

Strategy on Electrification of Urban Buses

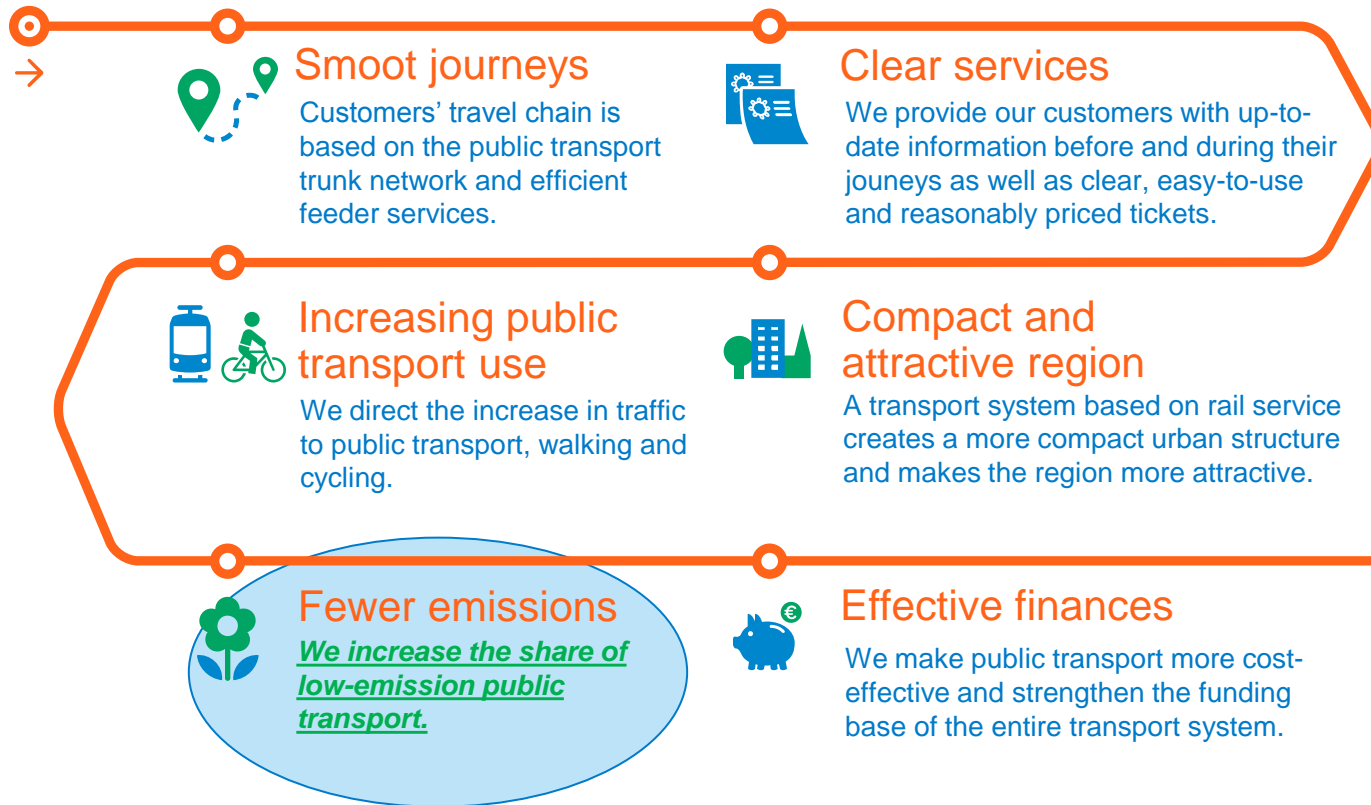
Project Director Reijo Mäkinen HSL
CEM - EVI Pilot City Forum 2018 Helsinki 28.5.2018

