The Chartered Institute of Logistics and Transport

Manchester Metropolitan University

100 YEARS OF GLOBAL LOGISTICS AND TRANSPORT

Net-zero carbon – can we get there before 2050?

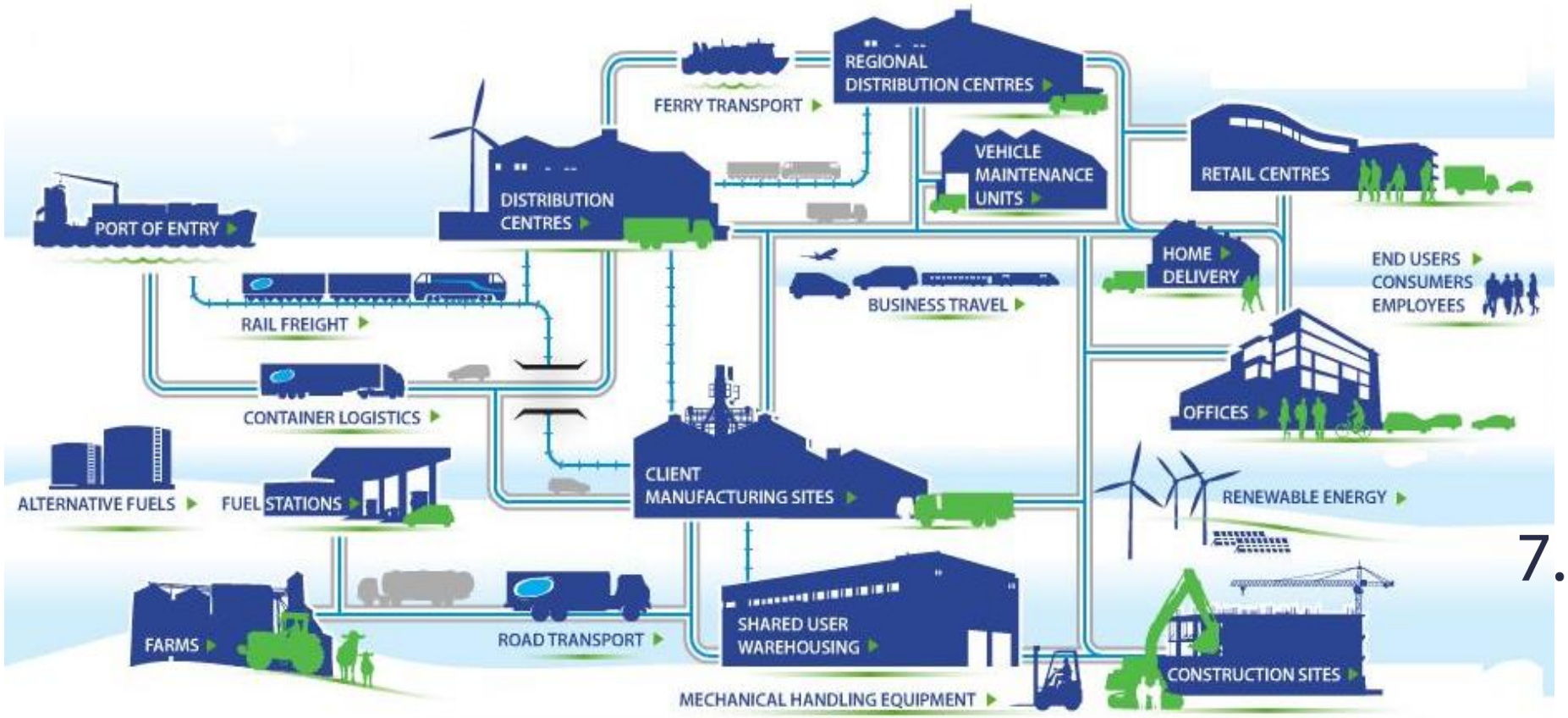
Steve Tainton, Head of Sustainability, Wincanton

Wincanton

Wincanton at a glance

17,700

3,600



200+

7.6m sqft

The fullest vehicles over the fewest, best miles in the best vehicle with a trained, motivated driver using a zero-emission fuel

What's the urgency?

