



Bus Services in the North

The Case for Investment

An OE View

Investment in Bus – A “No Brainer”

- **Backbone of public transport**
 - 58% of all PT journeys. 3 times rail. 9 times tram or light rail
- **Efficient**
 - 3 to 6 times more passengers carried per sq.m of road space Vs car
 - 23% of public transport spend over the last decade
- **Flexible**
 - Service and vehicles evolve with demand. Limited infrastructure
- **Clean**
 - 30% cleaner than rail per passenger km
 - 15% of new buses are zero emission Vs 2% of cars



Where to Invest?

- Investment priorities to deliver “biggest bang for buck”
 - Bus Priority
 - Ticketing
 - Connectivity
 - Networks
 - Technology



Where to Invest – Bus Priority

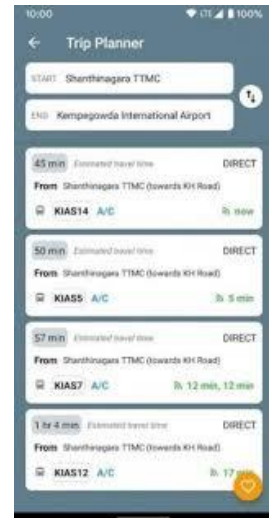
- A healthy industry will invest
- Adverse ridership trends limiting investment
- Need to act to drive bus traffic
 - Bus centric urban transport
 - Withdrawal of the car from city centres
 - Support for the network



York councillors approve scheme to ban cars in the city centre by 2023

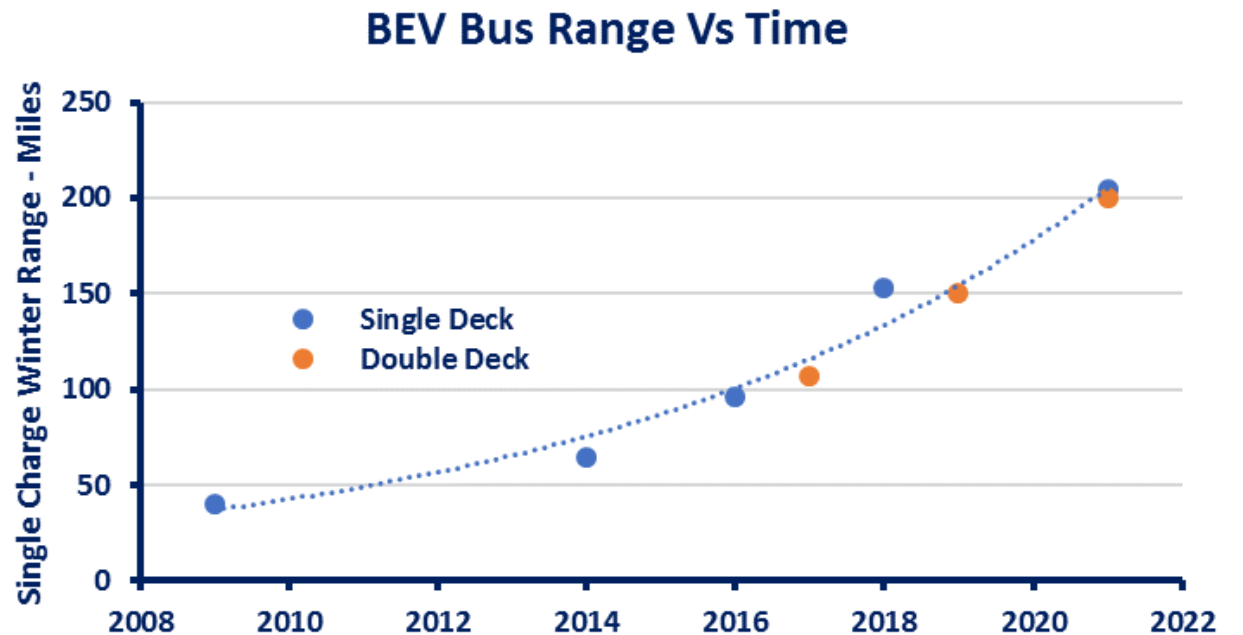
Where to Invest – Ticketing, Connectivity & Networks

