and vehicles



Mexico

First low-entry trolley,
new lines planned

> EUROPE

New or extended Trolley/ IMC-Systems



Lucerne

New „1-er“ in Lucerne as example for modernisation in Switzerland



Prague

New vehicles with IMC capabilities



Bratislava

Complete renovation of fleet and infrastructure



Salzburg & Linz

Grid extension and new vehicles



Arnhem & Amsterdam

Grid extension and new vehicles in Arnhem



Verona

New System under development



> GERMANY

New or extended trolley or IMC-systems



Solingen

32 Battery trolleys ordered,
introduction from 2020 on



Eberswalde

Modification of conventional
trolleys with batteries and in-
motion charging capabilities



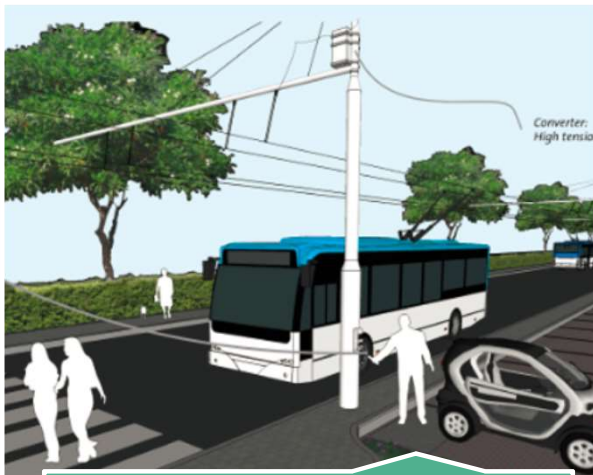
Esslingen

New battery trolleys in service

Trends for trolley services



> MULTI-PURPOSE CHARGING INFRASTRUCTURE



Eberswalde, GER



Szeged, HU

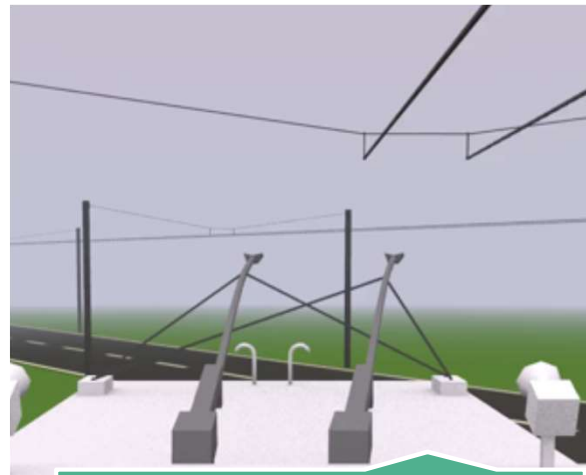


Arnhem, NL

> PROTOTYPES & INNOVATIONS



Conversion of an electric midi-bus into trolley-battery charging bus & testing of prototype bus in **trolley:2.0** partner cities (Evopro, all cities)

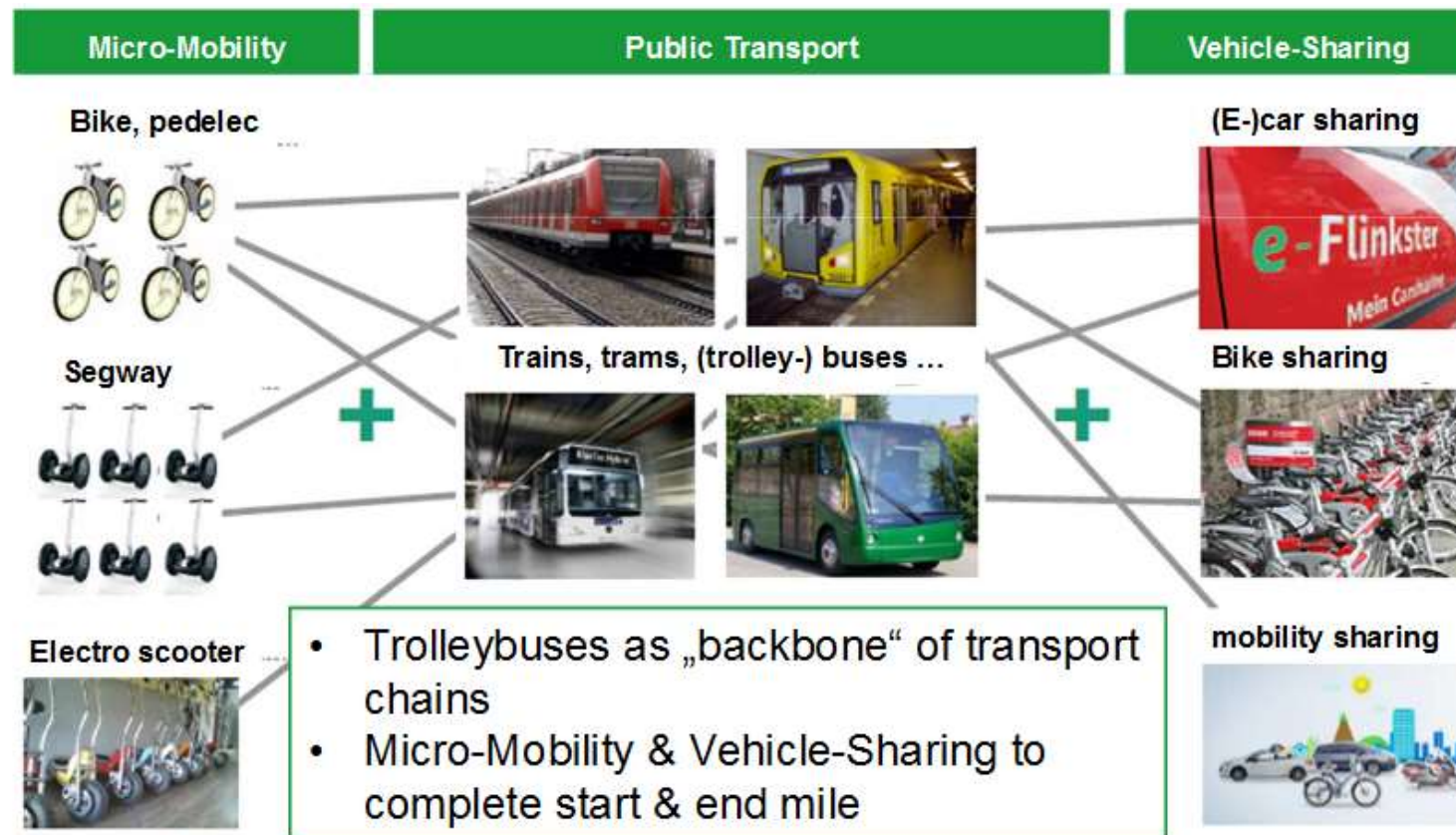


Testing of automated wiring technologies in trolley:2.0 partner cities (Eberswalde, Szeged)



Testing of energy storage concepts integrated into trolley grid / substations (incl. 2nd life batteries) (TU Delft, PRE, Szeged)

➤ TROLLEYBUS SYSTEMS AS BACKBONE IN SMART CITIES



Source: Spath, IAO, 2011

TROLLEYBUS SYSTEMS FOR SMART CITIES

Decarbonisation
& Air Quality

Digitalisation

Automation



Smart policies &
planning

Integrated mobility

Interoperability



trolley:2.0
for smart cities



> HIGH CAPACITY TROLLEY SYSTEM



VanHool 24m
Trolley in Linz, AT



Solaris 24m Trolley
announced





QUESTIONS?



THANK YOU!

Благодарю за внимание!



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Collective & intelligent mobility