The General Strategy of HSL

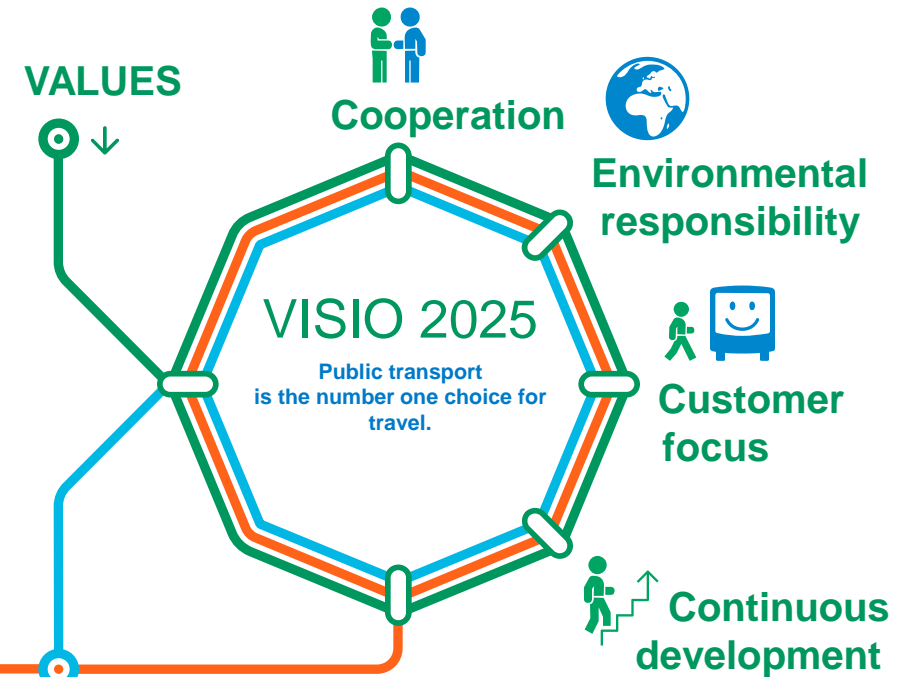


Strategy info action

GOALS



VALUES



MISSION

← Helsinki Region Transport develops and provides smooth, reliable transport solutions to customers' needs.

Vision 2025



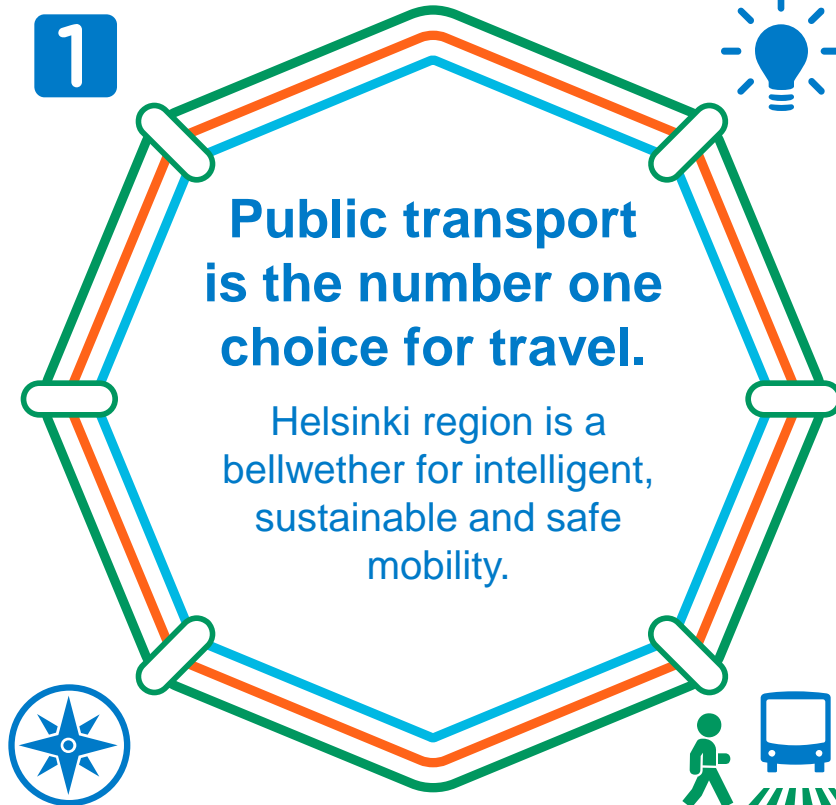
Number one choice

An increasing number of people use public transport for commuting and leisure journeys.

