SIEMENS

# Siemens response to National Infrastructure Commission call for evidence - Improving connectivity between cities in the North of England

## Introduction

This document forms part of Siemens' response to the consultation published by the National Infrastructure Commission (NIC). The response relates to the first part of the call for evidence: **Connecting Northern Cities**.

Siemens in the UK employs almost 14,000 people across the UK with 13 manufacturing sites and multiple other facilities. We have a strong presence in Manchester, Congleton, Leeds, Newcastle, Ulverston and soon to be Hull – employing over 3000 people across the north. In the region we manufacture and assemble gas turbines, motors and gear units. In Hull we will make blades for wind turbines powering the region and its green energy future. We are proud of a strong heritage in the region and play an active role in LEPs, Universities and Schools across the north.

We are responding as both a business user and major supplier of infrastructure technology and services in the north. We have also contributed to other, separate submissions to this consultation, most notably to evidence provided by the North West Business Leadership Team (NWBLT).

## Response to Questions:

### 1. To what extent are weaknesses in transport connectivity holding back northern city regions, specifically in terms of jobs, enterprise creation/growth and housing?

There are still considerable weaknesses in the connectivity of northern cities and towns via rail, road and ports. This is characterised by ageing infrastructure, lack of investment and weak integration of transport systems across the north. In spite of this, considerable improvement in rail, ports and airports has taken place – notably rail electrification in the North West and airport investment in Manchester. The progress of HS2 and a connecting HS3 will, in the long-term, improve national productivity and create more jobs. The

immediate focus for the NIC should be to look at the systematic integration of transport systems, and the facilitation of growth in northern cities which have historically suffered from a lack of private and public sector investment.

Siemens supports the notion that current weaknesses in effect fragment the business community and the market in the north of England. Addressing the lack of coordinated governance and lack of integrated transport systems will help create a true single market for goods, service and labour across the region.

Current weaknesses in connectivity prevent the development of a true interconnected 'powerhouse' through a multi-modal, integrated transport system for both personal travel and freight. Equally if northern cities are to grow, then the issues of capacity must be addressed across all modes of transport. Addressing these weaknesses will:

- Encourage domestic and inward investment by supporting economies of scale
- Help the development of port networks in the north as a basis for efficient exports
- Boost the knowledge economy and manufacturing related sectors and boost innovation
- Foster closeness of city economies by bringing business, employees and competition closer together
- Increase the pool and supply of skilled labour
- Increase connectivity of University Institutions
- Increase competitiveness through access to new and larger markets
- Reducing trading costs and using more efficient logistics networks e.g. ports

## 2. What cost-effective infrastructure investments in city-to-city connectivity could address these weaknesses? (all modes)

City-to-city connectivity investments that could address these weaknesses include:

- Acceleration of HS2 and HS3 across the north
- Boosting strategic highway capacity for both freight and personal travel – by increasing managed motorways and addressing gaps in the road network (including links to ports), with a particular emphasis on improving reliability for freight and business
- Fast, reliable and high quality fully electrified intercity rail network that connects to HS2/HS3 and relevant airports across the north
- Fast track renewal of rolling stock for rail networks that have suffered chronic underinvestment across the North West and Yorkshire
- Single ticketing system and Oyster Cards for the north.
- Developing a digital transport plan, connecting all transport networks to a easy to use customer facing platform
- Ensure Ports are at the heart of the One North Strategy, equal to the importance of rail, airports and highways.

- The planning and implementation of the Trans-Pennine electrification needs to be accompanied by firm planning of TransNorth, the mix of heavily-upgraded and wholly new rail lines that will bring Liverpool, Manchester, Leeds, Sheffield and Newcastle-upon- Tyne much closer together, including a 30-minute transit between Manchester and Leeds and a 60-minute Liverpool-Leeds timing.
- We agree with the North West Business Leadership Team that Rail electrification should be prioritised, eliminating slower and more costly and inefficient diesel services.
- The present planned Network Rail CP5 programme (2014-19) needs to be followed on into Network Rail's CP6 (2019-24)
- In addition to the creation of better transport links to airports and ports, some thought should be given to the "last two kilometres" in and out of these important transport hubs. This can often be where much of the congestion is concentrated and could be alleviated by better traffic coordination between the transport hub network and the surrounding local authority or Highways England (HE) Network. The HE are already working on a project to interface the motorway and trunk road network to the adjacent local authority roads. It would be sensible to extend this functionality into the privately owned ports and airports. Apart from the reduction in congestion it would deliver, this methodology would also provide more accurate data on the current state of all of the networks and give more options to alleviate issues caused by accidents and other unplanned incidents.

In assessing transport solutions for the north of England, we would also make a general point about the importance of technological innovation. This can play a major role in determining the right transport solution for a particular project or problem. Whether it be in the latest technologies for rail signaling and train control to improve capacity and performance, or smart technologies which can optimise road space, prevent congestion before it occurs, and manage parking systems in cities and towns to maximise parking availability, it is increasingly the case that technology can play a major role in determining which transport solution might be the most appropriate for a given set of circumstances or objectives.

