

NIA Process and Methodology Consultation Response Annex: Summary of other views and comments received, and the Commission’s response

The National Infrastructure Commission is grateful for the wide range of responses it received to its consultation on the process and methodology for the National Infrastructure Assessment (NIA).

The Commission has published its consultation response document separately. This Annex sets out a range of views, comments and suggestions received, and the Commission’s response to them. This list does not seek to cover points that are explicitly covered in the main consultation response document, or that are not directly relevant to the NIA methodology and process (e.g. matters that are for the government, or that relate to the substance and recommendations of the NIA).

Many of the issues raised by respondents are within the scope of the NIA or potentially useful in informing it, as set out in the table below. For the avoidance of doubt, the Commission, in stating that an issue is within scope of the NIA’s work, is not implying that it agrees or disagrees with the substance of the issue or any views expressed by the respondent in relation to it. Nor does it necessarily mean the issue will be prioritised and/or reflected in the NIA’s work and recommendations.

Respondent Comments/Views	Commission Response
What issues do you think are particularly important to consider as the Commission works to its objective (set by government)?	
Infrastructure needs should be looked at in the round with full consideration of wider socio-economic objectives. The Commission should take account of UK PLC as a whole, and should identify integrated solutions.	The Commission’s objectives are set by the government. They are to (i) support sustainable economic growth across all regions of the UK; (ii) improve competitiveness and (iii) improve quality of life.
The Commission should consider future UK industries against existing established sectors.	The Commission agrees that this is a relevant consideration.
The Commission must make clear how recommendations will be reflected in government decisions.	The government has committed to lay Commission reports – including the NIA – before Parliament as soon after the publication as practicable.
The Commission must not undermine economic regulators’ independence.	
It is not in the Commission’s remit to decide if and how its recommendations are to be delivered. It is a matter for the government (and where appropriate regulators, local government, and other key players) to respond to the Commission’s recommendations. The government has committed to issue a formal response to all the Commission’s recommendations.	

	<p>Recommendations accepted by the government will become government policy. The Commission will publish an annual report on the government's progress in delivering accepted recommendations, and will flag where progress is not being made or delays are occurring so that the government can be held to account.</p>
<p>Long-term stability and certainty – e.g. in terms of continuity of investment and complementary policy and regulatory frameworks – are key.</p>	<p>The Commission considers these to be relevant considerations.</p>
<p>The Commission should be conscious of the role of stable and complementary policy frameworks in infrastructure investment.</p>	
<p>Affordability is a key consideration and should be an NIA objective.</p>	<p>The government sets the Commission's objectives. The government will set a fiscal remit for the Commission, to ensure its recommendations take affordability into account. This fiscal remit will inform the Commission's prioritisation. The Commission is required to include a transparent assessment of the impact on costs to users of infrastructure that would arise from implementing its recommendations.</p>
<p>The Commission should embrace technological uncertainty.</p>	<p>The Commission is conscious this is an area of great uncertainty. The Commission is working to understand the potential impact of technology on infrastructure supply and demand. As part of this it will examine the available evidence of how technology can change people's interaction with infrastructure services.</p>
<p>The Commission should put in place a core strategy for government and understand and assess implications for national infrastructure of existing regulations and budgets.</p>	<p>This is not within the Commission's remit set by the government, except in cases or on issues where it interacts with the Commission's assessment of long-term infrastructure need and options for meeting this need as efficiently as possible. In these instances, such issues may be in the scope of the NIA.</p>
<p>The Commission should be responsible for validating 30-year sectoral and regional strategies and ensure that these are coordinated and act as a critical friend to UK PLC.</p>	
<p>In addition to the NIA, the Commission should also undertake periodic, detailed quantitative assessments of national infrastructure assets.</p>	<p>This is unlikely to be feasible for inclusion the first NIA. The Commission will include this proposal in its considerations for future NIAs or specific studies.</p>
<p>The Commission should be responsible for major infrastructure decisions ensuring:</p> <ul style="list-style-type: none"> • Future optionality isn't sacrificed for short-term cost saving 	<p>The Commission considers these issues to be relevant considerations.</p>

<ul style="list-style-type: none"> • Objective analysis of benefits and costs • Unbeneficial interdependencies don't take place 	
<p>The Commission needs to consider trends across the world not just UK economy.</p>	<p>The Commission will consider international trends and comparators where relevant to its objectives, and welcomes submissions as part of its call for evidence.</p>
<p>The Commission may need a process to commission other bodies to provide analysis.</p>	<p>The Commission will continue to seek views and evidence from a wide range of stakeholders through its NIA engagement plan.</p> <p>The Commission is also putting in place arrangements with key government departments and associated bodies to ensure it has appropriate access to analytical resource. It is also able to commission its own analysis from third parties where necessary.</p>
<p>It is important there is clarity on the respective roles of Network Rail, the NIC, HMG departments and devolved funders.</p>	<p>The Commission's remit for the NIA is to set out its assessment of long-term infrastructure need and provide recommendations to the government on how best to meet this need.</p> <p>Issues of governance and accountability are within the NIA scope.</p>
<p>The Commission needs to provide clarity on how it will interpret its quality of life objective, particularly as this is more subjective to measure than economic growth and competitiveness.</p>	<p>Given the complex and multi-faceted nature of its high-level objectives, it will be extremely difficult to directly measure the Commission's impact and progress against each of them. However, the Commission will take robust evidence into account and, as part of its planned work, will look to measure the performance of the UK's infrastructure. Progress against these performance measures will provide a proxy for progress against the objectives.</p>
<p>The NIA should have a meaningful and robust method of assessing the impact of infrastructure upon quality of life.</p>	
<p>Quality of life should include visitor experience for foreign tourists.</p>	<p>The Commission will provide further information on how it intends to measure the performance of UK infrastructure and how this relates to its objectives, including quality of life, in due course.</p> <p>The Commission agrees that infrastructure use for leisure purposes is a relevant consideration for its quality of life objective.</p>
<p>The Commission should sponsor studies to consider how the adverse effects of the economic cycle can best be alleviated.</p>	<p>This is unlikely to be feasible for inclusion the first NIA. The Commission will include this proposal in its considerations for future NIAs or specific studies.</p>

Are there any principles that should inform the way that the Commission produces the NIA that are missing?	
The assumptions and constraints used by the Commission in its work should be transparent and, where relevant, signposted to allow for challenge.	The Commission agrees that there is a benefit in transparency over methodology. As such, as part of its methodological principles, the Commission is committed to being “open and transparent, engaging a wide range of stakeholders” throughout the NIA process. The Commission proposes to set out further details on assumptions and methodological constraints as its work progresses.
The Commission should take a customer-centric approach to the NIA, where the customer refers to the end user of infrastructure services.	The Commission agrees that the customer perspective is relevant. Social research will be conducted as part of the methodology and a wide range of stakeholders will be engaged to develop an evidence base, including customers. However, the Commission believes that other perspectives are relevant too: for example issues such as pollution and congestion cannot simply be viewed from a customer perspective.
The Commission’s commitment to openness and transparency needs to be balanced with the need to respect confidentiality where appropriate.	As set out in its Charter, the Commission is committed to engaging with the public, policy-makers, infrastructure experts and relevant bodies openly and transparently, drawing on a broad range of expertise and helping build consensus. It will, in carrying out its work, respect confidentiality where this is appropriate (for example if it is party to commercially sensitive information in relation to infrastructure projects).
The NIA should be based on market principles, with well-functioning markets used as the primary delivery mechanism for infrastructure projects.	The Commission considers well-functioning markets to be a relevant factor in efficiently meeting infrastructure needs, and will seek to gather evidence on relevant market issues or barriers in its NIA work.
An important part of challenging established thinking will be recognising that some interests stand to lose from significant changes to infrastructure provision.	The Commission agrees that this is a relevant consideration.
The Commission should also be inclusive, considering in particular the impact of its recommendations on rural communities and vulnerable people.	The Commission will consider these issues where they are relevant to the objectives it has been set.
The Commission’s approach needs to be flexible in the face of changes, for example due to recession, terrorism and climate change.	The Commission agrees that this is a relevant consideration.
In order to fully meet its objectives, the Commission will need to understand a range	As part of its NIA work, the Commission will be seeking evidence on barriers to efficient

