

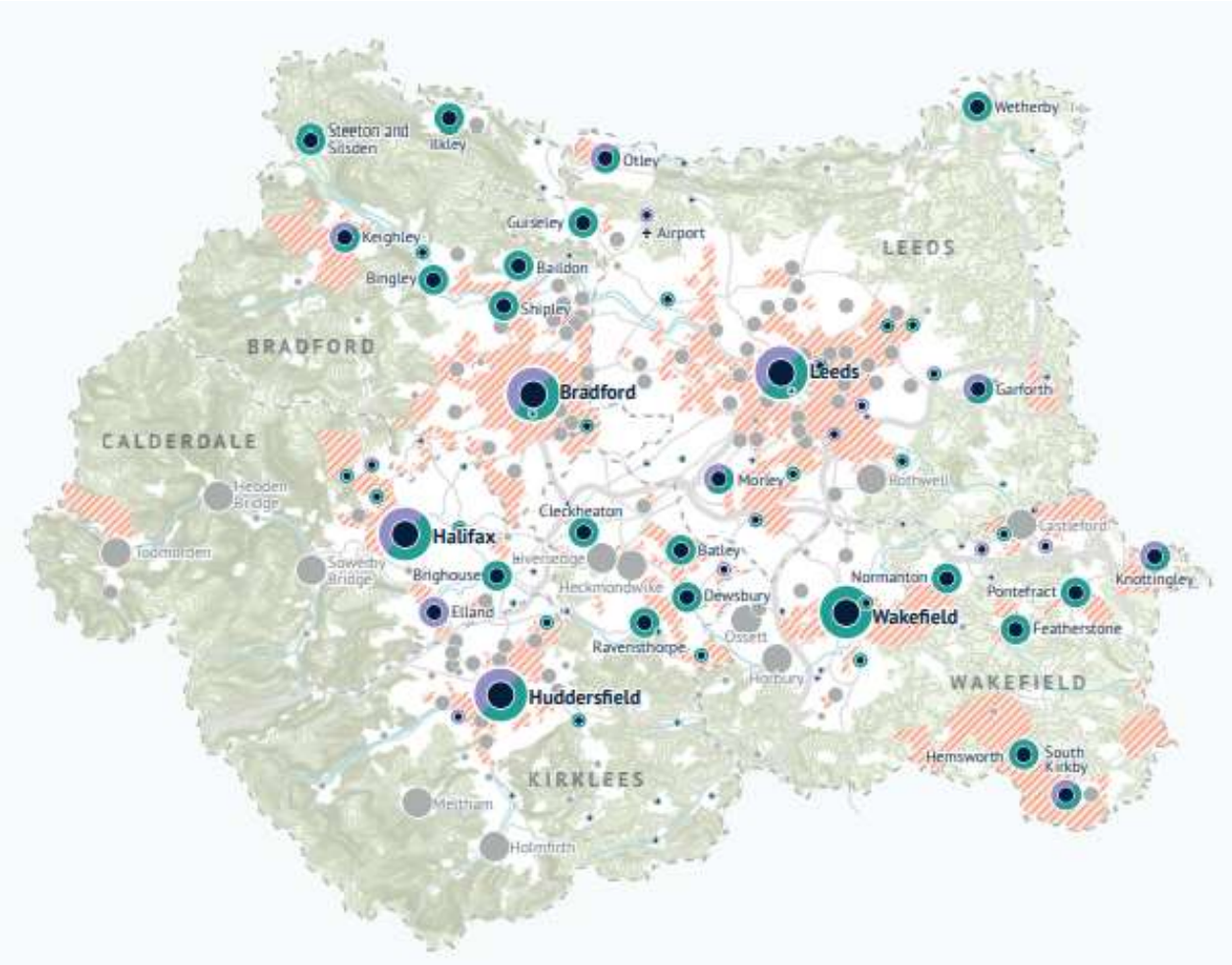


UK Light Rail Conference 2023

West Yorkshire, the Combined Authority, and Mass Transit

Luke Albanese – Director Mass Transit, 12 July 2023

Welcome to West Yorkshire



Welcome to West Yorkshire



2.3 million people



1.1 million workforce



95,000 businesses



7 universities, 91,000 students and
30,000 graduates



UK's largest regional finance centre



