



Inspiring Futures for Zero Carbon Mobility (INFUZE)

**Integrated National Transport Strategy: A call for ideas –
Response as an organisation**

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Introduction

We are INFUZE, an exciting UKRI-funded research project, based in Leeds, UK. We are led by the University of Leeds and work in collaboration with Lancaster University and the Royal College of Art. Our project goals are closely aligned with the local council's vision for Leeds to be a city where you don't need to own a car.

Active since July 2024, our project spans across five years and sets a number of ambitious missions. One of these is to build a new participatory science for designing mobility transitions. We start by understanding values and philosophies and then move to learning, bringing together citizen, supplier, governmental and academic perspectives. This will lead to designing alternative futures. It will involve co-designing our data collection tools, our modelling approaches and how we present this back to citizens and our evaluation framework. This will be brought together to design, deliver and test alternative mobility interventions. As such, the approach adopted should inform the thinking behind the Integrated National Transport Strategy which is seeking to take a more people-oriented approach to understanding what works.

The first milestone of our project is the Call-To-Action – an online survey that gathered responses from nearly 500 Leeds residents, closely representative of the city's overall population. In a rather unconventional manner for transport planning, we asked 17 open-ended questions (as well as various single – and multiple-choice questions) that looked at Leeds and its transport system from the perspective of individual values, hopes and fears for the future of the city, as well as joys and frustrations around journeys and experiences. In return, we received a very thorough and striking account of the potential meaning behind “better”, which forms the foundation for our response hereafter.

Q1. In your opinion, how could the transport network be better ‘joined-up’?

Whilst the question above is about integrating transport, it feels somewhat vague and lacking direction. Transport integration should serve a clear purpose (or a set thereof), and, having heard from our respondents, we believe that purpose goes

beyond the mechanics of getting from A to B. We argue that what truly matters to people is whether transport enables them to live according to their values and principles, but also how it affects their daily routines.

People in our survey told us they want places that foster a sense of community and allow connections with family and friends; they want neighbourly companionship, and for every citizen to be an active contributor to social capital. People want to connect with nature; they advocate for increased urban green spaces but also value having the means of escape to hinterland. People want places that embrace cleanliness, authenticity and heritage; they want places that are inclusive, diverse, and dynamic but, at the same, ensure serenity and safety for everyone around. People strive to live in environments that are connected and enable active lifestyles. They want access to daily necessities that does not ask for absurd sacrifices of comfort and time. People want support for public health and strong commitment to climate action; they want for children and youth to be looked after and empowered. People want for the future to be shaped by their voices that stand for justice, affordability, and social equity.

The current transport system, however, rarely aligns with this value system. Crimes, anti-social behaviours, and discourtesy prosper in place of community spirit, often defining the experience of public transport and active journeys. Urban green spaces, such as public parks, are limited and readily accessible only in certain areas, while rural landscapes are usually inaccessible by public transport altogether. The place-making efforts are put into urban centres, whilst a lot of sub-central and peripheral neighbourhoods remain run-down and deprived of opportunities.

Public transport connections, too, tend to be centripetal; they fail to recognise that what people do or want to do often lies outside of central districts. Accessing workplaces, schools, medical services, preferred shopping facilities, and other residential areas to visit family and friends, necessitates travel across the urban periphery. Achieving these journeys by passing through the centre, however, is complex, as they require multiple interchanges, and are also demanding in terms of cognitive effort but, most importantly, time. Centripetal connections are not designed to interwork. They are, in many cases, hourly at most and subject to frequent

cancellations, with fares rising and quality falling. At the same time, some passenger stops offer poor first- and last- mile connectivity, and lack shelter and essential information, leaving individuals unaware of the waiting timeframe whilst exposed to inclement weather.

Given the above, out-of-city and long-distance travel – particularly to rural areas – which, taken together, constitute a significant portion of regular journeys, become unbearably difficult and increasingly unaffordable to undertake by public transport. Similar challenges apply to any journeys with family and particularly small children. Many journeys, short or long, may also be burdened by the need to carry heavy items, be that shopping, luggage, or household waste; travel with pets is, likewise, restrictive. The system, we are told, also caters poorly for trip-chaining. For someone, the day could start with a school drop-off and be followed by commute to an office and an afternoon visit to a customer in another county. With the system unable to effectively fulfil the requirements of a simple A to B, how can it cater for these more complex itineraries? A better joined-up transport network ought to consider this broad range of issues as shared with us by Leeds residents.