of issues which at present may be deterring infrastructure investment, e.g. deal flow and the planning process.	financing of infrastructure projects. This work will inform the NIA.
Do you agree that the NIA should cover these sectors in the way which they are each described? Are there particular aspects of infrastructure provision in these sectors which you think the NIA should focus on?	
General points	
Modelling should take into account areas that are not covered by the Commission, e.g. housing growth	The Commission intends to consider the interactions between infrastructure and housing, in line with the remit set by the government. The Commission will seek to take account of relevant areas in its modelling, including the potential impact of housing growth on infrastructure demand.
The Commission should clarify where food production, as distinct from agriculture, fits into the NIA.	Food production is not within the Commission's remit set by the government. To the extent that food production, and agriculture, drive demand for economic infrastructure (i.e. infrastructure within the Commission's remit), they will be within the scope of the NIA's assessment of infrastructure demand that will inform its recommendations.
The NIA should consider Britain's data infrastructure as a distinct sector, and make recommendations for strengthening it – particularly to safeguard personal data.	Data issues are potentially relevant where they impact on, or are impacted by, economic infrastructure within the Commission's remit. However, they are not directly in the scope of the NIA in their own right. The Commission does not consider safeguarding of personal data to be within the scope of the NIA.
The Commission should approach the analysis of infrastructure systems using a three layer approach comprising technical, market and institutional analysis.	The Commission agrees that this framework is potentially useful. The Commission will consider this further in developing its methodological approach, recognising that it has received a number of proposals for analytical frameworks.
There needs to be a focus on local schemes (e.g. transport and distributed energy), as well as a national one.	The Commission views these issues as either being within the scope of the NIA or potentially useful in informing it, and these points will therefore be considered where appropriate (although this does not necessarily mean that the NIA will contain recommendations in these areas). For this first NIA, the Commission will focus on the most pressing issues of strategic national importance – placing particular emphasis on identifying long-term
The implications of new technology on improving existing networks for consumers should be considered.	
The issue of planning (including how planning and funding cycles could be better integrated) and land use needs to be considered as part of the NIA.	

	infrastructure needs, and highlighting the priority areas for action over the medium-term.
The Commission should consider the role that infrastructure corridors can play more widely.	The Commission agrees that the role of infrastructure corridors is a relevant consideration.
Transport	
The Commission needs to recognise the complex frameworks in place which determine transport infrastructure in the Devolved Administrations.	<p>The Commission's remit relates to areas of infrastructure that are the UK Government's responsibility, which will evolve in line with any future changes to devolution settlements.</p> <p>The Commission recognises the complexity of some interactions between UK Government responsibilities and those of the Devolved Administrations.</p>
There needs to be clarity and certainty of funding for national and sub-national/local transport bodies.	<p>The Commission views these issues as either being within the scope of the NIA or potentially useful in informing it, and these points will therefore be considered where appropriate (although this does not necessarily mean that the NIA will contain recommendations in these areas).</p> <p>For this first NIA, the Commission will focus on the most pressing issues of strategic national importance – placing particular emphasis on identifying long-term infrastructure needs, and highlighting the priority areas for action over the medium-term.</p>
The impact of transport infrastructure on air quality and climate change should be considered.	
The linkages between different modes of transport need to be analysed.	
Transport need should be considered according to user and passenger groups.	
The Commission should consider the value as well as the volume of transport patterns.	
The Commission needs to consider the potential of technology and digital to increase the capacity, reliability and flexibility of transport infrastructure.	
Congestion is a drag on competitiveness and productivity and leads to serious health conditions.	
The Commission should consider the role that demand management can play in transport.	
There needs to be more attention paid to the links between the East and the West of the country.	
The Commission needs to take into consideration major road networks and local strategic arrangements.	
It is important the Commission considers the potential for rail to stimulate and enable new growth as well as the need to accommodate the growth of existing demand.	
Changes in global freight patterns need to be accounted for.	

The Commission should take a joined-up approach when considering electric and hydrogen vehicles, recognising key interdependencies and risks.	
There should be a focus on public transport provision and the infrastructure requirements needed to support it.	
The Commission should consider the issue of stranded assets as electrification increases.	
The Commission's work should be joined up with planning exercises currently being conducted by the rail sector.	
The Commission needs to recognise the complexity of the rail system relative to other modes of transport.	
The relationship between transport infrastructure and land use changes needs to be better understood.	
The NIA should draw on previous work and studies, including the 2006 Eddington Transport Study.	
The Commission should utilise the best available analytical techniques.	The Commission agrees that its judgements need to be underpinned by a robust evidence base. There was broad endorsement for the methodology set out by the Commission as being logical, comprehensive and sensible. The Commission will seek to engage with a range of experts on available analytical techniques, while recognising that there is not always a consensus on which methods are "best".
The Commission should adopt a bottom-up approach to transport, starting at the sub-national level.	The Commission recognises the importance of place and will continue to look at its work through a 'place lens'. For this first NIA, the Commission will focus on the most pressing issues of strategic national importance, which will include some but not all transport issues that are relevant at a sub-national level.
The Commission should consider other ways in which space and social amenities could be used.	These issues are potentially relevant where they impact on, or are impacted by, economic infrastructure. However, they are not directly in the scope of the NIA in their own right.
Digital communications	
The consultation does not mention cyber security, which will be an important issue for the Commission to consider.	The Commission will be considering resilience as a cross-cutting issue. However, given the breadth and complexity of this issue, in the context of an already extremely broad NIA scope, the Commission is minded to maintain a tight scope for this work and avoid overlaps with bodies such as the Centre for the Protection of National Infrastructure (CPNI).