More manufacturing jobs than
anywhere in the North

Introduction to West Yorkshire Combined Authority



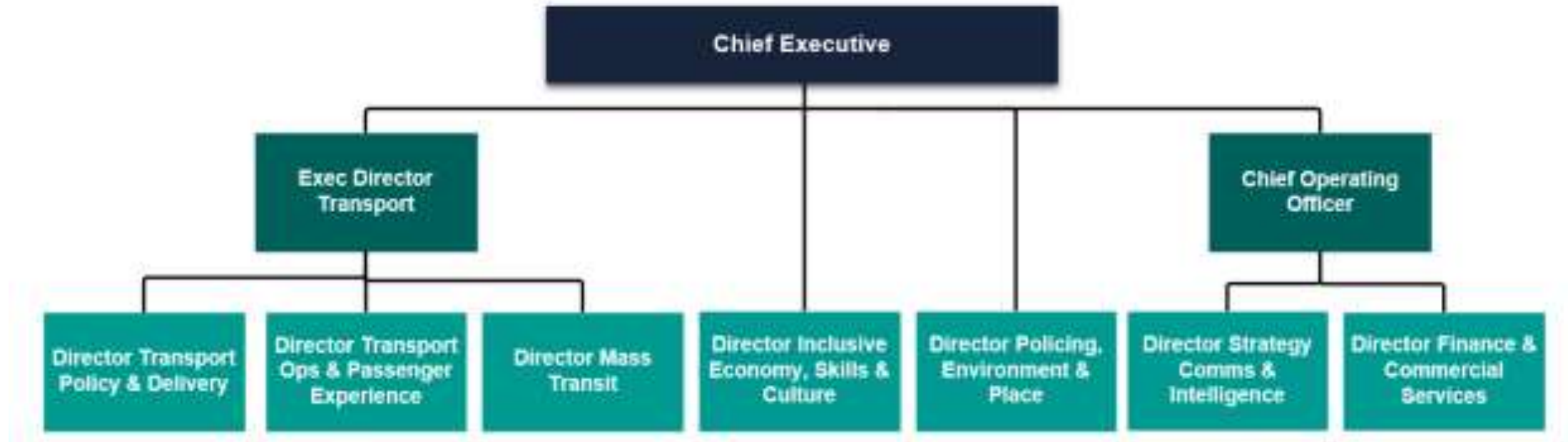
Mayor – Tracy Brabin

Combined Authority Board: West Yorkshire Mayor with Leaders and elected members of Bradford, Calderdale, Kirklees, Leeds, Wakefield Councils

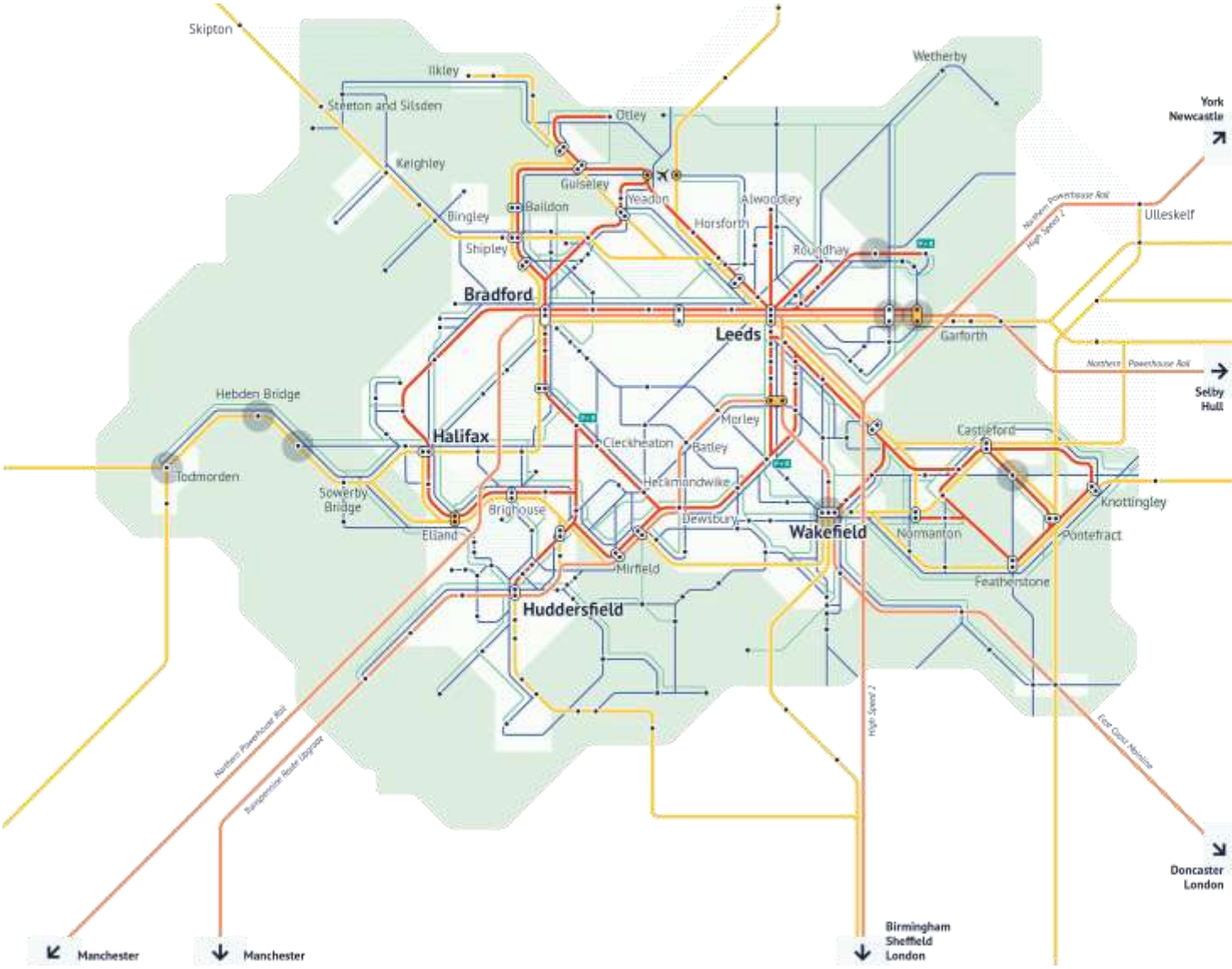
And committees covering:

