BALLARD®

FUEL CELLS AND HYDROGEN JOINT UNDERTAKING

We are Ballard Europe

November 22nd 2017

Europe is a strategic market

- Strong market drivers (including diesel vehicle regulations, COP21, commitment to ZEB)
- Large market with leading heavy duty OEMs
- Established hydrogen eco-system
- Fuel cell industry leadership with qualified scientists, engineers and technicians

We are growing our presence in Europe

- Ballard Europe is our competence center for stationary systems and vehicle integration, as well as service and training center for fuel cell buses
- Ballard has invested over €25M over the past 10 years in Europe
- Ballard Europe's staff of 50 employees covers the complete value chain
- We will produce our FCveloCity®-HD fuel cell module for motive applications in Europe

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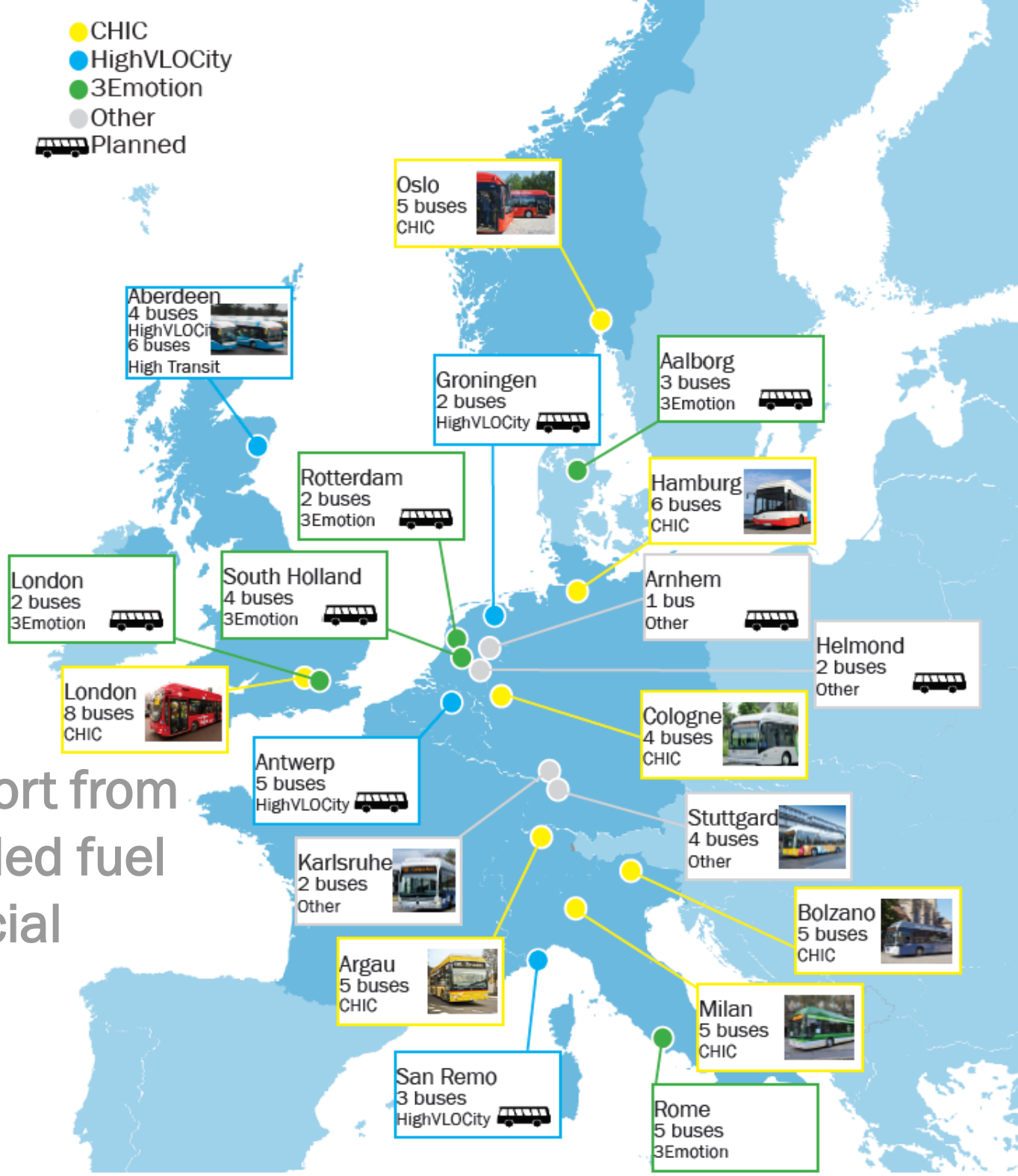
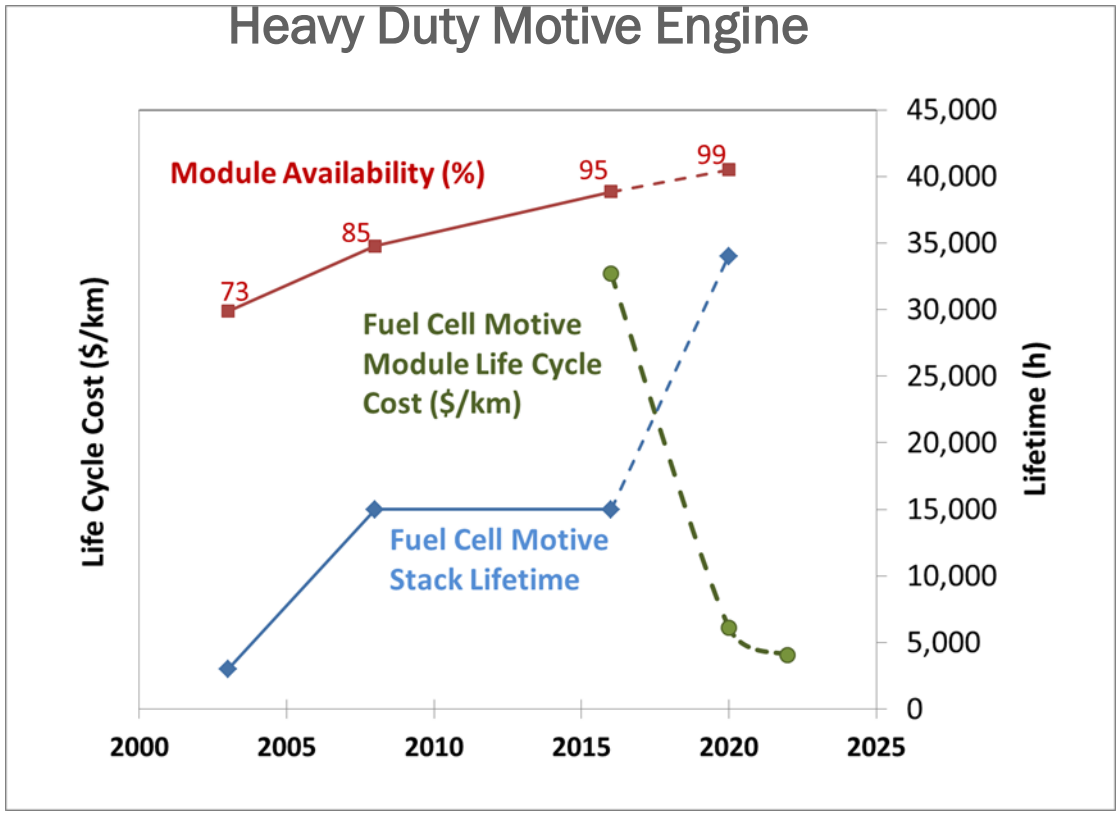


Continuous support from FCH-JU has enabled fuel cell bus commercial development

Dramatic Advances in Technology & Cost

Next generation fuel cell bus will be cost competitive with a battery powertrain and have lower operating costs than a diesel bus:

- Capital cost reduced by 40% and lifecycle cost reduced by a factor of 5x
- +33% power density
- Lifetime >30,000 hours
- Improved low-RH tolerance and increased maximum temperature operation
- Freeze-start capability



Functional improvements to durability, reliability and cost with each product iteration.

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We are driving fuel cell bus cost reduction with our partners to meet commercialization targets beyond 2020.

<1€5/kg | 7kg/100 km | < €0.35km

Less than €450k

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We believe that 30% of commercial electric vehicles will be powered with hydrogen by 2030.