The Commission needs to move away from legacy infrastructure and instead consider the role that new and potentially disruptive technologies could have on the digital communications network.	The Commission views these issues as either being within the scope of the NIA or potentially useful in informing it, and these points will therefore be considered where appropriate (although this does not necessarily mean that the NIA will contain recommendations in these areas). For this first NIA, the Commission will focus on the most pressing issues of strategic national importance – placing particular emphasis on identifying long-term infrastructure needs, and highlighting the priority areas for action over the medium-term.
The Commission should consider how the connection times for new fibre connections impacts on international competitiveness.	
Digital infrastructure will be a major source of growth in the future and the UK should drive the opening up and standardisation of data infrastructure.	
The Commission should look at how to ensure homes and businesses (particularly small businesses) are connected to broadband.	
The Commission should consider how satellites could improve infrastructure connectivity.	
To better understand demand patterns, the Commission should look at using new data sources (mobile data, internet of things) alongside new data mining techniques.	The Commission agrees that these data sources are potentially useful. The Commission will consider this further in developing its methodological approach.
Digital infrastructure should be separated from communications [as a service] to allow for better clarity and focus on the user.	In developing the NIA, the Commission will consider the demand and supply of infrastructure services, such as journeys or communication, as well as infrastructure assets, such as roads or fibre optic cables.
Energy	
The Commission needs to consider the impact of distribution price controls on network companies.	The Commission views these issues as either being within the scope of the NIA or potentially useful in informing it, and these points will therefore be considered where appropriate (although this does not necessarily mean that the NIA will contain recommendations in these areas). For this first NIA, the Commission will focus on the most pressing issues of strategic national importance – placing particular emphasis on identifying long-term infrastructure needs, and highlighting the priority areas for action over the medium-term. In line with its remit as set by government, the Commission will not re-open closed price control settlements in regulated utilities.
The Commission should focus on improving the role green technology can play in energy provision.	
The Commission should consider how to improve energy interconnection.	
Buildings should be put at the centre of delivering energy policy goals.	
There needs to be a strategic approach to how best to utilise bioenergy.	
The UK needs to develop a range of promising supply and demand technology options in electricity.	
The NIA should assess potential opportunities in the existing energy sector, including heat recovery.	
The findings of the Independent Review of Tidal Lagoons (the Hendry Review) should be fed into the NIA.	

The Commission should leverage the role of the market to change the structure and operation of the energy sector.	
The Commission should consider what role offshore wind deployment can play.	
The Commission should consider demand management issues, recognising the distinction between ‘smart energy’ and ‘smart power’.	
The Commission should explore the question of who will pay for transmission networks with more embedded generation.	
The Commission should use a spatial and temporal perspective when assessing energy issues.	
The Commission should consider the benefits of extending the gas network to those without access.	
The Commission should look at the issue of connection in the Grid and how the system may be impacted by an increase in the uptake of electric vehicles and heat pumps.	
The Commission should consider decommissioning issues, as well as those presented by legacy infrastructure.	
The Commission should consider how to reduce energy infrastructure demand.	
It will be important to consider urban regeneration and its implications for energy use.	
The Commission should look at the cost of energy and its impact on fuel poverty.	In line with its remit, the Commission will produce a transparent assessment of the impact on costs to consumers and others that would arise from implementing its recommendations. Fuel poverty, however, is not within the scope of the Commission.
Water and wastewater	
The scale and investment challenge in sewage and waste water management merit it being considered as a distinct sector.	The Commission recognises the challenges that exist in these areas, and proposes to cover this sector as ‘Water and wastewater (drainage and sewerage)’, which will encompass these issues.
There is significant potential to capture and reuse water within naturalistic systems.	The Commission views these issues as either being within the scope of the NIA or potentially useful in informing it, and these points will therefore be considered where appropriate (although this does not necessarily mean that the NIA will contain recommendations in these areas).
The NIA should provide a clear strategic direction on the potential role of water transfers.	
The Commission needs to recognise the complex ownership and accountability of the	

wastewater sector, sustainable urban drainage, highways drainage and land drains.	For this first NIA, the Commission will focus on the most pressing issues of strategic national importance – placing particular emphasis on identifying long-term infrastructure needs, and highlighting the priority areas for action over the medium-term.
The NIA should build on the work of Ofwat’s Resilience Task and Finish Group.	
The Commission needs to be mindful that the non-household market will be opening up to competition in April 2017 and to household around 2020.	
The Commission should consider whether large-scale projects may be better suited to a process outside of the price review mechanism.	
The NIA needs to connect the links between micro-level proposals such as sustainable urban drainage and water saving measures.	
The Commission should examine the need for a new large water supply scheme in the South East.	
The Commission should consider the opportunities to reform funding mechanisms for wastewater systems in order to encourage investment.	
Lack of forward planning and linkages to local planning requirements is a shortcoming of current waste water arrangements.	
The Commission should consider the need for National Planning Statements.	
Storm drainage schemes should be considered as a priority.	
Flood defences	
The NIA should not duplicate the work of DEFRA and the Environment Agency.	The NIA will not seek to duplicate work unnecessarily. As an independent body, the Commission will seek to build an evidence base of long-term need using a wide range of sources, including from government.
Resilience should be built into any natural water flood protection measures.	The Commission views these issues as either being within the scope of the NIA or potentially useful in informing it, and these points will therefore be considered where appropriate (although this does not necessarily mean that the NIA will contain recommendations in these areas).
The NIA’s assessment of flood defences should be considered in the context of the local and national growth agenda.	
The role of coastal erosion habitats and defences should be considered, with due regard paid to Shoreline Management Plans.	
The Commission should consider an approach which protects areas from the significant economic impacts of flooding, looking at whether existing funding is aligned with this objective.	
The Commission should consider how the devolution of flooding funds could allow Local	
	For this first NIA, the Commission will focus on the most pressing issues of strategic national importance – placing particular emphasis on identifying long-term infrastructure needs, and highlighting the priority areas for action over the medium-term.

Authorities to access other sources of funding.	
The Commission should consider the evidence base for flooding and its effective forecasting.	
The Commission should consider the land incentives in place for owners and farmers.	
The Commission should look at the planning system, particularly with regards to sewer connection.	
The Commission should look at adaptable modular designs, particularly those which are designed to prevent overflow.	
Waste	
The Commission should look at options to enhance waste-to-energy schemes.	<p>The Commission views these issues as either being within the scope of the NIA or potentially useful in informing it, and these points will therefore be considered where appropriate (although this does not necessarily mean that the NIA will contain recommendations in these areas).</p> <p>For this first NIA, the Commission will focus on the most pressing issues of strategic national importance – placing particular emphasis on identifying long-term infrastructure needs, and highlighting the priority areas for action over the medium-term.</p>
Processing and treatment on a larger than local scale would increase efficiency benefits.	
There needs to be a focus on major waste management infrastructure.	
The Commission should consider how to utilise disposal services in rural areas such as anaerobic digestion, biomass boilers and recycling.	
The processing of waste should be reimaged as ‘resource management’ and extended to include commercial and industrial waste, with the objective of maximising value rather than just avoiding landfill.	
The NIA should capture the interdependencies of the waste sector with retail, production, manufacturing and construction.	
Do you agree that the NIA should focus on these cross-cutting issues?	
Funding and financing	
New procurement models should be considered to develop supply chains.	The Commission recognises that delivery issues, including procurement models, could produce a barrier to delivering against its recommendations. However, the Infrastructure and Projects Authority is delivering a programme of work in these areas, which the Commission will not seek to duplicate.
The Commission should consider how increased levels of infrastructure investment would reduce defined benefit pension fund deficits and help insurance companies invest in a world of low yields - lowering risk in the financial sector as a whole.	This is not within the Commission’s remit, as set by the government.
The Commission should make reference to the importance of funding certainty.	The Commission views these issues as either being within the scope of the NIA or potentially useful in informing it, and these points will therefore be considered where
The Commission should give further consideration to affordability issues.	