- **Transport**
- **Place, Regeneration and Housing**
- **Climate, Energy and Environment**
- Business, Economy and Innovation
- Culture, Heritage and Sport
- Employment and Skills
- Leeds City Region Enterprise Partnership Board

Introduction to West Yorkshire Combined Authority



Future integrated transport system



- Network**
- Opportunity for Mass Transit
 - Long distance rail
 - Local rail
 - Local bus
 - Cycling
- Stops & connections**
- ⊕ Potential Mass Transit Interchange
 - ⊕ New Rail Station and Interchange
 - ⊕ Mass Transit park & ride
- Potential future mobility**
- ⋯ Demand responsive transport service coverage
 - Mobility hubs

WY Mass Transit Vision



West Yorkshire Mass Transit Vision 2040

• + •
**A new transport
system for West
Yorkshire**

+

**We have a bold ambition to make
West Yorkshire greener, more
inclusive and better connected.**

**To achieve this we need an equally
bold approach to public transport.**

**That is why we propose building
a modern, world-class public
transport system, using new
forms of advanced Mass Transit.**

WY Mass Transit Vision

West Yorkshire Mass Transit Vision 2040

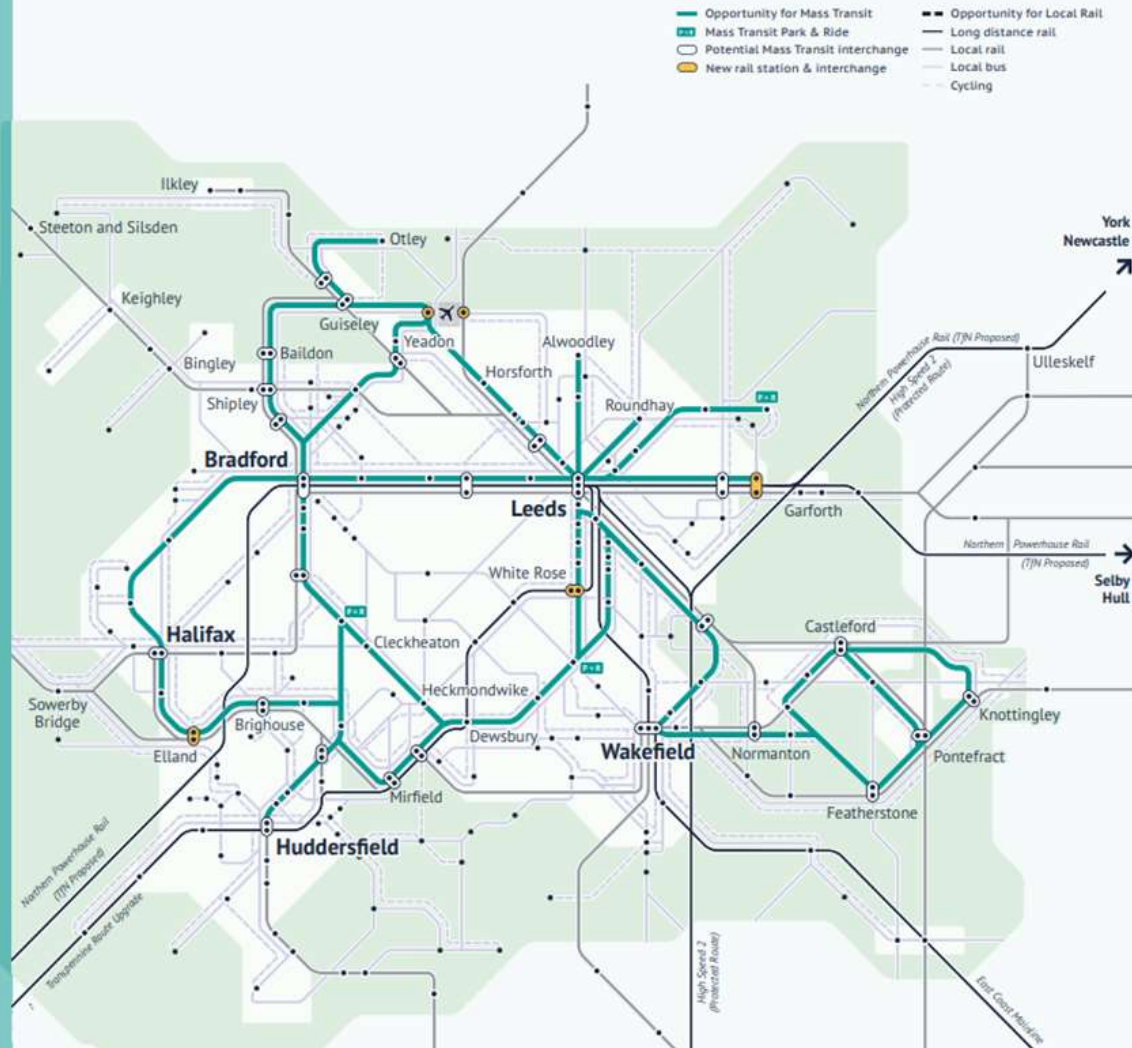
The benefits of Mass Transit as part of an integrated transport system

14
15

Mass Transit, linked to cycling and walking, bus and rail, is essential to providing a public transport system fit for the 21st Century.

- A better, more balanced economy.
- Support new housing and opportunities for business growth.
- Sustainable development and regeneration of our towns and cities.
- Enhanced quality of life for West Yorkshire's residents and visitors.
- A low emission and low carbon future.

A new transport system for a greener, more inclusive and better connected West Yorkshire



WY Mass Transit Principles

