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1. PURPOSE

- 1.1 The purpose of this requirement is to the National Infrastructure Commission with advice and analysis on:
- How the demand, nature and composition of the UK's freight system has changed over the past 100 years, the changing nature of types of freight being moved, and forecasts of future areas/sectors of growth and decline.
 - The current nature and composition of freight demand in the UK in 2018.
 - The key factors affecting the demand for freight and the likely demand on differing modes to deliver it.
 - Developing future scenarios of freight demand in the UK, including an understanding of geographical patterns and freight types and volumes.
 - How the changing nature of demand might affect freight movements into and around urban centres.

2. BACKGROUND TO THE CONTRACTING AUTHORITY

- 2.1 The National Infrastructure Commission is an independent body that enables long term strategic decision making to build effective and efficient infrastructure for the UK. The NIC was set up on 5 October 2015 and was formally established as an Executive Agency of HM Treasury on 24 January 2017. It will look at the UK's future needs for nationally significant infrastructure, help to maintain UK's competitiveness amongst the G20 nations and provide greater certainty for investors by taking a long-term approach to the major investment decisions facing the country.
- 2.2 The NIC will deliver a long-term plan and assessment of national infrastructure needs once a parliament, setting out what a government should do over the next five years to ensure delivery of the UK's long-term infrastructure requirements. It is overseen by a small board, appointed by the Chancellor, and able to commission research and call for evidence from public sector bodies and private sector experts.
- 2.3 The Commission will publish the first National Infrastructure Assessment in summer 2018, which will look ahead to requirements for the next 30 years. Alongside that, the Commission will carry out specific studies on pressing national infrastructure challenges to support the long-term competitiveness of the UK economy.



3. BACKGROUND TO REQUIREMENT/OVERVIEW OF REQUIREMENT

- 3.1 In November 2017, the Chancellor of the Exchequer asked the Commission to undertake a study on the future of freight. The Government asked the Commission to:
- *Assess the impact freight has currently on urban congestion and the UK's carbon emissions, and the future of inter-city freight movements;*
 - *Make recommendations on the future of freight infrastructure and regulation to reduce the effects of congestion on productivity, particularly in urban areas, and ensure wider freight connectivity supports economic growth;*
 - *Consider the potential of emerging technologies to improve the efficiency, productivity and environmental impact of UK freight;*
 - *Make recommendations on the future of our roads and highways to be able to adapt to new technology, e.g. platooning;*
 - *Consider the wider economic role of freight and how its economic benefits are factored into government infrastructure investments;*
 - *Take into account the increase in non-fossil fuels for road vehicles, and consider options for decarbonising the freight sector including the infrastructure and regulation needed for low emission haulage.*
- 3.2 Bidders should read the full [Terms of Reference](#) for the freight study in order to understand the broader context for this requirement and inform their response.
- 3.3 The Commission will publish **an interim report in Autumn 2018** that will outline the importance of freight, the future of freight demand, the impacts of congestion and carbon on freight and caused by freight, and the key barriers to improvement and change.
- 3.4 **The study will conclude with a final report in Spring 2019** that provides recommendations on the changes required to infrastructure, regulation, industry practices, and the government's investment priorities in the freight sector, in order to deliver an efficient and low-carbon freight system over the coming 30 years.

4. DEFINITIONS

4.1 Definitions:

Expression or Acronym	Definition
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Demand for freight	A measure of the demand for freight services, influenced by the demand for products split by categories of goods.
Freight	Freight is the transportation of commercial goods by road, rail or other modes.
Commission	Refers to the National Infrastructure Commission.

5. SCOPE OF REQUIREMENT

- 5.1 The scope of the requirement is to appoint a suitably experienced supplier to undertake a piece of research examining scenarios of future freight demand for the UK.
- 5.2 The Commission has, therefore, identified the need for research – impartial and evidence-based – to:
- Review how the demand, nature and the composition of the UK’s freight system has changed over the past 100 years, including an assessment of which elements have remained relatively constant during this time.
 - Provide an assessment of the nature and composition of present-day freight demand in the UK, including the elasticity of demand for different modes/types of freight, and price elasticity of demand measured against income.
 - A review of the changing types of freight being moved, and forecasts of future areas/sectors of growth and decline.
 - Prepare, analyse and assess future scenarios of freight demand in the UK out to 2050, including an understanding of geographical patterns alongside freight type and volume.
 - Analyse the interdependencies between urban and strategic freight movements, including a more focused city-scale review of how the changing nature of demand might affect freight movements into and around urban centres.