There needs to be a framework that allows scale of third party investment.	<p>appropriate (although this does not necessarily mean that the NIA will contain recommendations in these areas).</p> <p>For this first NIA, the Commission will focus on the most pressing issues of strategic national importance – placing particular emphasis on identifying long-term infrastructure needs, and highlighting the priority areas for action over the medium-term.</p>
The Commission needs to think about funding and financing for distributed infrastructure (like energy efficiency).	
The Commission should review current financing arrangements for low-carbon technologies.	
Concern about reduced local authority funding on roads not on the strategic network which creates ‘last mile’ issues.	
There needs to be a focus on local authorities, with greater certainty of funding.	
The Commission should develop common principles in relation to charging for access to infrastructure.	
The Commission should encourage sponsors and planners to present projects and proposed financing arrangements in standard formats as far as possible.	
The Commission should consider how innovative mechanisms (including taxation) could help scheme promoters in cities such as London capture uplift in land values.	
There is a need to consider the role of public and private investment, and general taxation, in infrastructure and affordability.	
The Commission should particularly consider economic payback of infrastructure investment (and the links to investment appraisal, decision-making, and how infrastructure is funded).	
The Commission should look at the OECD’s 2015 paper on infrastructure financing instruments and incentives.	
The Commission should look at success of Thames Tideway Model.	
The Commission should consider the possibility of a Brownfield Remediation Fund in the north.	

	modelling, including the potential impact of housing growth on infrastructure demand.
Perceptions of poor returns and high risk in the digital and waste sectors mean that the Commission should consider a procurement model similar to schools and hospitals.	As part of its NIA work, the Commission will be seeking evidence on barriers to efficient financing of infrastructure projects. This work will inform the NIA. However, the Commission will not seek to duplicate work on the delivery of infrastructure projects being undertaken by the Infrastructure and Projects Authority.
There is a case for financing climate-related infrastructure investment through long-term public borrowing.	Fiscal policy is not within the Commission's remit, as set by the government. The government will set a binding fiscal remit to ensure that the Commission's recommendations would be affordable.
It should be the case that local areas have to choose whether or not to accommodate their pro-rata share of national growth. Those that grant planning permission for greater than their share get assisted with HMG funding.	This is not within the Commission's remit, as set by the government.
The Commission should consider greater scope for councils to fund infrastructure – e.g. through a share of business rates or other local taxes.	The Commission will consider funding arrangements for infrastructure where they are relevant to its analysis on how best to meet identified infrastructure need.
Need to consider the role of devolution of funding as there is scope to go much further.	
Without government support, local authorities risk being exposed to levels of economic risk that they cannot reasonably be expected to manage absent the devolution of significant new funding streams.	
Sustainability and the environment	
Soil is a major missing area of infrastructure.	The Commission recognises the importance of factoring in sustainability and the environment as it undertakes the NIA. The Commission is grateful for the views and suggestions received, and will consider these sustainability and environmental issues where infrastructure impacts on them and where they can impact on or contribute to infrastructure services. As noted in the consultation response document, the Commission intends to interpret the term 'sustainable' in its objectives (“... sustainable economic growth...”) as meaning environmentally, economically and fiscally sustainable. The Commission will also remain mindful of the need to ensure its recommendations are compatible with legally binding
This workstream should consider smaller scale waste water infrastructure, particularly its impact on polluting water.	
This workstream should explicitly link in the Climate Change Act.	
This workstream should consider agricultural land within assessment.	
This workstream should take into account that water scarcity will affect natural environment and habitats.	
This workstream should take into account that there are strong economic cases for environmental projects such as improving water bodies and wetlands creation.	

	environmental targets (such as the Climate Change Act 2008).
The Commission needs to define 'low carbon' as part of its methodology.	The Commission will interpret 'low carbon' within the context of legally binding environmental targets (such as the Climate Change Act 2008).
This is an opportunity to improve sustainability performance of industry through setting expectations and targets.	The Commission will consider these sustainability and environmental issues where infrastructure impacts on them and where they can impact on or contribute to infrastructure services. Wider questions concerning the sustainability performance of industry is not within the Commission's remit, as set by the government.
The Commission should address the principle of cost-recovery – disagree with environmental levies being paid through bills.	The funding of infrastructure is a cross-cutting issue within the NIA. The Commission agrees that the funding of environmental investments is a potentially relevant consideration.
Performance measures	
The Commission might consider the effects of infrastructure investment and delivery on the measures of deprivation to look at appropriate ways of accounting for the value and quality of service provided.	The NIA will try to bring together the evidence available and identify the most appropriate way of systematically measuring the performance of infrastructure assets and services, including to provide a proxy for measuring the Commission's progress against its objectives. The Commission is grateful for the views and suggestions received in relation to the performance measures cross-cutting issue. It will consider them as its work on the NIA progresses, and where relevant and appropriate take account of them in its approach.
Clarity is needed on when in project's lifecycle it will begin to be measured.	
Performance must be measured by service delivered.	
One measure is to consider what would happen if an asset no longer existed or operated as intended.	
Performance metrics and data for natural capital are extremely lacking.	
Performance measures should be outcome rather than output based.	
Governance and decision-making	
The Commission should ensure infrastructure schemes have clear governance structures and there is appropriate allocation of risk over the lifecycle of the project.	The Commission is grateful for the views and suggestions received in relation to the governance and decision-making cross-cutting issue. The NIA will consider the current institutional framework for infrastructure investment and planning in both government and in regulated utilities, and will assess if these are fit for purpose to meet infrastructure needs for the future.
More emphasis needed on rights, needs, opinions of local people, roles and responsibilities of local planning authorities.	
Give clarity over respective responsibilities of government, local authorities and LEAs.	
There needs to be co-ordination across different departments and levels of	

government; devoid of policy reversal and delays over key decisions; supported by regulatory stability (particularly in regulation heavy sectors such as energy).	<p>The Commission will ensure that its NIA work includes an ongoing engagement process that is able to capture the expertise and opinions of people from across industry, business, central and local government, regulators, academia, civil society and the wider public. This is necessary if the NIA is to be built upon a robust evidence base and if its recommendations are to have credibility and gain traction.</p> <p>In keeping with its independence, the Commission will ultimately reach its own conclusions from the evidence base it has built, and make recommendations as appropriate (these could include proposed improvements to governance and decision-making mechanisms such as better coordination). That may involve making recommendations to government, but also to regulators, local decision-making bodies, including local and combined authorities, in which case it will be for those bodies to decide how to respond.</p>
The Commission should look at promoting mechanisms/processes for joined up infrastructure and land use planning.	
The Commission needs to look at links between the built environment and flood risk.	
The Commission should consider interdependencies between economic regulation and planning policy.	
There should be greater emphasis on the land use local planning system, and an integrated approach to land use planning.	
The Commission should assess the town planning system to give more certainty to those impacted by major projects.	
The Commission should recommend if National Policy Statements are absent, incomplete or out of date.	
The Commission should take a view on whether NSIPs are fit for purpose.	
The Commission needs to clarify potential interaction between decisions and the planning system, NPSs and National Planning Policy Framework.	
Network planning – entails multi-faceted process, needs better exchange of information.	
Support for the Commission playing an arbitration role for new settlements and urban extensions (i.e. local authority border disputes).	This is not within the Commission’s remit, as set by the government.
Cost and delivery	
The Commission should consider the long-term cost impacts of projects	<p>The Commission recognises that some of the issues raised in relation to costs and delivery (such as skills, innovation and material supply) could produce a barrier to delivering against its recommendations. However, the Infrastructure and Projects Authority is delivering a programme of work in these areas, which the Commission will not seek to duplicate.</p> <p>The Commission understands that infrastructure assets will last longer than the timeframe for the first NIA (out to 2050) and will take this, including whole-life costs and benefits, into account in considering options for this NIA.</p>
Costs must be properly assessed, as they relate to the competitiveness of the projects under construction and the risk of cost overrun.	
There is a trade-off between short-term and long-term cost, and between cost and quality.	
The Commission should consider the issue of maintenance of assets once constructed and barriers to delivery including skills.	
The Commission should emphasise the importance of whole-life costs and the context of long-term system evolution.	