In response to these transport challenges, people often consider personal cars as the only viable option. The car is, however, for the most part also *the antagonist* of everything our respondents stand for. People report that there are too many cars and that they take up space that could alternatively be used to introduce greenery, social places, or housing initiatives. They are the source of noise disruption to domestic and public environments; they are contributors to poor air quality and to climate change. With many car drivers being disrespectful to other road users and the surroundings, personal cars often go against the community and social justice principles. Car drivers park on pavements; they park on cycling lanes, restricting access to the very much desired yet limited, “token”, cycling infrastructure. They break the rules and exceed speed limits, posing a risk to pedestrians, cyclists, and even children. People recognise that increasing car use jeopardises the viability of public transport with reductions in service quality and increases in costs, further exposing those who cannot or choose to not have access to a car to the shortcomings of the system.

Three quarters of our respondents own cars; among those, however, 70% use alternative modes whenever practical, and a further 21% do not value their cars at all or wish to cease ownership for a variety of social, environmental, and economic reasons. Moreover, 40% of our respondents either already use or wish to use a bicycle for their regular journeys, regardless of their current car ownership status. Transport integration, therefore, should build on this positive change potential; it should realise a transport system that is “joined-up” with people’s values, desires, and practices, a system that fights the difficulties people face and makes more journeys not just possible but better without a car.

The fundamental improvements required should meet a range of needs and challenges:

- There is a need to focus on the quality of bus stops and train stations; this may include changes in location or quantity thereof to improve first- and last-mile access, but also sheltering, lighting, information provision, and ensuring safety and security. Safety and security should also form a part of initiatives for public transport rides.
- Most important to our respondents are the enhancements in reliability and frequency beyond hourly. The service routes themselves should be thought through and realise the needs of people to travel beyond and outside of urban centres. In Leeds our respondents wanted a spider-web-like network that offers both radial and circular connections. This would be coupled with timetables that allow all public services to interwork with each other, to considerably shorten travel times.
- Cycling infrastructure that forms a network of end-to-end, clean, and, ideally, scenic routes, completely separated from motorised traffic, should complement public transport system. It needs to be usable and free of parked cars, as do our pavements. There has been no follow up to the previous Government’s consultation on pavement parking; yet this clearly matters to people.
- While many of our respondents wanted improvements to the quality and experience of bus, train and cycling infrastructure, they also recognised that real change would need to be far more systemic and give them not just better

experiences and choices but real agency. This systemic change should be developed by codesigning solutions with citizens and trialling these in an iterative manner before scaling up.

The above could ease a multitude of what are currently car-dependent journeys; it may not be enough, though, to ease them all. We believe, therefore, that car still has a role to play in transport integration. The INFUZE project (<https://in-fuze.org.uk/>) is working with citizens and stakeholders across Leeds to explore what a system where people accessed cars on demand as part of a different transport offer might look like. This involves designing with the values and goals we identified above and enabling any new system to better align with people's everyday missions. In the UK we spend around 11 times more, per capita on owning cars (not moving them) than we do on public transport. If the INTS does not provide a vision that integrates the role of the car in society and how that might change then it might address some operational and experiential issues with public transport, but it will not change the realities which people described to us. Leeds City Council's vision to be a city where you don't need to own a car is potentially transformative. Our work is to enable citizens, transport providers and politicians to design this transformation together. We are already working with the Chief Scientific Advisor's team on this and would be happy to work more closely with the INTS team.

Q2. How could data be used to improve the transport network?

Data in the context of this question can mean having better information about journeys, such as but not limited to departure times, journey planning, traffic information and accessibility information.

Building on Leeds residents' responses to our Call to Action, we wish to highlight a number of issues around the performance of data-based transport services, which, we believe, will be applicable also beyond our project's context. Some of our respondents expressed frustrations over the misalignment between the stated timetables and the physical services. These services tend to arrive long before or after the stated time or simply disappear from digital displays not having turned up. There is clear lack of real-time updates around delays and disruptions, while the live

tracking services are unreliable and lag behind. Therefore, users struggle with planning their journeys as the services they rely on are not where they appear on the map or get cancelled without notice.

The planning difficulty is further aggravated by the fact that transport providers are usually segregated and offer separate apps for their services; this makes navigation around services and the bundling thereof confusing. The more integrated applications that are available, such as Google Maps or WYMetro, do not always display all available routes and offer limited customisation. They tend to push forward service bundles that prioritise shorter travel times; therewith, these times are based on the stated timetable rather than actual service delivery, sacrificing reliability, which is what actually matters to people. The lack of transport provider integration also results in concerns, associated with costs. Without seamless tap-on/tap-off type of integration across different public transport services people face an increased risk of overpaying for their journeys.

