OPINION

Better use of data is key to decarbonising freight transport

Freight monitoring technology has allowed the private sector to increase efficiency through better supply chain management. AECOM's **Michael Whittaker** and **Kit Allwinter** say the public sector has much to gain from making more use of the available technologies.

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Over the past 20 years, freight logistics has advanced rapidly due to an explosion in data, telematics and capacity management technology, not to mention the ability to store, analyse and learn.

With margins low and competition high, the private sector has leapt on such technologies to improve supply chain management, driving down costs and increasing efficiency across company fleets, even as delivery windows have tightened and standards increased.

Up-to-the-minute information is easily available for deliveries, with 15-minute delivery windows available on everything from individual Amazon parcels to truckloads of car components and real-time tracking of container trains.

Despite this, awareness about freight movements still eludes many, from policymakers to infrastructure providers, regulators to customers.

The public sector has access to some data, but it could be better utilised to understand current freight flows across the nation.

At a local authority level, even logistics centres such as Warrington or Sefton in the north-west have little information beyond the following:

- The percentage of vehicles on their roads that are heavy goods vehicles (HGVs).
- Extracts from the (somehow still) paper-based Continuing Survey of Road Goods Traffic.
- A local planning officer's knowledge of the transport assessments done for any recent industrial developments.

If we are to meet our commitments on emission reductions and tackle congestion, this has to change.

In areas where air quality is poor, this should be a priority. In such places, local authorities are responsible for the implementing clean air zones (CAZs), a Government policy designed to discourage the use of older, more polluting vehicles.

Although the introduction has been delayed until coronavirus is overcome, the crisis is seeing an uptick in the use of private vehicles and an increasing reliance on deliveries, which could exacerbate the problem.

It doesn't need to be this way, with much data currently untapped. For example, Automatic Number Plate Recognition cameras across the nation's strategic road network could provide a better sectoral analysis of the firms owning the vehicles.

Authorities could also plug into Network Rail, which has detailed data on rail freight transport for track access billing purposes, while third party logistics firms working across modes know how these flows combine.

At a national level, the Great Britain Freight Model (GBFM) provides a detailed prediction of freight demand within GB for the Department for Transport (DfT).

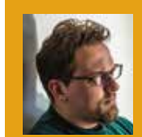
Consultation with industry bodies such as the Road Haulage Association, Logistics UK, Rail Freight Group, British Ports Association and the Chartered Institute of Logistics and Transport complete the picture.

Yet stirrings of change are on the horizon. Seven English sub-national transport bodies are taking an increased interest in logistics and starting to evolve their freight policies and strategies. However, they seem to be following the national approach of using models and qualitative consultation, rather than exploring data mining and analysis.

Big Data provides a sturdier foundation for such analysis and understanding than survey statistics such as the National Travel Survey as we move to tackle the challenges of the climate crisis.

ABOUT THE AUTHORS

Michael Whittaker works closely with clients in unlocking freight and logistics insight between the public and private sectors in the use of critical infrastructure by freight. In doing this he works across multiple disciplines and sectors using his previous experience of both private sector supply chain management and public sector transport planning.



Kit Allwinter works closely with authorities seeking innovative and effective ways to encourage uptake of sustainable and active travel choices including shared mobility. Working across urban design, freight movements and passenger networks he has wide knowledge of how modern mobility is developing.

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However, it is not a stand-alone solution. As we've seen with Mobility as a Service (MaaS), simply applying more technology and collecting more data will not, of itself, fix legacy issues in our public transport network and, magically, make it more competitive or lower emissions. It is what we do with the data that counts: modelling and consultation are needed to providing meaning to the data, yet the data is needed to enable the modelling and consultation.

The time is ripe for change. The DfT's freight data-mapping project, the Future of Freight Study, is expected to be published by the end of 2020.

To improve overall outcomes, Highways England and Network Rail have begun working together to share data on key corridors (such as the Solent to Midlands route) where freight is split between road and rail. Brexit, for all the anticipated negative impacts of queuing lorries and long customs checks, will also provide better digital documentation of imports and exports to and from this country.

If a way could be found to harness all the data that exists at scale from both the public and private sectors (suitably anonymised) then it opens up a whole host of opportunities to better understand how the freight sector can decarbonise.

A first step is to convince the sector to share data. Much data is currently jealously guarded and locked away as commercially sensitive, which in some cases is right, and in others merely inhibits change.

This could be overcome by using broad industry sector categories and approximate postcode origin/destination data. Such data is already held by firms' own software, and could be sampled and shared with the public sector in a secure digital environment with the development of an application programming interface (API) to access and automatically upload it for central analysis. It would be far better for the industry to build trust between the private sector and the Government to allow this to happen, rather than require mandate and regulation.

Working together, we could use the technology we have and the data it already collects to build a better understanding of freight and logistics across the country.

If, as a sector, we change the way we look at shipments, seeing them collectively rather than individual modes and loads, we will demonstrate we are ready and willing to tackle the decarbonisation challenge.