<p>The Commission will need to clearly communicate the trade-off between costs and service levels, and explore the affordability of infrastructure services.</p>	<p>The Commission is required to include a transparent assessment of the impacts on costs to business, consumers, government, public bodies and other end users of infrastructure that would arise from implementing its recommendations.</p>
<p>Resilience</p>	
<p>Resilience to climate change should be more prominent in the NIA work and potential adaptation measures highlighted.</p>	<p>The Commission will be considering resilience as a cross-cutting issue.</p>
<p>The Commission should make the most of digital centres to aid cyber security.</p>	<p>Given the breadth and complexity of this issue, in the context of an already extremely broad NIA scope, the Commission is though minded to maintain a tight scope for this work and avoid overlaps with bodies such as the Centre for the Protection of National Infrastructure (CPNI). After completion of the first NIA, there may be a case for carrying out a more in-depth analysis of resilience as a theme, working with key stakeholders, to inform a future approach ahead of the next NIA.</p> <p>The Commission is grateful for the views and suggestions received in relation to resilience. It will consider them as its work on the NIA progresses, and where relevant and appropriate take account of them in its approach.</p> <p>The Commission’s work on the climate change and environment driver will inform the scenarios developed as part of the NIA, and its wider thinking on the resilience implications in different sectors.</p>
<p>The Commission should look at better collaboration between different providers to improve resilience.</p>	
<p>ICT should be at the centre of resilience, e.g. Software reliability</p>	
<p>Threat of terrorist attack if roll out of autonomous vehicles.</p>	
<p>It is important the Commission considers what an appropriate level of resilience might be.</p>	
<p>The NIA should distinguish between robustness (the ability of infrastructure to withstand a shock) and resilience (the ability of infrastructure to recover after a shock).</p>	<p>The Commission agrees that both these factors are relevant considerations.</p>
<p>Geography and local growth</p>	
<p>The Commission should consider the role and potential of devolution, and the impact on national economic strategy. It should consider a national plan and local devolution strategy.</p>	<p>The Commission will seek to understand how economic and physical geography relates to infrastructure provision and development, and in turn how infrastructure can shape geography. It will look at the role of economic devolution in infrastructure development and consider how its recommendations affect the entire country and local areas.</p>
<p>A move to further devolution will bring risks and opportunities which need to be explored by the NIA.</p>	
<p>Economic devolution of infrastructure funding and development is particularly critical in the case of rail.</p>	

Benefits of infrastructure investment are higher in poorer regions.	The Commission is grateful to respondents for submitting these views, and will consider their merits as its work on the NIA progresses.
Infrastructure outside of the south east lacks the speed and efficiency of south east networks, which themselves are overloaded.	
Appraisal	
The Commission should encourage an improvement in the appraisal of transport projects and include wider benefits, specifically changes to land values.	<p>The Commission is grateful for the views and suggestions received in relation to the evaluation and appraisal methodology cross-cutting issue. It will consider them as its work on the NIA progresses, and where relevant and appropriate take account of them in its approach.</p> <p>The Commission notes that cost-benefit analysis can be a powerful way of bringing together multiple dimensions of differing projects in a broadly comparable way. However the Commission recognises the limits of standard cost-benefit analysis approaches, and will also be exploring improvements that can be made to current methodologies.</p>
The Commission needs to consider alternative discount rates to the Green Book appraisal of projects over the long-term which has a bias for future generations.	
Rather than CBA, the Commission should use Thames water's 'multi criteria performance assessments'.	
Standard discount rates may not be appropriate for long-term horizon.	
Fundamental reform is required. Suggest the SEA approach for any NIA.	
Forecasting future transport demand is notoriously difficult, the process needs to be updated to improve accuracy and process for re-examining if circumstances change.	
CBA not good at capturing socio-economic gains.	
There are deficiencies in DfT demand modelling and appraisal methodology: a) too little investment in urban rail, because the benefits from development are not recognised; b) too much investment in inter-urban roads, in the vain hope of reducing congestion, too little investment in digital technologies that would allow the more effective use of existing infrastructure.	
The Commission should look at Transport for Scotland appraisal methodology.	
The Commission should consider both the impacts on GVA and welfare improvements from infrastructure.	
The Commission needs to make sure that appraisal fully incorporates potential changes in land use.	
Appraisal of agricultural land in the Green Book assumes homogenous valuation by wheat. Valuation should take into account the importance of the farming industry and food security. Further uncaptured benefits from management of environment and ecosystems by farmers.	

The Commission’s appraisal methodology should take into account ecosystem services.	
The Commission’s appraisal methodology needs to capture regeneration.	
The Commission could consider the importance, and the UK's current effectiveness, at conducting post-hoc analysis of infrastructure projects after they are completed.	
The Commission should study the impact of optimism bias.	
Are there any other cross-cutting issues that you think are particularly important?	
<p>A number of additional cross-cutting issues were proposed by respondents, including:</p> <ul style="list-style-type: none"> • Health and social benefits. • Market design and consumer behaviour. • Consumer experience and expectation. • Nature. • Social mobility. • Business models and market mechanisms. • Data protection privacy and cyber security. • Temporal and spatial mapping of sectors. • Investment in R&D. The Commission should propose initiatives to help UK adoption of ‘Internet of Things’. Opportunities in the ICT sector, which has potentially large influence across infrastructure. • International interconnectivity – mainly transport but also energy and communications. • Street works – ensuring works are coordinated and executed in an efficient and effective way. • Business rates of network infrastructure. • Coordination between local and national priorities. • Intergenerational funding (who pays and when). • Utility connections – measures needed to facilitate competition in the provision of utility connections. • Acceptability and equality. • Supply chain issues, including minerals and materials supply. • Risk and safety planning and emergency response. • Construction industry business model. • Procurement process and objectives. • Liveability / quality of life / wellbeing. • Demand management and hotspots. 	<p>The Commission welcomes these suggestions for further cross-cutting issues, many of which could in principle be included in the NIA scope (although a number would appear to fairly clearly fall outside of the Commission’s remit).</p> <p>However, the scope of the NIA is already extremely broad and the Commission is content that it has identified the highest priority areas on which to focus within this scope. The Commission does not therefore intend to introduce any further cross-cutting issues, although it will seek to include relevant issues where practical within existing priorities. The prioritisation of cross-cutting issues will be reviewed and refreshed for each future NIA.</p>

<ul style="list-style-type: none"> • A National policy on demand management. • Distribution of costs and benefits across users. • UK competitiveness in a decarbonising world. • Historic infrastructure that should be considered for conservation. • Working habits. • Industrial strategy. 	
<p>Do you agree with this methodological approach to determine the needs and priorities?</p>	
<p>The Commission should be conscious of the ambitious scale of the NIA, particularly for a newly established body.</p>	<p>The Commission recognises the extremely broad scope of the NIA.</p>
<p>The Commission should provide clarity on how the first NIA will inform future ones.</p>	<p>For this first NIA, the Commission will focus on the most pressing issues of strategic national importance – placing particular emphasis on identifying long-term infrastructure needs, and highlighting the priority areas for action over the medium-term. In identifying priority areas, the Commission will seek to maximise its impact by focusing on key systemic gaps in the evidence base and decision-making functions. This will include identifying and working to address significant cross-sectoral issues and interdependencies, as well as the most pressing issues in each individual sector.</p> <p>Other issues, although important and pressing to some interest groups, may be addressed more closely in subsequent NIAs and specific studies.</p> <p>The Commission will carry out a lessons learnt review following the publication of the NIA. This will help inform the next NIA, alongside consultation the Commission will carry out on its approach to it.</p>
<p>The Commission should look to achieve collaboration across the private sector, signing parties up to a common objective.</p>	<p>The Commission agrees that part of its role is to build consensus and the process and methodology of the NIA is intended to facilitate that. This extends beyond the private sector.</p>
<p>An improved methodology would be to first produce a systematic vision, then to assess different infrastructure needs and finally identify, evaluate and select options.</p>	<p>The Commission agrees that this framework is potentially useful. The Vision and Priorities document will set out the Commission’s proposed long-term vision, the priority areas for action and policy options for addressing the infrastructure needs identified. The</p>