Bellwether

Helsinki region's urban structure and transport system are top in Europe.

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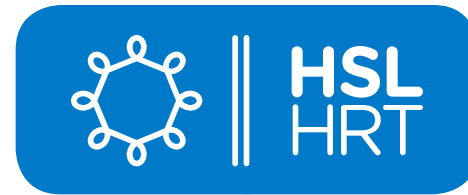
Intelligent

We provide our customers with services that enhance the travel experience and are based on intelligent technology.

Safe and sustainable

The transport system is based on sustainable sources of energy and low-emission vehicles. Passengers considers public transport safe.

Public transport purchaser-provider model



Bus services

Helb, Nobina, Transdev, Pohjolan liikenne, Korsisaari, Oy Andersson, Taksikuljetus, Etelä-Suomen linjaliikenne, Tammelundin liikenne, Åbergin linja



Metro HKL



Trams HKL



Commutertrains VR

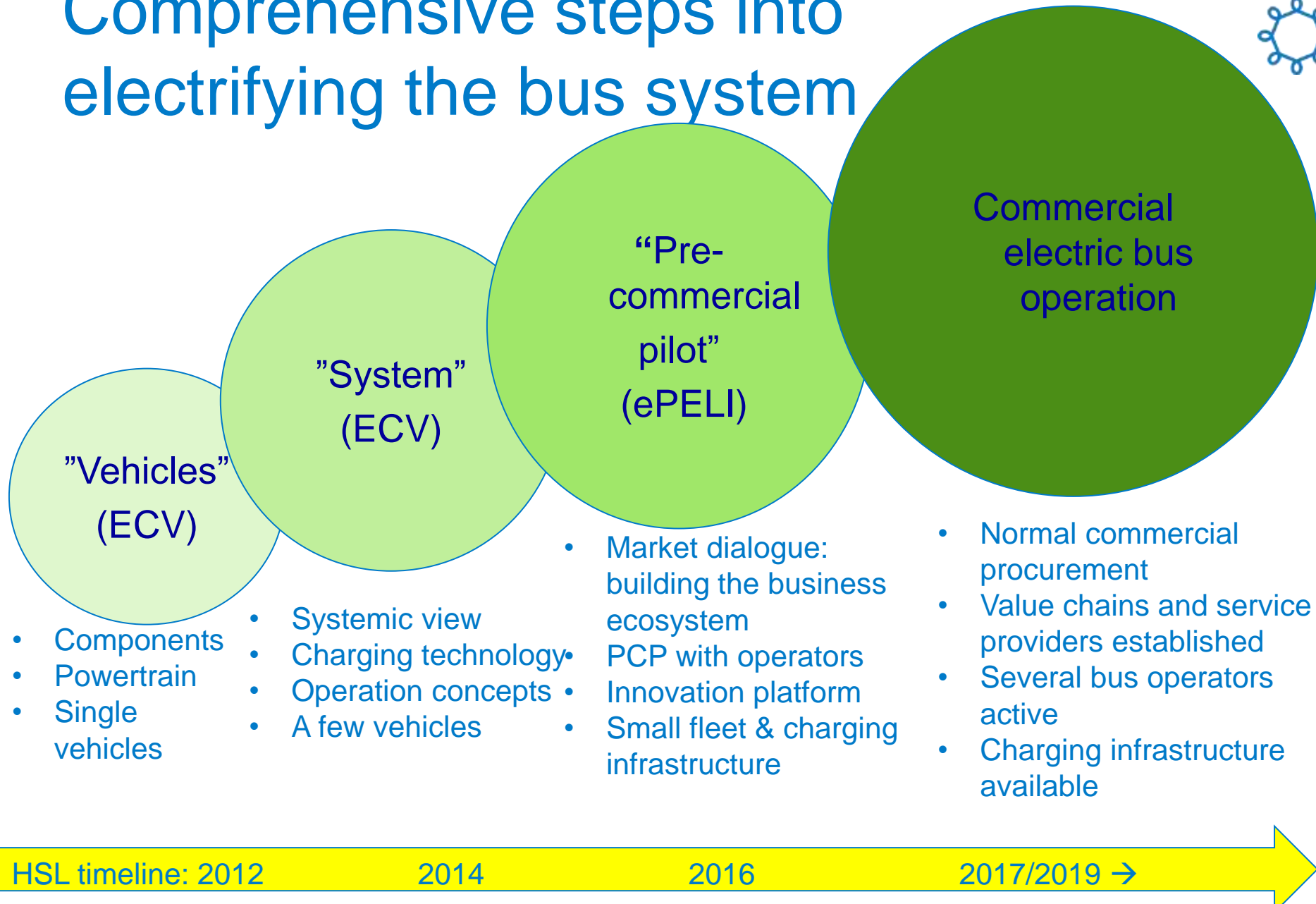


Ferry services HKL

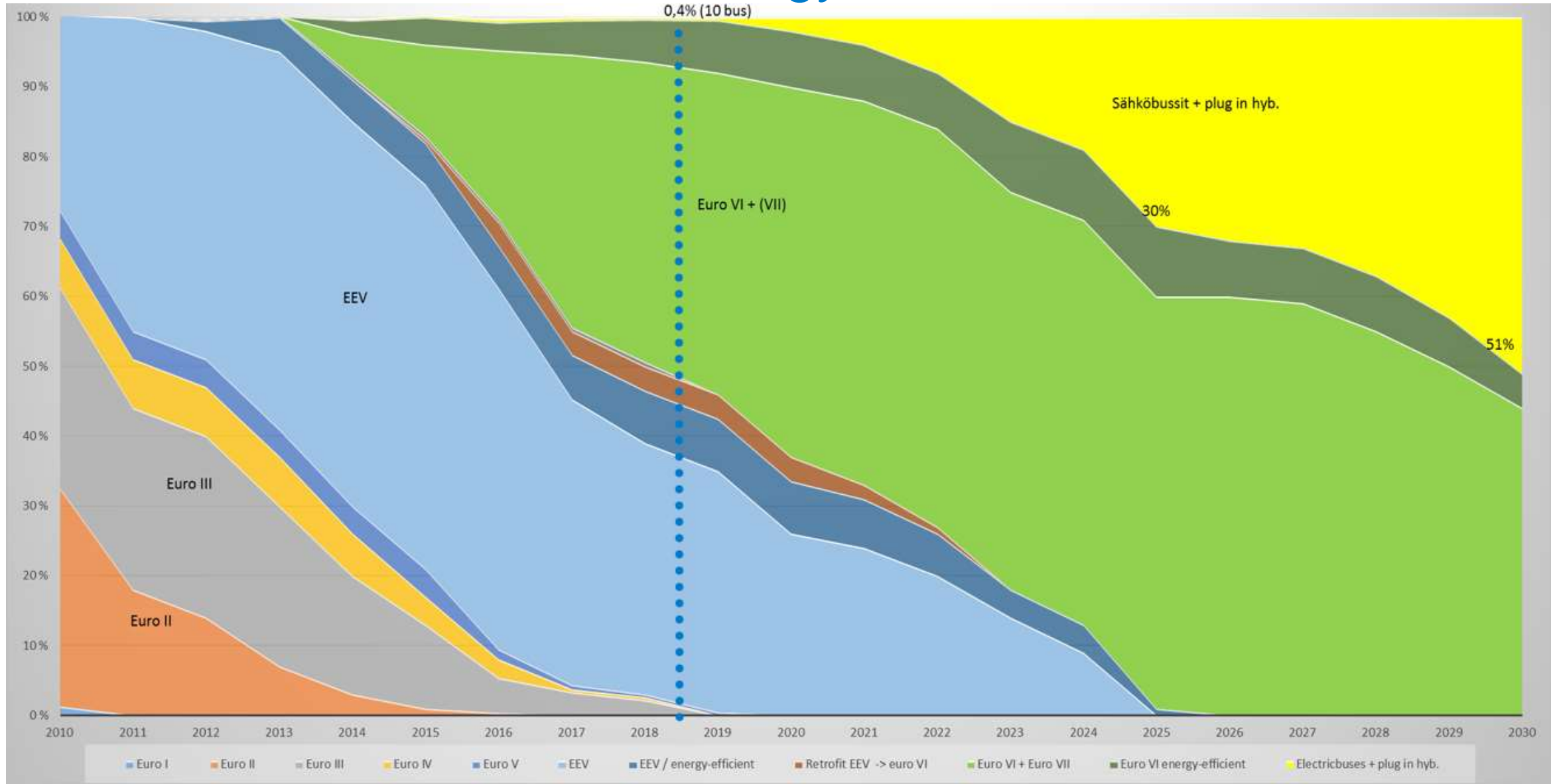
The eBus path to 2020 and to 2030



Comprehensive steps into electrifying the bus system



HSL fleet strategy 2030



Principles of the eBus contracts



- eBuses will be adjusted to the normal tendered bus contract mechanism of HSL