Stakeholder Trends

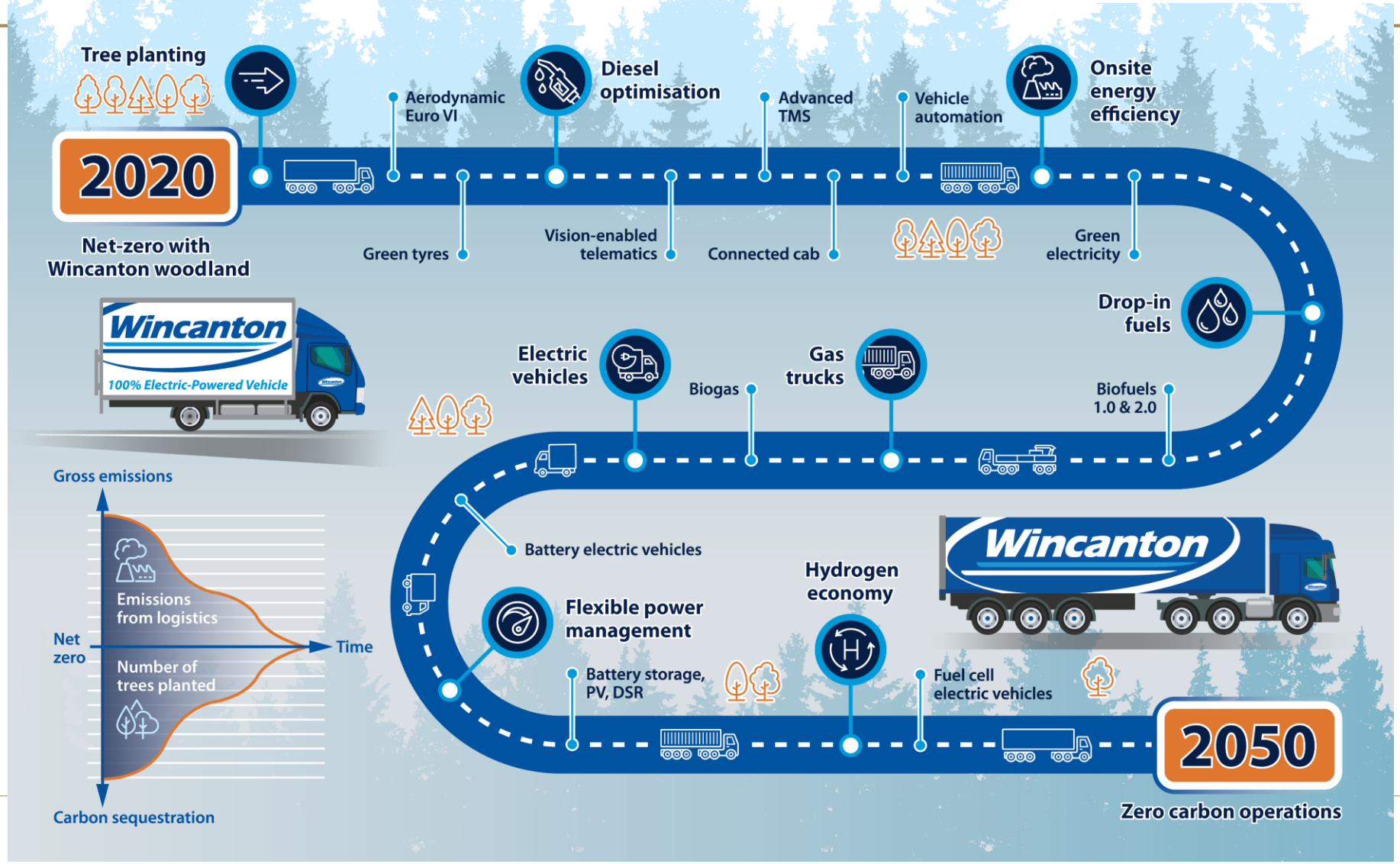
Public concern
- "Extinction Rebellion", School strikes, Greta Thunberg
- Blue Planet
- Colleagues and Communities expect responsible action

Customer priorities
- Sustainability, health and CSR propositions
- Reporting on impacts
- Ethical supply chain

Government responses
- UK – "Net-zero carbon by 2050" - What freight targets?
- Infrastructure support (new charging and fuel networks)
- New reporting rules

Investor priorities
- Environmental, Social, Governance (ESG) Transparency
- Targets & assurance
- **Authenticity !!**

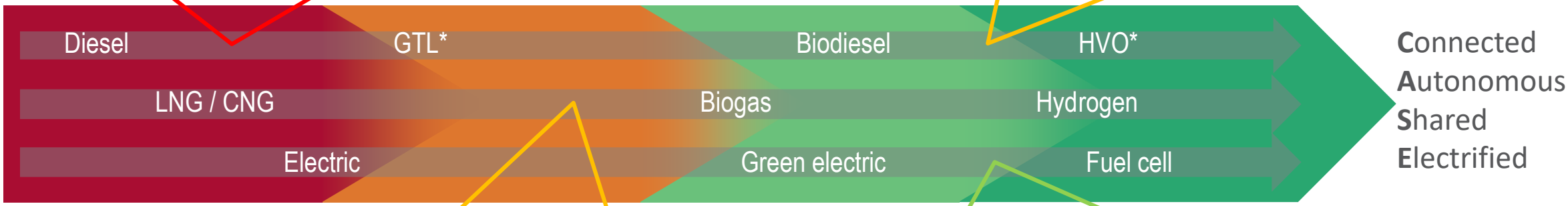
How fast?