	Commission will consult on this before forming its recommendations.
There needs to be a trade-off between the Commission's objectives and societal concerns.	The Commission's objectives have been set by the government and the Commission is required to carry out its work in accordance with its remit.
The Commission should develop a framework to assess how infrastructure priorities may vary across society.	In the context of an already extremely broad NIA scope, the Commission is not minded to cover this point. In some cases, relevant work is already being carried out into these areas by other organisations, with whom the Commission will consult. In other areas it is not directly pertinent to its work. The Commission will include this proposal in its considerations for future NIAs or specific studies.
The NIA process should seek and facilitate public participation to avoid it being a top-down process.	The Commission agrees that there is a need to engage with the public and will do so as part of an open and transparent programme of engagement. The Commission's engagement tools include regional roundtables and sectoral seminars, as well as social research using a mix of deliberative techniques and potentially survey data.
The assumptions used for each of the four drivers should be clearly outlined, and open to input from a wide range of stakeholders.	The driver papers will clearly outline the assumptions that have been used and how they inform the Commission's understanding of long-term infrastructure needs. The technology driver and the population and demography driver papers will be published later this year. The Commission will welcome input on the papers following publication.
The Commission needs to have a clear audit trail of the decision-making processes taken throughout the NIA.	The Commission intends to be open and transparent throughout the NIA process, including the use of formal consultation, as well as a programme of stakeholder engagement. The reasoning and evidence behind its recommendations will be set out in full in the Commission's reports and any supporting documentation. In addition, the Commission will publish minutes of its meetings and correspondence with ministers at relevant points.
The Commission should clarify whether it will provide a view on the distributional impacts of	The Commission will consider these issues where they are relevant to the objectives it has been set.

infrastructure investment, i.e. intergenerational impact, effect on inequality.	
The timing of the NIA should align with the investment cycles and business plan periods.	The Commission recognises the importance of investment cycles and business plan periods. However, since these vary across infrastructure sectors it is not possible to completely align the publication timetable for the NIA with all such cycles.
The Commission should outline and consult on an appraisal framework.	The NIA will assess current appraisal methods for large infrastructure projects and test whether wider benefits, such as system effects, are effectively captured. The NIA will therefore examine existing frameworks and consider if they are suitable for large and nationally significant infrastructure projects. The case for alternative models will also be considered.
The models used by the Commission should first be tested on businesses and users of infrastructure services.	For the first NIA, the Commission expects predominantly to use existing models, which have already been tested. The Commission recognises that all models have limitations and will seek to understand the constraints on any models which it uses. By using a range of models, it should be possible to limit the impact of any constraints. However, modelling will only form part of the evidence-base for the NIA.
National transport model appraisal methodologies needs to be evaluated and improved.	
The NIA should include an assessment of the National Information Infrastructure work produced by the Cabinet Office.	The Commission does not consider the Cabinet Office work on “National Information Infrastructure” (strategically important data held by the government) to be within the scope of the NIA.
The Commission should make use of the latest data mining and analytical techniques.	The Commission agrees that these data sources and methods are potentially useful. The Commission will consider this further in developing its methodological approach.
The Commission should use an approach which allows alternative budgets and strategic decisions to be modelled.	The Commission is required to operate within a fiscal remit that will be set by the government.
The Commission could use backcasting and uncertainty modelling as part of its approach.	In creating scenarios out to 2050, the Commission agrees that these shouldn’t be based purely on projecting forward current trends. The Commission will draw together a broad range of quantitative and qualitative evidence to understand what the future might look like. The Commission recognises that it is not appropriate to base decisions on future need purely on projections of future demand. Options to improve efficiency or manage demand will be considered in the NIA

	<p>alongside options for new build. Nor, however, is it sufficient to assume that demand can be managed to some ‘preferred’ level. Instead, an evidence-based assessment needs to be made of the scope, costs and benefits of demand management options and the potential for behavioural change.</p>
<p>The Commission should analyse continental infrastructure models.</p>	<p>The Commission agrees that international best practice is a relevant consideration. The Commission recently ran a roundtable with the OECD, which brought together a number of international stakeholders to discuss best practice in infrastructure planning. A report of this event will be published shortly.</p>
<p>Cost-benefit analysis techniques used by the Commission should recognise the importance of social and natural capital, as well as the need to understand how benefits vary across different regions.</p>	<p>The Commission recognises the limits of standard cost-benefit analysis approaches, and will also be exploring improvements that can be made to current methodologies. The Commission is interested in ways of capturing wider costs and benefits that are credible, tractable and transparent.</p>
<p>The Commission needs to be conscious of the risk that normative and political judgments will influence its analysis.</p>	<p>The Commission will make independent recommendations, underpinned by a robust evidence base.</p>
<p>The NIA should include spatial mapping, overlaying maps with a range of data to explore key relationships and interdependencies.</p>	<p>The Commission recognises the importance of place and will continue to look at its work through a ‘place lens’. The Commission will consider further what role mapping could usefully play in that.</p>
<p>The Commission needs to recognise the role of infrastructure assets as the source of long-term private investments and, as such, consider what role private financing should play in the future.</p>	<p>As part of its NIA work, the Commission will be seeking evidence on barriers to efficient financing of infrastructure projects. This work will inform the NIA.</p>
<p>There should be a greater emphasis on the development of adaptive strategies for decision-making.</p>	<p>The Commission recognises the importance of having recommendations that are specific, clear and tangible but also flexible enough to be appropriate to a range of possible futures. In its recommendations, the Commission will aim to set out the pathway to meeting identified long-term needs, particularly where lead times are long and critical paths complex. That may include explaining what early decisions will be needed and by when, and what steps need to be taken now to facilitate future decisions, such as the gathering of critical data or evidence or investments in new technologies or approaches.</p>

