

Ultra-Low Emissions Road Freight



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Figure 1: The Transport Hierarchy

MORE SUSTAINABLE		
<div style="font-size: 2em; font-weight: bold; color: #4CAF50;">Avoid</div> <div style="font-size: 2em; font-weight: bold; color: #FFC107;">Shift</div> <div style="font-size: 2em; font-weight: bold; color: #2196F3;">Improve (vehicles)</div> <div style="font-size: 2em; font-weight: bold; color: #757575;">Improve (networks)</div>	Priority 1	<p>Minimise demand</p> <p>Manage the reasons why transport is needed and the context in which transport demand is derived, to deliver the same access to services and activities with less powered/motorised transport.</p>
	Priority 2	<p>Enable modal shift</p> <p>Enable the choice of transport modes with the lowest environmental impacts, and enable easier changes between modes.</p>
	Priority 3	<p>Optimise system efficiency</p> <p>Increase all efficiency measures of transport modes and their use, particularly in terms of gCO₂/km for passengers and gCO₂/tkm for freight.</p>
	Priority 4	<p>Increase capacity</p> <p>After optimisation of the first three steps, any capacity increases that are required should be prioritised to the most efficient and sustainable modes.</p>
LESS SUSTAINABLE		

Avoid: Reducing freight demand

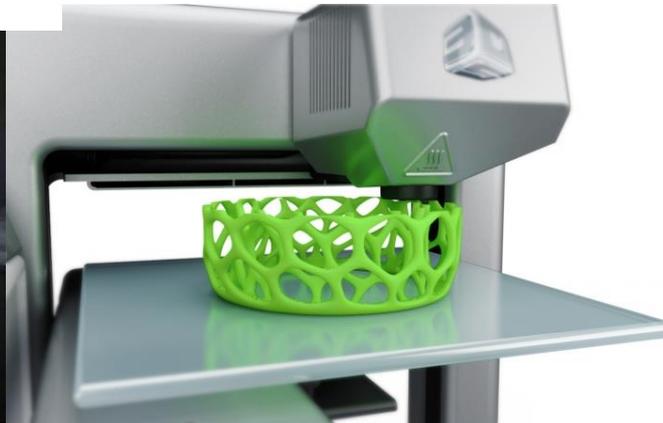
Vision 2035:

What if we all ate healthily, and bought only what we needed?

What if we got all the drinking water we need from our own kitchen taps?

What if many consumer products could be “manufactured” locally?

All of these would take tonne-km out of the freight system altogether, and would often have wider, upstream sustainability benefits.



Requires action to influence (or regulate) consumer demand.

Shift: To cleaner, greener modes

Vision 2035:

What if our rail network was fully electrified and balanced the needs of passengers and freight?

What if we made effective use of our ports to move goods around the coast?

What if last-mile logistics were often achieved on foot or by cargo bike?

All of these would shift tonne-km away from trucks and vans and, if managed properly, onto more sustainable modes.



Requires long-term political will.

Improve: Sustainable vehicles and fuels

Vision 2035:

What if the vast majority of urban deliveries were completed by plug-in vehicles?

What if many long haul trucks were supplied with energy on the move and were optimally sized?

What if there were a range of renewable and sustainable fuels available for combustion engines?

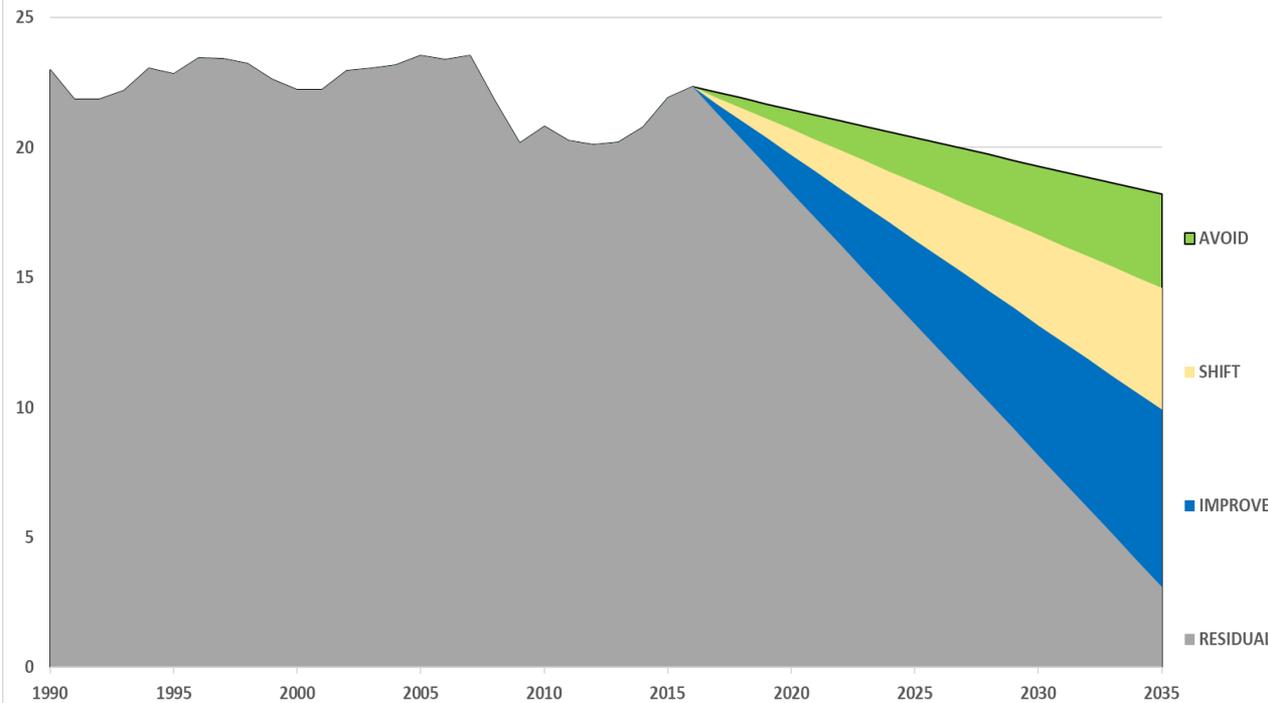
All of these would cut gCO₂e/tonne-km, and would often have wider, air quality benefits, too.



Requires innovation funding and support for early-adopters.

Putting it all together...

UK High Ambition Scenarios (source road freight emissions, MTCO₂e)



Vision 2035:

Business As Usual is not an option.

Don't ignore AVOID & SHIFT.

Even with highly ambitious actions on all three fronts, we won't achieve zero carbon by 2035.

A Vision for 2050?

We know how to decarbonize the road freight sector, but will we?

Thank you for listening...