Our four design principles

16
17



People first

Designed for people of all ages and abilities – easily accessible low-floor vehicles.

Reflect the region's diverse communities and cultures.

Multiple doors for quick and easy boarding.

Inclusive safe spaces around stops.

Affordable, easy to use, enjoyable and stimulating.

Environmental responsibility

Zero-emission at the point of use.

An attractive alternative to car travel.

Infrastructure resilient to climate change.

Landscaping to promote biodiversity, improve air quality and overall health.

Sustainable management of surface water.



Better connected

Integrated with local bus services. Bus and Mass Transit will share infrastructure where needed and practicable, while avoiding competition.

Connected to local rail services, yet independently operated. Link to HS2 and Northern Powerhouse Rail.

Cycleways that complement Mass Transit routes.

New and enhanced Park & Ride.

A sense of permanence and ease of use.



Celebrating West Yorkshire

Celebrate our built and natural environment.

Add to, and enhance, our urban spaces and support regeneration.

Respect existing spaces and neighbourhoods, build on their strengths.

Build and retain skills.

Be a symbol of pride for West Yorkshire.

WY Mass Transit Principles

Candidate Mass Transit technologies for West Yorkshire



Belfast Glibster, Ireland, © Albert Bridge

Advanced Bus Rapid Transit



Can run on street with other traffic and on bus-only alignments.



Rubber tyred vehicles.



Low-floor vehicles with multiple double doors for easy level boarding and alighting.



30-50 seats and an overall passenger capacity of around 120 people.



Potential to be battery or hydrogen powered.



Developing technology.



Belfast, Bogotá, Metz, Nantes.