- The operator will purchase the buses
- The municipalities/HSL will purchase the charging as a service

Obstacles in the path



- Only 12 meter electric buses on the market now
- Only 16 % of HSL's bus services could easily be converted by 12 meter long eBuses
- **The big question: The responsibility of functioning of the whole system !! => incentives needed**
- Big urban development schemes in bus terminals are causing uncertainty and challenges

Big questions – not only eBuses



- Do we need/want to return to articulated buses?
 - Bus infrastructure needs to be changed

- Most of the 2-axle bus services are today produced by 13 m low entry buses => do we dare to convert them by 12 meter eBuses? (capacity)

- How big share do we give to eBuses in the beginning in a single tendering bundle: 30 – 50 – 80 – 100 %

First commercial implementation

Espoo, Leppävaara



- First commercial tenders with eBuses in august 2018
- 5-6 bundles in the tendering round
- Operation starts in 8/2019 and 1/2020
 - ⇒ 11-14 months to deliver the buses and prepare for the operation
- Roughly 30-40 % eBuses per one tendering bundle
 - ⇒ 20-30 eBuses totally in service in the spring 2020
 - ⇒ The high share of diesel buses will guarantee the operational reliability in the begin

Market overview

From the beginning of 2019, plenty of electric buses from European manufacturers:

- Iveco
- Linkker
- MB
- Scania
- Solaris
- VDL
- Volvo

The pilot lines



- 23 Rautatientori – Ruskeasuo
 - Helsingin Bussiliikenne
- 55 Rautatientori – Koskela
 - Transdev
- 51 Hakaniemi – Malminkartano
 - Pohjolan Kaupunkiliikenne
- 90/96 metro's feeder line in Vuosaari
 - Tammelundin liikenne
- 133 Friisilä – Matinkylä – Suurpelto in Espoo
 - Åbergin Linja

Leppävaara
Charging as a service
1/2020

Malminkartano
12/2017

Koskela
3/2017

Ruskeasuo
1/2017

Vuosaari
(lines: 90/96)
09/2018

Hakaniemi
12/2017

Rautatieasema 4 p.
12/2017

Kilon kartano
Leppävaara

Tapiola 2015

Friisilä 01/2018

Charging stations in HSL's area



55 Koskela Forsby

55 Koskela Forsby

HSL HRT

HSL HRT 1234

Uniker 13



HSL
HRT

Moves us all

Helsinki Regional Transport