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Dear Sir/Madam

NIC Consultation - Connecting Northern Cities

For this topic area, we have not attempted to answer each question as set, however, we would hope it may be helpful to contribute some remarks that might inform the process and suggest a direction toward future lines of enquiry.

Connecting northern cities

Arup believes that improved connectivity between the cities of the North of England is fundamental to achieving the vision of a dynamic, integrated Northern Powerhouse economy and labour force. For the North of England to function effectively, a 'hub and spoke' approach is critical to

- Link the main northern cities;
- Swift movement of people to jobs;
- Creating one integrated economy and jobs market;
- Facilitating improved global connectivity (particularly connections to key airports, such as Manchester, and ports);
- Creating a balanced mixed economy with local centres specialising.

The cities of Leeds and Manchester act as local hubs for employment and economic activity, but the many other smaller cities in the wider City Regions do not have critical mass to generate such activity.

In these locations the ability of people to access opportunities and jobs is limited by both the relative high cost of public transport and its general poor availability. Furthermore, the lack of provision of public transport at weekends and evenings perpetuates the use of cars and exacerbates the congestion on many of the North's trunk roads and motorways.

Congestion, delays and poor journey time reliability in a typical working week result in poor productivity and a reduction in effectiveness of the road network for core users. Any improvement to train services, particularly to the faster east – west Trans-Pennine Express services, tends to lead to immediate growth in patronage showing the level of suppressed demand for high quality inter-city connections.

Added to this, whilst journey distances across the North are relatively small by global standards, there is a level of geographical relief and remoteness between the main population centres which means that adverse weather (as we have recently seen) can generate very challenging travelling conditions at almost any time of year.

As a result of these factors there is very little intra-regional commuting for working purposes.

In a nutshell the poor quality of intra-regional transport infrastructure in the North, coupled with fragmented provision of both intra-regional and local public transport is considered to be a significant handicap that is holding back the economic and social development of the region and inhibiting inward investment. It also detracts from people locating businesses in the North and graduates staying in the region after leaving university

Arup's view is that an integrated approach to connecting the Northern Powerhouse cities is required. With significant investment, rail can provide a new spine connecting the main cities across the North by providing increased frequencies (providing turn up and go between the city centres), more comfortable trains and reduced journey times (20-30 minute headline city centre to city centre journey time).

Improvements should focus on the principle and growing population and employment centres and the main international gateways (particularly Manchester Airport). Exploration of corridors for improvement that move away from existing alignments can also maximise the potential to facilitate regeneration of main areas of deprivation in other cities and towns across the North.

Lessons can be learnt from the route alignment of HS1 originally promoted by Arup as to how regeneration opportunities along a route can be balanced against the imperative of reduced journey times. With proactive management of these opportunities, real value can be created that will sustain and enhance the impact of the investment.

Rail, though, contributes to the overall transport impact and any investment must be fully integrated with other modes on the "hub and spoke" principle.

Overall transportation objectives should be to create excellent connectivity to the main hubs by road, rail and local transport, optimising usage of existing networks and improving journey times, frequency and reliability, especially:

- on the trans-Pennine trade corridor linking Liverpool-Manchester-Leeds-Hull, and connectivity between this corridor and adjoining areas of deprivation;
- around the Leeds-Sheffield-Manchester triangle;
- on North-South Links along the north – south railway corridors and the M6/M1 corridors, providing better connectivity between the important energy resources of Cumbria and Britain's Energy Coast; and the economic centres of the North East.

To be globally competitive the North will need improved links to global economies such as China. Better rail freight connectivity will be needed for the Ports of Liverpool and Hull.

In Manchester Airport the region has a major international hub airport with good regional transport links to the airport but growth at other airports such as Leeds-Bradford and Liverpool has been lower post-recession because of their poorer access in comparison to Manchester.

The North is large on both geographical and population scales in a UK context, but not in a global context. Having several bodies responsible for overseeing large capital investment programmes as well as the operation of a variety of modes of transport, make integration challenging.

Indeed, under current conditions such organisations are competing against each other for investment without ever realising the combined potential. This is a significant issue for effective coordination of transportation resources and improved governance – with teeth - would bring benefits.

A key factor in planning future infrastructure investment will be the determination and demonstration of what constitutes “cost-effective”.

Transformational change is likely to have much broader value and appropriate models that account for wider economic environmental and social benefit need to be developed to improve evidence-based decision making.

Improved governance is required to prevent pursuing schemes that do not bring significant benefit and which may be the preferred option based on a specific local or stakeholder preference. This would instead provide focus and investment on opportunities with a wider benefit.

It is important that there is follow-through on the establishment of TfN and the proposed decentralisation of government decision making to the local City Regions. Better procurement is also required, and the NIC should promote the use of best practice such as that embodied in HMG guidance on project initiation route-mapping.

Whilst the questions that the consultation focuses on cover specifically transport, it is extremely important that the NIC recognise that the transport systems in the North are only one critical enabler for economic growth.

Digital Connectivity will also be a critical enabler and planning for digital networks should be integrated with planning for physical transport networks, communications networks and for power and energy distribution networks.

Furthermore the transformation of the North will also rely on creating a resilient infrastructure model that can cope with the chaotically evolving weather systems that we are starting to experience and with other potential shocks.

This requirement provides potentially the greatest challenge of our generation and yet has so far received only minimal consideration.

The interdependencies inherent in considerations of resilience may require much broader multi-stakeholder governance models to be developed.

This is an exciting, and welcome, period of reappraisal of the potential of the UK's infrastructure and Arup looks forward to playing a supportive role in ensuring the success of the NIC for the benefit of UK plc.

Yours faithfully

James Kenny
Head of Global Affairs