Birmingham Metro, UK, © West Midlands Combined Authority

Light Rail/Tram

Can run on street with other traffic and on segregated alignments, which can be integrated with urban realm and green spaces.

Steel wheels on steel rails.

Low-floor vehicles with multiple double doors for easy level boarding and alighting.

50-80 seats and an overall passenger capacity of around 200.

Overhead line but doesn't need to be from end to end if battery or hydrogen powered as well.

Proven technology.

Birmingham, Bordeaux, Dublin, Nice.



Mulhouse Tram-Train, France

Tram-Train



Can run on street with other traffic, on segregated alignments like light rail/tram and on the same tracks as trains.



Steel wheels on steel rails.



Either high-floor to use existing platforms at railway stations, or low-floor serving new platforms. Multiple double doors for easy level boarding and alighting.



50-80 seats and an overall passenger capacity of around 200.



Overhead line but doesn't need to be from end to end if battery or hydrogen powered as well.



Proven technology but interface with rail can make challenging to implement.



Karlsruhe, Mulhouse, Sheffield.



Artist Impression of Coventry Very Light Rail, UK

Ultra Light Rail

Can run on street with other traffic and on segregated alignments like light rail/tram.

Steel wheels on steel rails.

Low-floor vehicles with multiple double doors for easy level boarding and alighting.

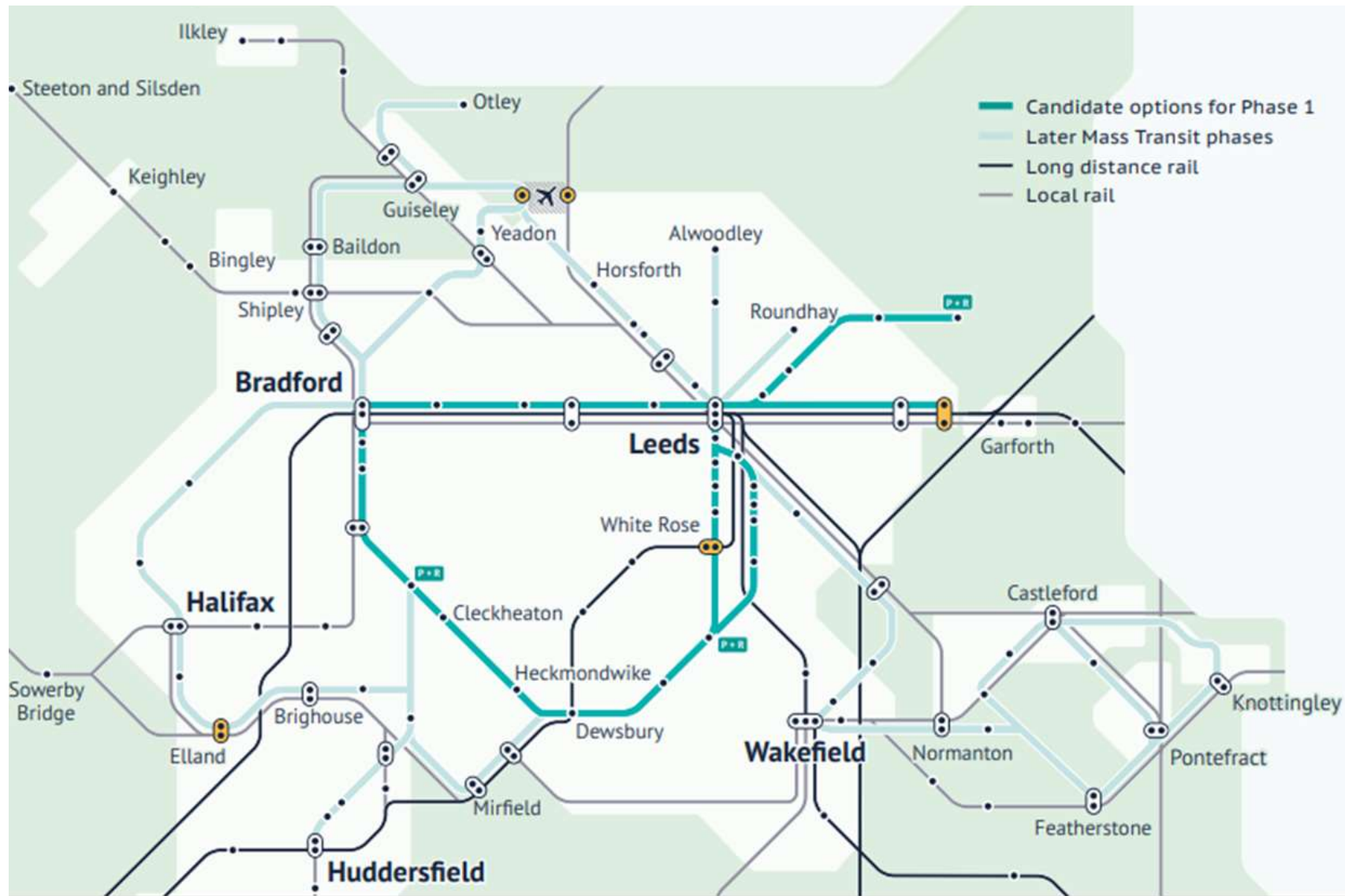
20-30 seats and can carry up to 70 people in total.

