National Infrastructure Commission

National Infrastructure Assessment: Call for Evidence

BSA Response

In October 2015, the BSA welcomed Chancellor George Osborne's announcement of a new National Infrastructure Commission (NIC). When established on a statutory footing, the NIC will help provide constructors with a clear vision of what the UK's infrastructure landscape in the medium to long-term will look like. This is even more important in light of Britain's vote to leave the European Union. Below is the BSA's view on what NIC should consider when assessing UK infrastructure priorities. These will focus on:

- Skills – Building a diverse skills base aimed at meeting infrastructure needs
- Connectivity – Ensuring the UK's large cities and small towns are better connected to improve productivity
- Devolution – Clarifying how combined authorities and local government fit into national infrastructure planning
- Funding – Maintaining and improving the flow of infrastructure investment and building comprehensive business cases
- Technology – Understanding how technology influences construction, skills, and how people interact with infrastructure

Skills

The Government's National Infrastructure Pipeline (NIP), as of March 2016, is worth £483bn[1]. Whilst many of the projects are shovel ready and have workers on the ground, the Pipeline is as much a vision as it is a reality as the skilled workforce needed does not exist. The National Infrastructure Assessment's (NIA) role to chart Britain's infrastructure requirements up until 2050 also needs to take into account the skills required.

The National Infrastructure Plan for Skills[2] estimates that approximately a quarter of a million construction workers and engineers will need to be retrained or 'upskilled' in order to deliver the NIP in full. Uncertainty around the future of immigration policy significantly complicates the matter. Meeting this challenge will prove one of, if not the biggest, faced by the construction industry and the NIC's assessment of need will be crucial to catalysing training and investment in the workforce.

The BSA welcomes the announcement of new National Colleges for High Speed Rail in both Birmingham and Doncaster earlier this year[3]. The colleges will boost Britain's construction skills base and ensure the development of bespoke training for the UK's future engineers. Additionally, this will

[1] https://www.gov.uk/government/publications/national-infrastructure-pipeline-2016

[2] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/464354/NIP_for_skills_final_web.pdf

[3] https://www.gov.uk/government/news/major-step-forward-for-national-college-for-high-speed-rail-as-construction-starts-in-birmingham-and-doncaster

ensure that workers trained to specifically deliver HS2 will have the capabilities required to deliver future high-speed rail lines.

The BSA urges the NIC to explore options for establishing future infrastructure colleges in a similar mould to the National High-Speed Colleges. This will ensure Britain has a diverse construction and engineering skills base, capable of delivering a wide-range different projects. Potential colleges could focus on energy grid management, roads, aviation and urban transport. The industry would want to support the development of such institutions and contribute resources and expertise to boost effectiveness.

The biggest risk to building and maintaining a skilled workforce is a stop-start pipeline. The BSA recommends project continuity, for example, ensuring Crossrail 2 commences soon after the completion of Crossrail. This allows the skills base built on the latter project to be retained and built upon, increasing productivity and effectiveness.

The NIC should encourage the Government to use procurement to pursue its broader skills objectives. Provisions such as hiring a certain number of apprentices or ensuring workers are trained to a certain standard will help Britain broaden its construction skills base. BSA members are ready, willing and able to provide such training and help the Government reach its ambitious apprenticeship targets. Such an approach will allow industry to take the lead in building an infrastructure skills base and ensure training becomes an embedded part of the procurement and construction process, as is often the case already.

Connectivity

One of Britain's major infrastructure challenges is improving transport connectivity. Improving the speed at which people and goods reach B from A is key to improving UK productivity. Additionally, improving transport connectivity is essential to realising the Government's long-held ambition of rebalancing the economy and strengthening the regions. The BSA supports the NIC's finding that the North of England needs 'immediate and very significant investment' and the need to kick-start projects such as HS3 and increasing M62 capacity[4].

The NIA should therefore focus on which projects are likely to achieve improved connectivity across the north, which routes should be priorities and what measures can be introduced rapidly and cost-effectively. Projects such as HS3 will significantly improve both capacity and journey times across the region's different towns and cities. However it is a project unlikely to be completed for a few decades, potentially longer. Whilst the NIA's remit covers medium to long-term infrastructure need, shorter term options, such as rail electrification, larger and longer trains (where possible) and road surface improvements, shouldn't be ignored.

Connectivity doesn't just cover city to city transportation. Intra-city connections are as, if not more, important to productivity and prosperity. The Government's devolution agenda, including the establishment of numerous sub-national transport bodies, such as Transport for the North and Transport for the West Midlands, can drive connectivity improvements. Different cities and regions will have different infrastructure priorities to suit their characteristics. The BSA would therefore encourage the NIC to engage with the newly formed Combined Authorities to understand their priorities, before undertaking a nationwide assessment of infrastructure need.