<p>It will be difficult for the Commission to plan for future investment needs or to develop business cases without making assumptions about future housing development.</p>	<p>The Commission intends to consider the interactions between infrastructure and housing, in line with the remit set by the government. The Commission will seek to take account of relevant areas in its modelling, including the potential impact of housing growth on infrastructure demand.</p>
<p>The NIA should include the outcomes of inaction.</p>	<p>The Commission agrees that the consequences of inaction are a relevant consideration.</p>
<p>Do you believe the Commission has identified the most important infrastructure drivers? Are there further areas the Commission should seek to examine within each of these drivers?</p>	
<p>Land use and resource implications of drivers must be considered.</p>	<p>The Commission will take land use and resource implications into account where these are relevant to and have a relationship with economic infrastructure.</p>
<p>Driver – Economic Growth:</p> <ul style="list-style-type: none"> • Recommendations should be made with consideration of historical imbalances. 	<p>The Commission is studying the relationship of the 4 identified key drivers of infrastructure supply and demand with long-term infrastructure needs, including feedback loops. The scope of this work is to inform the Commission’s development of scenarios, which will help it to understand how the UK’s infrastructure requirements could change in response to different assumptions about the future.</p> <p>The Commission is grateful for these suggestions, many of which are relevant to its scope. It will be seeking further, focused stakeholder engagement and evidence-gathering on each driver. This will begin with publication of discussion papers on the technology driver and the population and demography driver later this year.</p> <p>Some of the issues are out of scope of the Commission’s drivers work, as they do not directly relate to driving infrastructure demand and supply, or are likely to be extremely difficult to forecast. Nonetheless, they may be within the scope of the NIA as a whole or potentially useful in informing it, and these points will therefore be considered where appropriate (although this does not necessarily mean that the NIA will contain recommendations in these areas).</p>
<p>Driver – Population and Demography:</p> <ul style="list-style-type: none"> • Should be an understanding people and vehicle flows through population and demographic analysis. • Believe that people of working age move because of jobs rather than attraction of quality infrastructure. • Note the impact of increase in high-rise flats and multi-occupancy dwellings on recycling rates in the population driver. • Would expand to include generational dimension. • Income distributions should be considered. • No mention of how technology will impact where people work and live. 	
<p>Driver – Technology:</p> <ul style="list-style-type: none"> • Should include predictive analysis, modelling and data mining techniques. • Cover digitisation, smart maintenance, and electric or hydrogen and driverless vehicles. • Useful to include analysis of how technology could both bring down cost and affect timelines. • Include analysis of how technology has changed people’s relationship with infrastructure, e.g. smart meters and contactless payment. • Would like the Commission to evaluate and propose ideas for how technological 	

<p>advances can be used to both improve the skills base and encourage future workers.</p> <ul style="list-style-type: none"> • Consideration should be given to emerging technologies and disruptive trends. • Need to engage fully with business in this sector. • Should consider how update of technology should be reported. • Potential of technology to enable infrastructure should also be an important consideration of the Commission. 	<p>For this first NIA, the Commission will focus on the most pressing issues of strategic national importance – placing particular emphasis on identifying long-term infrastructure needs, and highlighting the priority areas for action over the medium-term.</p>
<p>Driver – Climate Change:</p> <ul style="list-style-type: none"> • Need to implement initiatives to improve climate projections, future flood impact and resilience and major flood event. • Should explore the benefits of reducing demand through improved building fabric. • Stronger targets with supporting policies should be introduced. • Suggest it should be widened to incorporate the National Planning Policy Framework and to protect and enhance the natural, built and historic environment. • The long-term resilience of technology must be balanced with the need for affordability and pace of delivery. • Extreme events likely to become the new normal. 	<p>The Commission is grateful for suggestions received on additional drivers. Many of these are covered as part of the wider methodology, for example resilience and governance are being treated as cross-cutting issues; improving competitiveness is one of the Commission’s objectives; and market design will be a relevant consideration in analysing each of the sectors.</p> <p>The Commission does not intend to treat health, education, natural resources or international considerations as drivers in their own right. They may be relevant considerations within the existing drivers, e.g. education levels may be a relevant attribute of how population changes impact on the demand for infrastructure services. The Commission would welcome robust quantified evidence on such effects.</p> <p>The Commission agrees that changes in individual behaviour, such as changes in</p>
<p>Additional drivers proposed:</p> <ul style="list-style-type: none"> • Population health and education/skills at both a national and regional level. • Attitudes towards technologies and governance. • Attitudes towards the governance of decisions. • Extent of market failures and inertia policy vs ‘economic optimisation’. • International competitiveness. • Risk and resilience. • Protection of public health. • Changes in value systems. • Availability of natural resources/resource constraints. • International considerations. • Transport for Greater Manchester 2040 report used six drivers – economy and employment, technology and innovation, society and community, urban development, environment and resources, policy and governance. 	

	attitudes or value systems, can be important drivers of future outcomes. However, these are extremely difficult to forecast and the Commission does not therefore propose to develop scenarios based explicitly on behavioural change. Instead, the Commission will consider the extent to which its scenario-based modelling is sensitive to key parameters that might change through behavioural change. In considering its recommendations, the Commission will draw upon this to ensure that it takes into account the social context, the possibilities for behavioural change, and the consequences of this.
The NIA will aim to set out a portfolio of investments that best meets the demands of the UK in the future. Do you have a view on the most appropriate methodology to determine that portfolio?	
The portfolio should be comprised of projects which will deliver the greatest economic growth and jobs, with this approach being reflected in the modelling used in the NIA.	The Commission has three objectives which, in addition to supporting sustainable economic growth across all regions of the UK, include improving competitiveness and quality of life.
The Commission could look to give relevant government departments and Devolved Administrations early sight of relevant recommendations.	Details of the working relationship between the National Infrastructure Commission and the government will be set out formally in a mutually agreed Framework Document in due course. With regard to the Devolved Administrations, the Commission's remit only relates to areas of infrastructure that are the UK Government's responsibility, which will evolve in line with any future changes to devolution settlements.
There needs to be a fiscal target which makes building this priority infrastructure feasible, with detailed costings for each recommendation.	As outlined in the Charter for the National Infrastructure Commission, the government will provide the Commission with clear guidance by issuing a public remit letter, which will include a binding fiscal remit to ensure that the NIC's recommendations would be affordable.
The final portfolio should include smaller local projects as well as large projects.	NIA recommendations related to specific projects will focus on projects of strategic national importance, rather than those of purely local importance. This will be based on the Commission's assessment of need and view on priorities for meeting this need.
The Commission should avoid being too specific in its recommendations, e.g. being site-specific.	
The portfolio of recommendations could be measured against an initial list of high-level objectives.	The Commission will make conclusions based on rigorous evidence, setting out the reasons for these conclusions and the likely benefits

	and costs. This will include an assessment of how the portfolio delivers against the Commission's objectives.
In developing the portfolio, the Commission will need to consider demand side and local delivery issues.	The Commission views these issues as either being within the scope of the NIA or potentially useful in informing it, and these points will therefore be considered where appropriate (although this does not necessarily mean that the NIA will contain recommendations in these areas). For this first NIA, the Commission will focus on the most pressing issues of strategic national importance – placing particular emphasis on identifying long-term infrastructure needs, and highlighting the priority areas for action over the medium-term.
The Commission needs to assess how recommendations may affect competition within a sector.	
The Commission could look at ensuring different recommendations complement one another in terms of value.	
Recommendations on energy need to be customer-centric.	
The portfolio should be driven by a clear vision of the desirable attributes that the infrastructure of the future should have.	
The recommendations should be clearly prioritised, specific and tangible, setting out timescales of key decision points and cutting across sectors where justified.	
The portfolio should represent a flexible approach, accounting for potentially innovative new technologies (either by looking to develop relevant technologies or by being technology-neutral) and the need to establish a low-carbon pathway.	The Commission recognises the importance of having recommendations that are specific, clear and tangible but also flexible enough to be appropriate to a range of possible futures. In its recommendations, the Commission will aim to set out the pathway to meeting identified long-term needs, particularly where lead times are long and critical paths complex. That may include explaining what early decisions will be needed and by when, and what steps need to be taken now to facilitate future decisions, such as the gathering of critical data or evidence or investments in new technologies or approaches.
How best do you believe the Commission can engage with different parts of society to help build its evidence base and test its conclusions?	
The Commission needs to create forums for groups with differing views to build understanding	The Commission has set out a wide-ranging engagement plan to build its evidence base, including roundtables with local representatives across the country; large scale workshops with a range of stakeholders; smaller scale roundtables and seminars with experts on particular thematic or high-profile issues; and deliberative social research. The Commission agrees that stakeholder engagement needs to be an input into its evidence base and not just a way of testing conclusions that have already been developed.
Exploring sectors with diverse groups could reveal more interdependencies.	
The Commission should get sectors to talk to each other, not just have Commission holding bilateral conversations.	
The Commission should ensure that expert roundtables and panels should not strengthen existing silos and the UK's bias for investing in the South East.	
Geographical assessment stage will need local dialogue with place-based discussions	