Overhead line but doesn't need to be from end to end if battery or hydrogen powered as well.

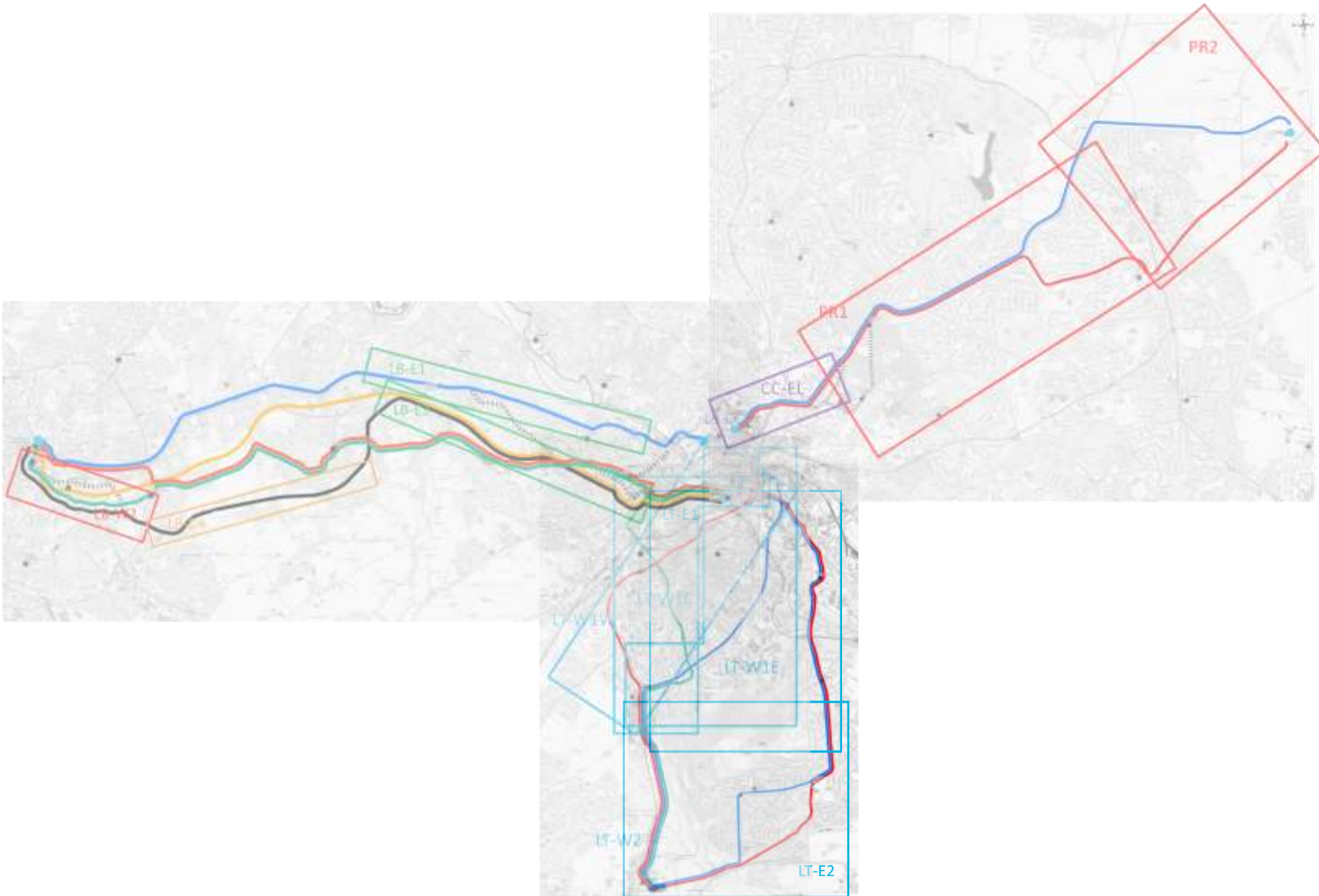
Developing technology.