More efficient use of road and rail capacity through the use of smart technology can itself be a transport solution, perhaps in certain circumstances even avoiding the need to build brand new capacity altogether. Technology can therefore also drive down costs and drive up efficiency not just for individual capital projects, but for the wider management of transport systems.

It is therefore increasingly important that technical considerations are taken into account at the earliest stages of a project development to ensure that the right solution to a particular problem or wider transport objective is developed from the outset. Technology should not be an issue that is left to be addressed once a particular transport solution has been decided upon and we hope that this is something that the NIC will consider as part of these deliberations.

## 3. Which city to city corridor(s) should be the priority for early phases of investment?

The main focus for the early stages of investment should be laying the foundation stones to create a "northern economic belt" that would travel from the SuperPort in the Liverpool, to the Port of Hull. Underpinned by HS3 and HS2 this strategic focus would be provide the basis for Liverpool, Manchester, Leeds and Hull to develop and grow into interconnected super cities.

This would be an incredibly attractive inward investment proposition. Siemens has announced its decision to invest £160 million (EUR190m) in wind turbine production and installation facilities in Hull. In Leeds we are growing our Mechanical Drives business, in Manchester developing the Siemens Didsbury site to create a business park and leading hospital facility. In Congleton we are investing in tomorrow's digital technologies today. Across the north we are creating over 1100 jobs, and investing in the skills needed to grow a green and digital economy. This is only possible with a long term strategic vision for the creation of this 'northern economic belt', which should in time encompass all the northern cities across the UK.

In relation to airports, Siemens also believes, like the North West Business Leadership Team, that "as the premier airport serving the entire North of England catchment (and beyond), better links to Manchester Airport deserve a very high priority. All rail links into Manchester Airport require more attractive frequencies and journey times. Manchester Airport, in effect, needs to be treated as a freestanding "large city" destination in its own right." [1]

## 4. What are the key international connectivity needs likely to be in the next 20-30 years in the North of England, with a focus on ports and airports? What is the most effective way to meet these needs, and what constraints on delivery are anticipated?

The most significant changes that are anticipated in the next 25-30 years are:

- Continuing growth at Manchester, Leeds, Newcastle and Liverpool John Lennon airports (Manchester is expected to double)
- Major growth in Liverpool's freight traffic through the Atlantic Gateway project
- Increased export and import volume growth in the North West and North East – greater volume of throughput
- Increases in green exports and imports across Yorkshire owing to development of nascent wind industry and renewable industries
- Rising demand for passenger travel and freight movement owing to economic and population growth
- Increased automation and digitalisation of airport and port business operations

[1] NWBLT Transport Report – A Progress Update 2013/2015

The effective ways to meet these demands are:

- Increase capacity for highways to better connect airport and ports
- Accelerate HS3 & HS3 proposals
- Increase rail freight capacity with a focus on international routes
- Better rail connectivity to Manchester Airport, to allow quick and easy access to the range of intercontinental destinations
- High quality surface access to airports and ports

The principle constraints on progress:

- Provision of finance and investment in early phases of development
- Reform of Air Passenger Duty still required to enhance regional airports
- Overcoming existing delays in freight paths between North and South – e.g. North West and Southampton
- Overcoming skills shortages required to deliver engineering elements of the plans

## 5. What form of governance would most effectively deliver transformative infrastructure in the North? How should this be funded, and by whom?

Providing there is a long term and strategic framework for delivery Siemens supports a devolved approach, led by Transport for the North. This must be coupled with strong steer from each regional LEP.

A governance of mixed infrastructure providers, coupled with experts in electrification and cities would be welcome. Equally transparent structures underpinned by public participation will be essential to maintaining public trust.

Whilst governance and integration should be delivered by the public sector, it is imperative that the funding is private and public sector based; the burden should not fall solely on the tax payer for systems/modes that will be operationally delivered by the private sector.

## Further information

We would welcome the opportunity to meet the NIC team to further explore the topics listed above. For this or any questions arising from this response contact:

Paul Addison
[email address and phone number redacted]

Siemens plc, 8 January 2016

## About Siemens

Siemens AG (Berlin and Munich) is a global technology powerhouse that has stood for engineering excellence, innovation, quality, reliability and internationality for more than 165 years. The company is active in more than 200 countries, focusing on the areas of electrification, automation and digitalization. One of the world's largest producers of energy-efficient, resource-saving technologies, Siemens is No. 1 in offshore wind turbine construction, a leading supplier of combined cycle turbines for power generation, a major provider of power transmission solutions and a pioneer in infrastructure solutions as well as automation, drive and software solutions for industry. The company is also a leading provider of medical imaging equipment – such as computed tomography and magnetic resonance imaging systems – and a leader in laboratory diagnostics as well as clinical IT.

In fiscal 2014, which ended on September 30, 2014, Siemens generated revenue from continuing operations of €71.9 billion and net income of €5.5 billion. At the end of September 2014, the company had around 357,000 employees worldwide. Further information is available on the Internet at www.siemens.com.