6. THE REQUIREMENT

- 6.1 The objectives of this piece of research are to provide the NIC with a clear, concise, evidence-based, research report which develops and assesses a number of plausible future scenarios of freight demand out to 2050 in the UK and in a small number of urban centres (to be defined in conjunction with the Commission). These should include consideration of:
- The types, volumes and geographical nature of demand and an understanding of the parts of the freight system that will experience the most stress;



- A historical review of how the UK's freight system has changed over the past 100 years;
- An assessment of the key factors/drivers of change which could affect the demand for freight in the future (including the possible implications for different modes to transport/deliver freight), and a literature review of the elasticity of demand for different modes/types of freight, and price elasticity of demand measured against income; and
- Analysis of the interdependencies between urban and strategic freight movements, including how changing demand might affect freight movements into and around urban centres and how this, in-turn, could affect cross-country freight movements.

6.2 The NIC therefore requires the provider to:

- Undertake a desktop review how the demand, nature and the composition of the UK's freight system (including modes and nodes utilised as well as the goods carried) has changed over the past 10 years, including an assessment of which elements have remained relatively constant during this time, the elasticity of demand for different modes/types of freight, and price elasticity of demand measured against income.
- A desktop review to produce a geographical and quantified assessment of the nature and composition of present-day freight demand in the UK, including key entry/exit points and key networks used.
- Use this historical understanding of the nature/speed of change and an understanding of future trends to develop an assessment of the key factors which could affect the demand for freight in the future (including the possible implications for different modes to transport/deliver freight). This should incorporate forecasts of future areas/sectors of growth/decline which have been published/used by the industry (e.g. Network Rail).
- Use the historical review and analysis of the drivers of change to creatively prepare, analyse and assess future scenarios of freight demand in the UK over the coming 30 years.
- The scenarios should be defined in conjunction with the Commission, possibly through a workshop process. The scenarios could, for example, include high, medium and low demand scenarios for volumes of freight, but also include analysis of the potential changing nature of demand. They should also include consideration of the types and volumes of freight travelling into, out of and within the UK; and the geographical nature of future demand for freight (e.g. entry/exit points, urban centres) and freight infrastructure (e.g. ports, rail freight terminals), including key routes for imports and exports into and out of the UK.
- The assessment of these scenarios should include a qualitative understanding of the parts of the freight system that will experience the most stress (factoring in key planned improvements) under the different future scenarios.



- Finally, this analysis should surface the interdependencies between urban and strategic freight movements, including a more focused city-scale review of how changing demand in key nodes (e.g. urban areas) might affect freight movements into and around urban centres. This should include an understanding of how the changing nature of demand could affect the type, timing, location and mode of freight movements.
- 6.3 We anticipate that the work of preparing scenarios for future freight demand is unlikely to consist of modelling. We anticipate that it will be a qualitative assessment, informed by a creative process and led by evidence on trends, but also consideration of future possibilities and uncertainties
- 6.4 Delivery of the above analysis will require the successful bidder to work with other consultancies undertaking research for the NIC on the demand drivers of freight, approaches to deliver a low/no carbon freight system, and detailed assessment on the value of different interventions to manage congestion. This will involve sharing of information and outcomes, in order to deliver a coherent package of research based on consistent assumptions and data.
- 6.5 We anticipate that this requirement can largely be achieved through secondary research methods, though we recognise that there may be cause for primary research in the form of workshops, interviews, roundtables or questionnaires. Suppliers should explicitly state their methodologies for each stage of the research process and demonstrate their experience and the suitability of this methodology to the task.
- 6.6 The Commission operates within a fiscal and economic remit. We expect that, where applicable, the analysis will indicate its implications for the fiscal and economic remit. Further details of the Commission's fiscal and economic remit can be found [here](#).
- 6.7 The supplier will be responsible for the development of a project plan and timetable, to meet the needs of the NIC (indicative timescales are set out in **Section 7** below).
- 6.8 At the start of the project we would expect to hold an inception/scoping meeting with the successful supplier, and for a short inception report to then be provided which clarifies the approach to be taken, along with a plan setting out key milestones and dates for regular updates, deliverables, risks and how these will be managed etc. – for agreement, before proceeding to carry out the analysis. During the evidence gathering and subsequent phases we expect the bidder to work closely with the Commission, including through regular meetings and other communication.
- 6.9 The Provider should also be prepared to present to technical and non-technical members of the Commission in a clear and concise fashion, to set out the key findings from their work, and the key assumptions, results, and caveats in a clear and concise fashion, to ensure these are fully understood.



- 6.10 Analysis should be derived from a broad range of credible sources, in particular drawing on information and analysis that is already in the public domain and analysis of locally held data and intelligence.