None in the UK. Coventry system is in development.

WY Mass Transit Phase 1

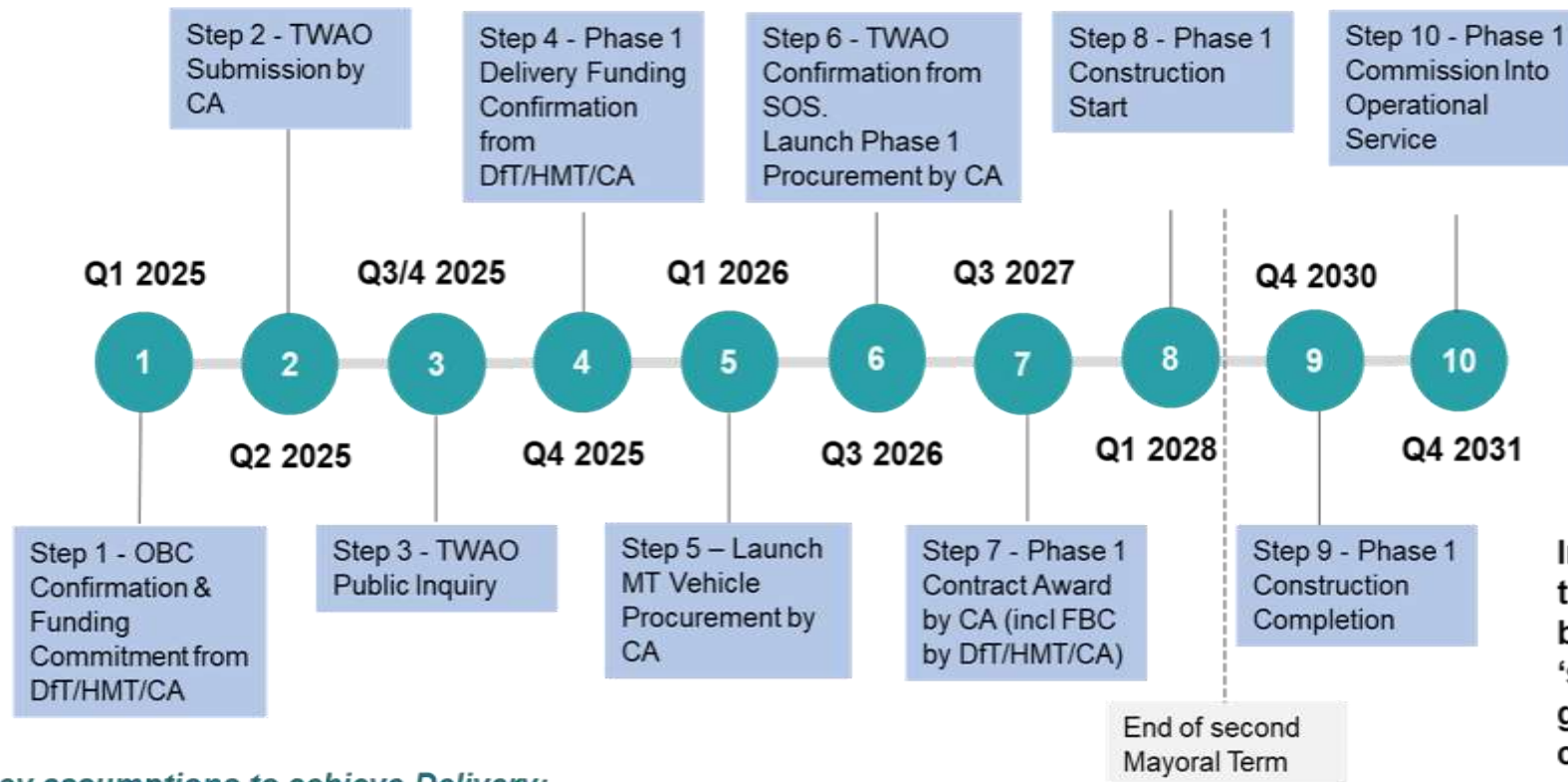


Corridor and route selection studies



Programme – West Yorkshire Mass Transit – Phase 1

Timescales Indicative & Subject to Development



Key assumptions to achieve Delivery:-

Business case:-

Funding confirmed to launch procurement & award contracts.