Interestingly, only 14 people in our survey stated that improvements in the use of data are required. Perhaps, this is because most problems with digital services are caused not by the data per se but by the limited functionality of the underlying transport system. It is important, therefore, to address the issues we presented in our previous response; only then can the digital layer truly enhance the system. For the existing issues with digital services that can be regarded as data-specific, what would be of value is improving real-time service accuracy by ensuring, for example, that live tracking is truly reflective of train and bus movements. Transparency and advance communication about disruptions, such as delays and cancellations, should also be enhanced. A single transport app that integrates all transport providers and offers a universal payment system as well as customisation features is also necessary; this, however, cannot happen without physical integration as a backbone.

Q3. How could technology be used to improve the transport network?

Technology in the context of this question means new and innovative ways to complete journeys, for example but not limited to the use of autonomous vehicles, electric scooters and e-hailing rides.

This call for ideas seems to make the assumption that technology is in the foreground of achieving transport integration, as the ideas regarding technology are requested both among a long list of questions for the members of the public as well as a very short list of questions for organisations. People in our survey, however, may be thinking differently.

In response to the multiple-choice question “Which of these issues worry you?”, 30% of our survey respondents picked technology and the way it affected their life. Other, open-ended, questions in our survey were not focused on technology but tried to look at what people value and their hopes and fears for the future of the city from a context-free perspective. In response to those, only four people mentioned the word “technology”, with the free-text comments expressing concerns rather than positive visions. Only seven respondents mentioned the more innovative e-hailing services, referring to their use solely as a way to deal with the pitfalls of current transport system in absence of personal car and not as a part of the future transport system. No comments were made by our respondents about autonomous technologies.

We did, however, hear about “electric” experiences today and thoughts about futures but only from a total of 21 respondents, with some sharing opinions, in cases conflicting, for various forms of electric transport. Two saw all-electric transport being an important component of their vision for the future and another two expressed concerns around all-electric transition going wrong. The belief that replacing personal ICE cars with EVs is a way forward was expressed in six instances and increased charging infrastructure, including at-home charging, was advocated for in five instances. Electric scooters and bikes were mentioned by seven of the 21, with five associating the modes with criminal and anti-social behaviours and only two seeing them as a valuable addition to the future transport system. Seven respondents shared positive feelings about the move towards all-electric public transportation.

We conclude, therefore, that technology may not be a predominant factor in the minds of people when thinking about the futures of the cities or the transport networks. This may be because technology fails to align with a number of

components of the more altruistic and pro-social overarching value system that the people in our survey expressed. Electric yet personal car, for example, may cut noise pollution and tailpipe emissions, attending to serenity needs and climate concerns; yet it conflicts with aspirations for community by not really tackling driver discourtesy and does not address the issues around the use of public space. Autonomous scenarios with private ownership still in place may have similar implications.

We would also like to emphasise that when simply added to a poorly functioning public transport system, these innovative technologies are only disruptive and, as in the case of e-hailing, simply cover up some issues at hand. With 30% of our survey respondents concerned about technology, we argue that such systems, whilst offering benefits to some, are not universally trusted or liked; the way in which such services are managed, not just their presence, is important to people, too. What needs to happen first is the not so hype-worthy but, certainly, functional improvements to the existing public and active transport networks, some of which we recommended in our previous responses. First and foremost, people want and need the basics that work. Innovative technology alone can only do so much: in a system where a bus still doesn't turn up, it does not matter that it would have been fully electric.

Q4. How, if at all, would you improve the way decisions are made about the transport network?

One of the things our project advocates for is thinking about transport policy as the result of co-creation with those at whom it is addressed. We work closely with the residents of Leeds but also various service providers and policy makers to develop a truly participatory approach to policy design. We believe that for policy to be effective it has to listen to but also balance out and align with the values, principles, and needs of various transport stakeholders.

With regular transport users being one of the policy-making primary objects, we strongly encourage transport users' participation. This Integrated Transport Strategy Call for Ideas attempts to do exactly that; the approach, however, is very extractive, makes multiple assumptions regarding where the problems and solutions develop

from, and fails to recognise the wider context in which transport system operates and which it reflects. With our Call-To-Action, we took a different approach of asking broader and bolder questions that tried to understand people's values and hopes and the transport system's potentials and failures in fulfilling these. As a result, we learnt about transport's wider missions.

But we have to go further than just listening. In the INFUZE project, we will be using our citizen and stakeholder events to influence our data collection tools, to define our modelling scenarios and how we present information to different groups. We will develop a new evaluative framework which will enable different groups and stakeholders to understand whether the system options they imagine will work for them or not. It means letting go of the heavily specified national ways of specifying what makes for a good policy or investment. This, we would suggest is a necessary feature of any transformative integrated national transport strategy. We have a jointly funded PhD studentship with the DfT to explore this further and a second which explores what the governance implications of the INFUZE findings are. If the Integrated National Transport Strategy is to enable different outcomes to the ones which we currently get, it needs to be open to different ways of arriving at those decisions.

Q5. Any other comments?

[none]