7. KEY MILESTONES

- 7.1 The Potential Provider should note the following project milestones that the Authority will measure the quality of delivery against:

Milestone	Description	Timeframe
1	Project inception meeting with NIC to include draft inception report to be provided, and agreed by NIC, clarifying the approach to be taken, along with a plan setting out key milestones and dates for deliverables, risks and how these will be managed, etc.	Within 2 weeks of contract award
2	Workshop/agreement with the NIC on demand scenarios for development	Within 1-month of contract award
3	Early outcomes and presentation of emerging findings presented to the NIC	End-August 2018
4	Draft report provided to the NIC for review	Late September 2018
5	Final peer reviewed report ready for publication	Mid/Late-October 2018

8. AUTHORITY'S RESPONSIBILITIES

- 8.1 The Commission will provide relevant evidence gathered through previous stages of its work. The NIC has already undertaken a significant amount of engagement with key stakeholders and where appropriate will be able to provide analysis, background information and views from those engagements to ensure that the contract runs smoothly.

9. REPORTING

- 9.1 The Department will work with the adviser to put in place a weekly and monthly emailed reporting regime in order to track progress, resource needs, and budget.

10. VOLUMES

- 10.1 N/A

11. CONTINUOUS IMPROVEMENT

- 11.1 The successful Provider will be expected to give due consideration to how the way in which the required Services are to be delivered throughout the Contract duration can be continually improved.
- 11.2 Changes to the way in which the Services are to be delivered must be brought to the Authority's attention and agreed prior to any changes being implemented.



12. SUSTAINABILITY

12.1 N/A

13. QUALITY

13.1 The Commission will be looking to use the research and analysis to inform its interim report and recommendations to Government in Autumn 2018 and final recommendations to Government in Spring 2019. Therefore it is critical that the project runs to time, with all assumptions and caveats clearly highlighted.

13.2 This is a substantial piece of work – the expectation is that all the outputs and related materials will be of a high quality and publishable standard.

13.3 The Commission will also seek views from its expert technical panel on the work and findings of this research. Any advice or comments will be fed back to the supplier via the NIC.

14. PRICE

14.1 Prices are to be submitted via the e-Sourcing Suite using Appendix E pricing table excluding VAT. This excel spreadsheet is to be submitted at question level on the Emptoris system.

14.2 The maximum budget for the full requirement is £75,000 (exc. VAT), and bids received over this budget will be deemed non-compliant.

14.3 Prices should be inclusive of all expenses and exclusive of VAT.

15. STAFF AND CUSTOMER SERVICE

15.1 The Authority requires the Potential Provider to provide a sufficient level of resource throughout the duration of the Contract in order to consistently deliver a quality service to all Parties.

15.2 Potential Provider's staff assigned to the Contract shall have the relevant qualifications and experience to deliver the Contract.

15.3 The Potential Provider shall ensure that staff understand the Authority's vision and objectives and will provide excellent customer service to the Authority throughout the duration of the Contract.

16. SERVICE LEVELS AND PERFORMANCE

16.1 The Authority will measure the quality of the Supplier's delivery with reference to the key milestones set out in paragraph 7.

16.2 As referenced in paragraph 13.3, the Commission will seek and feedback views of the NIC's Technical panel, which should be factored into the suppliers work. In addition, all suppliers must have a peer review process included as part of their proposal.



17. SECURITY REQUIREMENTS

17.1 The Supplier will acknowledge and protect all sensitive and confidential information its employees have access to during the contract period. The Supplier will also ensure their IT security systems are sufficiently robust to prevent confidential and sensitive material being made available in the public domain.

18. INTELLECTUAL PROPERTY RIGHTS (IPR)

18.1 All analysis (including any calculations and models) used to generate the outputs should be provided to the Commission for future use

19. PAYMENT

19.1 Payment can only be made following satisfactory delivery of pre-agreed certified products and deliverables.

19.2 Before payment can be considered, each invoice must include a detailed elemental breakdown of work completed and the associated costs.

20. ADDITIONAL INFORMATION

20.1 The supplier should demonstrate that they are open to working collaboratively with other suppliers, contracted by the Commission in order to deliver related pieces of analysis.

21. LOCATION

21.1 The location of the Services will be carried out at the offices of the supplier. However frequent meetings will need to take place with the National Infrastructure Commission at the supplier's offices, or at the Commission's offices at Eastcheap Court, 11 Philpot Lane, London, EC3M 8UD. It is likely that, while this work is being delivered, the Commission will move to new premises, also in central London. The supplier will be advised in good time of any change in the Commission's offices.

21.2 Suppliers should cover the costs of their travel through the original price rather than T&S claims.