TWAO:-

Determined & positive decision in 12-18months. No significant conditions altering scheme imposed.

Delivery Implementation:-

Delivery timeline for Phase 1 only shown – other subsequent phases follow thereafter. Phase 1 development & delivery timescales to be determined by final scheme design. Enabling, utility works & land assembly to be undertaken as advanced works where possible.

Indicative timescales based on 'spades in the ground construction' within the second Mayoral Term (by Spring 2028)

WY Mass Transit

UK and International Examples

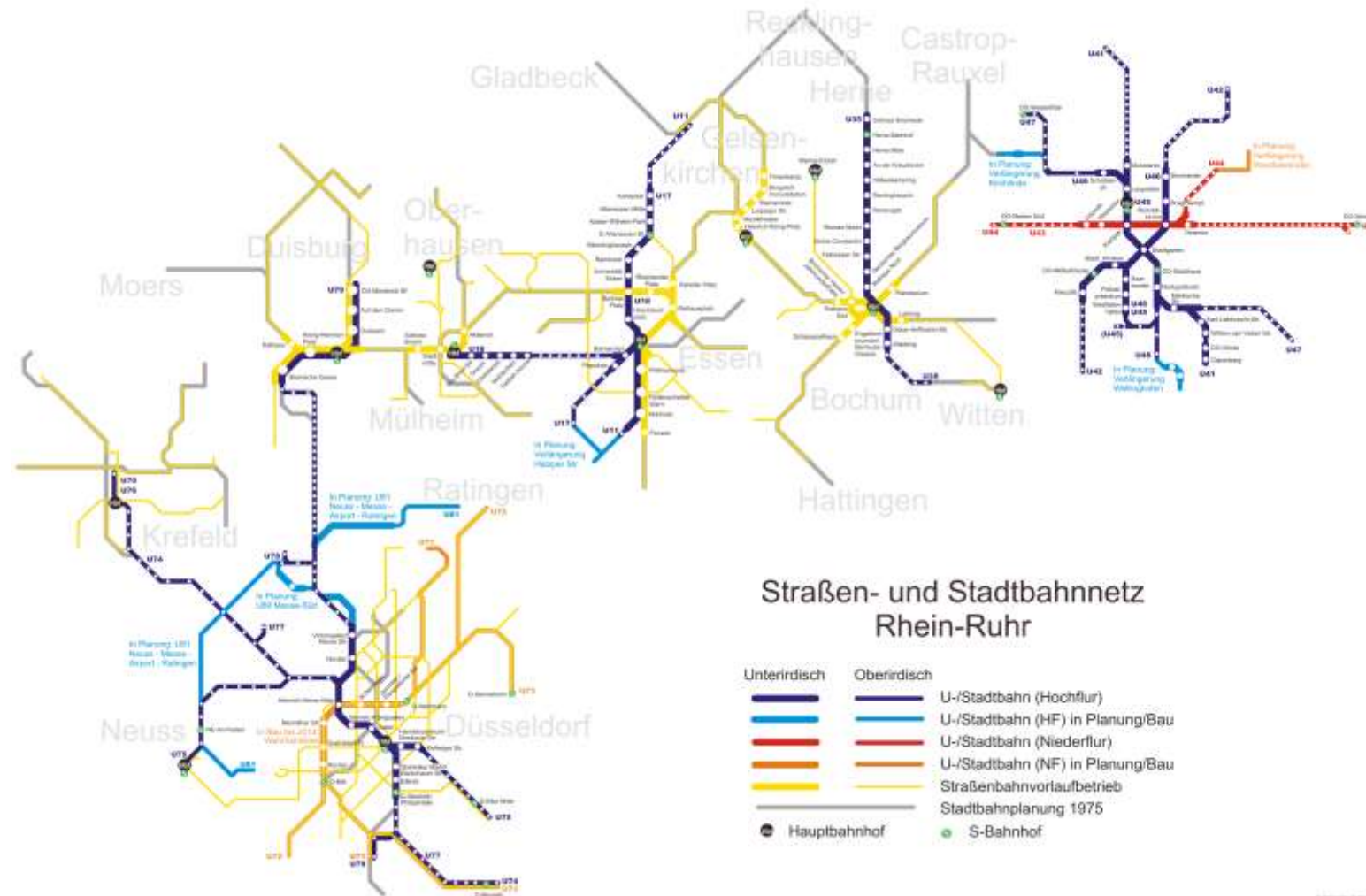


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WY Mass Transit - UK and International Examples



WY Mass Transit – one possible glimpse of the future?





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