It is important the Commission engages with all parts of society.	Although some key issues are cross-sectoral, many stakeholders are still focused on specific sectors, and a balance of cross-sector and sectorally-based events should encourage wide participation.
The Commission should engage with city deals and growth deals.	
Engagement should be throughout and as an input rather than just to test conclusions that have already been developed.	
Expert panels and workshops should include membership from across all involved sectors.	<p>Details of the Commission's expert advisory Analytical and Technical panels are available on the Commission's website.</p> <p>Panels include experts with a wide range of specialisms. Members of the panels were invited as individuals, rather than as representatives of particular sectors but include those with a background in industry.</p> <p>Panels have not been lined up with drivers but rather by broad disciplines.</p>
Panel of experts should include environment, sustainability and climate change experts as well.	
There should be a forum of interested parties and experts to discuss, focus and advise on the interdependencies.	
Expert panels appear to have been lined up with drivers but there is an absent group for climate change and environment.	
Expert panels should have representatives from industry as well as engineers and economists, etc.	
The Commission should welcome contributions from outside the UK.	
Use of small expert groups is potentially detrimental to rigour and objectivity.	<p>The Commission has set out a wide-ranging engagement plan to build its evidence base, including roundtables with local representatives across the country; large scale workshops with a range of stakeholders; smaller scale roundtables and seminars with experts on particular thematic or high-profile issues; and deliberative social research.</p> <p>Expert groups are one part of this plan. In establishing its expert advisory groups, the Commission has sought to include experts from a range of fields and perspectives.</p>
Creating workshops which provide the Commission with independent advice including pension funds and experts from other international markets.	<p>The Commission has set out a wide-ranging engagement plan to build its evidence base.</p> <p>As part of its work on the funding and financing cross-cutting issue, it intends to capture the investor perspective, amongst others.</p>
The Commission should ensure published details of potential schemes take specific care to avoid unnecessary or premature planning blight.	The Commission will engage with local representatives across the country (including through roundtables), to ensure that local priorities and issues are factored into its considerations and recommendations.

	The Commission recognises that planning blight is a potentially relevant consideration.
Decision-making frameworks should be transparent and simple so they can be communicated and engaged with.	The Commission recognises the benefits of transparent and simple frameworks to support the widest possible stakeholder engagement. At the same time, many of the issues raised in the NIA are inherently complex. The Commission will seek to provide simple explanations where possible.
It is vital to engage across political spectrum. Building public confidence is vital.	In producing the NIA, the Commission commits to engaging with the public, policy-makers, infrastructure experts and relevant bodies openly and transparently, drawing on a broad range of expertise and helping build consensus.
The Commission should be clear on what it is engaging on and what the outcome will be.	The Commission has now set out its approach to the NIA process and methodology, including its engagement plan.
The Commission should liaise with government departments and trade associations with sectoral responsibilities to ascertain key players in each area.	As it undertakes the NIA, the Commission will continue to seek input from across industry, business, central and local government, regulators, academia, civil society and the wider public.
The Commission should engage with HMT early to understand financial situation.	As set out in the Commission's Charter, "the government will provide the NIC with clear guidance by issuing a public remit letter. This will include a binding fiscal remit to ensure that the NIC's recommendations would be affordable."
The Commission should ensure regular contact with professionals who understand the viewpoints of long-term institutional investors on risk and return.	The Commission will ensure that the investor perspective is sought from relevant experts, as part of its work on the funding and financing cross-cutting issue.
The Commission should make information accessible, relevant and understandable.	The Commission will remain open and accessible across all of its work, and in compliance with relevant legislation and its commitment to openness and transparency. In addition to making documents available via its website, the Commission will accommodate all reasonable requests for accessible versions of its work. Stakeholders, including relevant bodies and trade press will receive Commission publications via email.
Commission documents should be available across a variety of media not just Gov.uk, and should be clear on how it will discharge duties under Equalities Act 2010.	
In addition to publishing the consultation documents, the Commission should email to relevant bodies and contact the trade press.	Visitors to the Commission website can set up email alerts or RSS feeds. The Commission is also on Twitter (@NatInfraCom).
Appropriate and independent governance and stakeholder panels should be implemented to	The Commission is committed to engaging with the public, policy-makers, infrastructure experts and relevant bodies openly and

ensure legitimacy and maintain trust in infrastructure decision-making.	transparently, drawing on a broad range of expertise and helping build consensus. The Commission has set up two expert advisory panels, details of which are on the Commission's website.
Cross-sectoral working would be best encouraged through the collaboration of industry trade bodies.	As it undertakes the NIA, the Commission will continue to seek input from across industry, amongst other stakeholder groups. For example, the Commission's engagement plan includes workshops with a wide range of stakeholders, focused on specific sectors or sub-sectors. It will provide more information on these workshops, along with other elements of its engagement plan, in due course.
Strongly encourage collaborative working between industry groups which are generally quite disparate. Believe critical mass could be formed through ICE, ACE, RICS and the Infrastructure Forum.	
The Commission should establish an 'Energy Taskforce'.	
The Commission needs to ensure close collaboration with all sectors of industry.	
The Commission should make available a simple model so that people can investigate for themselves.	This is an interesting idea, but the Commission does not believe it is deliverable in the time available for the first NIA. Given the underlying complexity of the issues, building a simple model that was not misleading would be extremely challenging. The Commission will include this proposal in its considerations for future NIAs or specific studies.
The Commission should undertake that all methods and assumptions which underpin technical analysis and the entire evidence base will be subject to public scrutiny before advice is finalised.	The Commission is committed to operating in an open and transparent way. The Commission's methodological approach to the NIA is set out in the main consultation response document, available on the Commission's web site. The Commission proposes to set out further details of its methodology as the NIA progresses.
The Commission could learn from 'macro deliberation' in France	The Commission has now set out the key components of its engagement plan for the NIA in the consultation response document. However, it is grateful to respondents for suggestions provided, and will consider those that could support its work as it makes progress against the plan it has set out.
The Commission should consider participatory appraisal techniques, e.g. 'planning for real', and the French National Commission for public debate	
The method of gathering evidence and testing proposals through the land use planning	

<p>system is a model that could be adapted for this purpose.</p>	
<p>The Commission should consider use of polling expert opinions through techniques such as the Delphi method for capturing a wider range of factors than can be embraced by formal models.</p>	
<p>The Commission needs to be staffed and supported appropriately, potentially including private sector secondees from sectors and/or firms with relevant expertise.</p>	<p>The Commission agrees on the importance of drawing on talent and experience from a range of relevant backgrounds.</p> <p>The secretariat has drawn staff drawn from other parts of the civil service, made appointments direct from external open competition, and brought in secondees (including from local authorities, regulators and consultancy organisations).</p>