The NIC's recommendations and assessments should ensure improved connectivity does not come at the expense of smaller towns. Major projects have a tendency to focus on links between larger cities. However the risk of excluding smaller towns, often lying at the perimeter of major conurbations, can lead to their decline. The Cities Outlook 2015 report from the Centre for Cities found a significant number of smaller cities in close proximity to major urban centres have 'low wage, high welfare'

[4] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/507791/High_Speed_North.pdf

economies[5]. Improved transport connectivity is one of the measures the Government can take to improve the prospects of these 'outlying' areas.

Devolution

The NIC's most complex challenge is to determine, with a set amount of resources, the value of different infrastructure projects, in different sectors. Decisions about whether to spend a set amount of funding on a new power plant or a new rail line presents a unique challenge. The NIC must ensure that the potential multiplier effect of new investment is fully calculated e.g. boosts to housing capacity, effect on productivity, impact on wages and demand.

The emerging range and number of combined authorities, as part of the Government's drive for the devolution of powers, has seen a particular focus on infrastructure. Whilst the decision making process for construction projects at a central government level is clear, the relationship between Whitehall and combined authorities is less clear.

The NIC should make clear its position in relation to devolved bodies and whether its proposals should be delivered at a combined authority or national level. Reports also suggest that a number of combined authorities and devolved bodies have begun establishing their own infrastructure pipelines[6]. As these continue to develop, with the possibility of more localised infrastructure commissions, it is crucial for the NIC to closely cooperate with their development.

Financing

In light of Britain's vote to leave the European Union, and the subsequent downgrading of the UK's credit rating, the construction industry needs reassurance that streams of funding will continue to flow from Europe and beyond. Although it is not within the NIC's remit to secure funding, a clear list of viable infrastructure projects, with a clear business case will help boost investor confidence. The NIC should not simply back the simplest option, with bold, innovative but viable projects likely to energise investors.

The BSA recommends using the HM Treasury 'better business case framework' to help support a vision and decision making[7]. In some cases it might be the private sector partner bringing that business case to Government.

Technology

We were pleased to see a recognition of the importance of technology for improving infrastructure delivery in the NIC's recent reports, in particular the energy storage analysis[8], and urge the NIC to continue assessing the role of technology. Given the medium to long-term nature of the NIC's work, it is crucial that the rate of technological advance is factored in to cost analysis. A prohibitively expensive project today may not be so in 10 years. Additionally, it would be useful if, when proposing project ideas, for the NIC to include analysis of how the pace technology change could both bring down cost and affect timelines.

The NIC, as part of assessing longer-term needs, should examine how technology is changing people's interaction with infrastructure. Transport in particular is undergoing a technological revolution that will usher in the next generation of vehicles and digital railways[9]. The BSA encourages the NIC to include as part of a wider report into infrastructure, or even as a separate report, analysis of how

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[5] http://www.centreforcities.org/publication/cities-outlook-2016/
[6] http://sheffieldcityregion.org.uk/about/ltb/
[7] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/220541/green_book_complete.pdf
[8] https://www.gov.uk/government/publications/smart-power-a-national-infrastructure-commission-report
[9] http://www2.deloitte.com/uk/en/pages/business-and-professional-services/articles/transport-in-the-digital-age.html

technology has changed people's relationship with infrastructure, for example, since the introduction of smart meters and contactless payments on transport.

The analysis of technology and its relation to training and skills is another aspect for the NIC to consider. Technology developments such as BIM have fundamentally altered the construction process, giving the industry a more high-tech, innovative feel. Such changes can be used to enthuse potential engineers and the builders of the future to consider a career in construction, where they may have looked elsewhere. The BSA would like to see the NIC evaluate and propose ideas for how technological advances can be used to both improve the existing skills base and encourage future workers.

Summary of Recommendations

1. Explore options for establishing further bespoke infrastructure colleges, similar to the National College for High Speed Rail, in partnership with the construction industry.

2. Encourage project continuity between similar schemes, such as Crossrail and Crossrail 2, to ensure the skills base is retained.

3. Use procurement to meet broader skills objectives including increasing apprenticeships

4. Focus on the connectivity between smaller towns and major cities when examining any major transport project between urban centres.

5. Conveying to the industry the 'multiplier effect' of any investment when comparing infrastructure need across different sectors, making the case to industry and investors.

6. Incorporate analysis of the rate of technological advance into assessment of medium to long-term need.

7. Outline how technology is altering people's everyday interaction with infrastructure and how this might further change in the future.