Tree planting
2020
Net-zero with Wincanton woodland
Aerodynamic Euro VI
Diesel optimisation
Advanced TMS
Vehicle automation
Onsite energy efficiency
Green tyres
Vision-enabled telematics
Connected cab
Green electricity
Drop-in fuels
Biofuels 1.0 & 2.0
Gas trucks
Biogas
Electric vehicles
Wincanton
100% Electric-Powered Vehicle
Gross emissions
Emissions from logistics
Net zero
Time
Number of trees planted
Carbon sequestration
Battery electric vehicles
Flexible power management
Battery storage, PV, DSR
Hydrogen economy
Fuel cell electric vehicles
Wincanton
2050
Zero carbon operations

Fuels: liquid, gas or electric ?

Diesel Optimisation Strategy – do the most work with the least fuel
1. Network design & operation: Advanced TMS/TPS; MiX telematics; In-cab connectivity; Collaboration;
2. Fuel efficiency: Euro VI fleet; Green tyres; Aerodynamics; LSTs; Double decks; Automation features; Driver training, coaching & Management

Diesel "drop-in" development – as for diesel optimisation strategy plus back to base refuelling with:
1. FAME Biodiesel B20 from waste oils/fats (Argent Energy)
2. Blends of "paraffinic" fuels. GTL from methane and HVO from waste oils/fats



Gas development – as for diesel optimisation strategy with dedicated gas vehicles using back to base refuelling supplemented by gas network refuelling:
1. LNG/CNG
2. Biomethane
3. Hydrogen used in ICE (unlikely)

Electric development – as for diesel optimisation strategy with electric vehicles (EVs) using back to base recharging (or hydrogen refuelling)
1. Electric with battery EVs (BEVs) [3.5t – 26t]
2. BEVs with green electricity** [3.5t – 26t]
3. Hydrogen used in fuel cell (FCEVs) [3.5t – 44t]

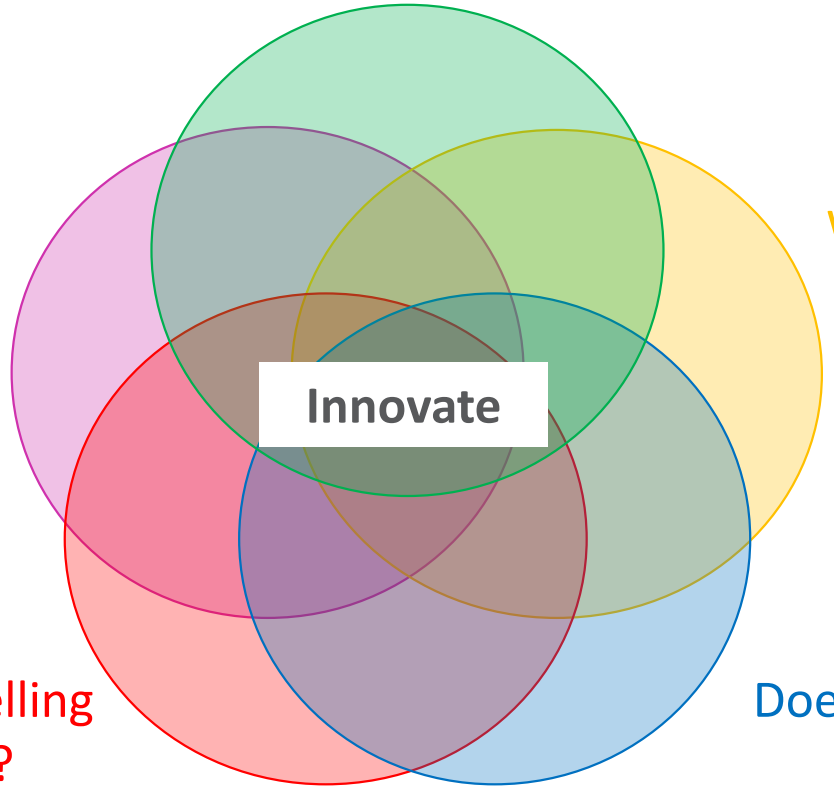
What stops us?

Environmental

Does it provide *authentic* environmental benefits?

Customer

Will it meet their goals?
Will they collaborate and contribute?



Social

Will people accept it?
Is it safe?

Commercial

Is the business case compelling over the contract term?

Technical

Does it work, as needed, reliably and consistently?

When *could* we do it?