- **Universal ticketing & Simple Fares**
 - Phone/contactless not bespoke cards
- **Open data a big step forward in connectivity**
- **Customer focused real time data**
- **MAAS not DRT**



Where to Invest - Technology

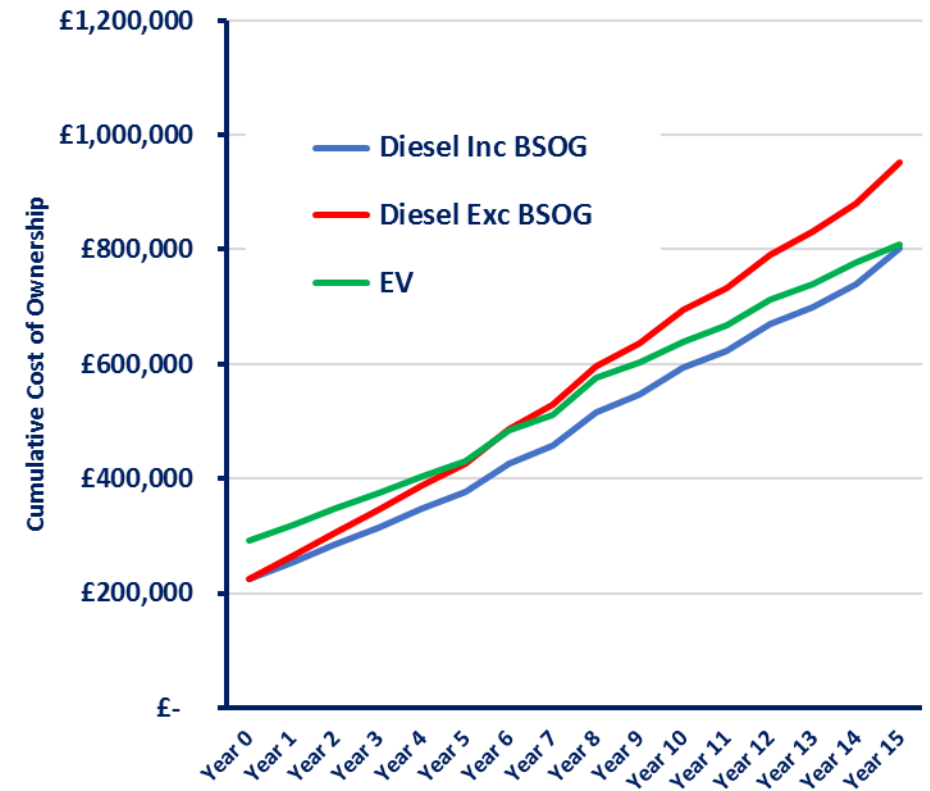
- ZE buses are the future
- ZE Range must deliver
- Limited range means cost
 - Vehicles
 - Infrastructure
 - Drivers
- Range growing exponentially
- 200 miles plus by 2025



Where to Invest – Technology

- ZE Whole life costs a barrier to change
- BEV Running costs offset high capital costs
- WLC parity Vs E6 via battery “lease”
 - Double deck a better case than singles
- Changes to BSOG can bring EV WLC leadership
- The model will improve as EV costs reduce

Double Deck BEV
Cumulative Whole Life Cost Vs E6 Diesel
Exc BSOG Exc OLEV & Inc Battery Lease



Investment in Bus Services- A Recipe for Success

- No longer “Cinderella” in Public investment
- Disincentives for urban car use
- Operator investment in accessibility
- Bus as part of an integrated solution
- OE investment in delivering clean credentials & lower costs

