Funding for Innovation: Opening Local Authority Transport Data Application Form

Department for Transport

Please ensure that you have read and understood the criteria and advice in the "Funding for Innovation. Opening Local Authority Transport Data" guidance note **Bidders should at least ensure that they address all the guidance highlighted in bold in this guidance**

A separate application form should be completed for each scheme

Applicant Information

Local authority name(s)*:
Southend-on-Sea Borough Council (Lead Authority for bid)
Basildon Council
Brentwood Borough Council
Castle Point Borough Council
Essex County Council
Rochford District Council
Thurrock Council

**If the bid is a joint proposal, please enter the names of all participating local authorities and specify the lead authority*

Bid Manager Name and position: Nick Corrigan – Director of Digital Futures

Name and position of officer with day to day responsibility for delivering the proposed scheme.

Contact telephone number: 01702 534 612
Email address: nickcorrigan@southend.gov uk

Postal address:
Southend-on-Sea Borough Council
Civic Centre
Victoria Avenue
Southend-on-Sea
Essex
SS2 6ER

When authorities submit a bid for funding to the Department for Transport, as part of the Government's commitment to greater openness in the public sector under the Freedom of Information Act 2000 and the Environmental Information Regulations 2004, they must also publish a version excluding any commercially sensitive information on their own website within two working days of submitting the final bid to the Department for Transport. The Department for Transport reserves the right to deem the business case as non-compliant if this is not adhered to

Please specify the web link where this bid will be published:
https://www.southend.gov uk/transportdata

SECTION A - Scheme description and funding profile

A1. Scheme name: ASELA Open Transport Data Initiative

A2. Headline description:

Please enter a brief description of the proposed scheme (in no more than 250 words)

The Association of South Essex Local Authorities (ASELA) is a strategic alliance between 7 local authorities forming the South Essex growth corridor based on a growing recognition of the opportunity and need for greater cross-boundary working across South Essex

This region of huge potential is currently constrained by Transport Infrastructure. According to national planning targets, the South Essex Corridor is expected to see the development of at least 90,000 new homes and creation of 70,000 by 2036, while the expansion of the airport offers significant international opportunities With limited space within the Borough for road widening there is a clear need for new approaches Improved real-time management and open data could enable existing capacity to be optimised and a range of traffic and mode management strategies to be employed.

The ASELA Open Transport Data Initiative seeks to join-up UTC, UTMC and Parking data across the South Essex Corridor and link to key collaborators such as the University of Essex Centre for Artificial Intelligence and local SMEs to maximise the opportunities from Transport Data At the Western end of ASLEA, the project will focus on links with Highways England's real-time monitoring of the M25, through Thurrock the project will link UTMC for key freight and export corridors, while in Southend and Rochford UTC and UTMC data essential for the seamless movement of people and goods supporting leisure, tourism, international travel and the emerging digital and creative cluster will be opened The potential to integrate, utilise and open data from multiple parking systems will also be investigated, building on work to date

A3. Geographical area:

Please provide a short description of area covered by the bid (in no more than 50 words)

The ASELA is a strategic alliance between 7 local authorities These authorities are· Basildon Borough Council, Brentwood Borough Council, Castle Point Borough Council, Essex County Council, Rochford District Council, Southend-on-Sea Borough Council and Thurrock Borough Council. Collectively they form the South Essex Growth Corridor

OS Grid Reference TQ 87938 86352
Postcode SS2 6ER

Please append a map showing the location (and route) of the proposed scheme, existing transport infrastructure and other points of particular interest to the bid e g development sites, areas of existing employment, constraints etc.

Please see Appendix G

A5. Equality Analysis

Has any Equality Analysis been undertaken in line with the Equality Duty? ☒ Yes ☐ No
Please see Appendix L

SECTION B – The Business Case

B1. The Scheme – Summary/History (Maximum 200 words)

Please outline what the scheme is trying to achieve – indicate what data you expect to collect and your approach, what applications you will deliver from the connected data etc

This should also provide a clear statement on data privacy and security

Led by Southend-on-Sea Borough Council (SBC), SBC is redesigning its corporate approach to focus on key 2050 outcomes, including becoming Connected and SMART (Appendix A).

SBC is leading SMART and Connected initiatives in the region, investing heavily in supporting infrastructure including comprehensive city fibre network, borough-wide IoT canopy and high resilience datacentre architecture as a key building block for the borough's future digital requirements This funding acts as a catalyst for key SMART City transportation ambitions, delivering regional benefits and digital innovation

Data collection and availability:
• UTC & UTMC data focusing on cross-boundary sharing, collaboration and intelligence benefits
• Highways England data, focusing on predictive analytics and management from up-stream incidents, improving network resilience
• Integration of parking data piloted in Southend, enhancing multi-modal travel information and access to the town for visitors, shoppers, businesses and residents

Applications delivered:
- Integration of data alongside transport models to enhance insight and improve network performance
- Air quality monitoring integration, improving public health
- Data publication encouraging third party travel applications
- Joining-up transport data with public safety / CCTV data
- Artificial Intelligence and Predictive Analytics application via the University of Essex

Data privacy and security will be at the heart of the project with strict protocols.

B2. The Strategic Case (Maximum 500 words)

This section should set out the rationale and strategic context for making the investment This section is the most important and bidders should ensure that they address the guidance (particularly the text **in bold).**

Supporting evidence may be provided in annexes – if clearly referenced in the strategic case. This may be used to assist in judging the strength of your strategic case arguments but is unlikely to be reviewed in detail or assessed in its own right So you should not rely on material included only in annexes being assessed

Some of the questions you may wish to consider are:

How can opening data improve your transport service and what is the strategic context and value?

According to national planning targets, the South Essex Corridor is expected to see the development of at least 90,000 new homes and creation of 70,000 by 2036, including international opportunities from airport expansion, but is constrained by Transport infrastructure

With limited space within the Borough for road widening, new approaches are required which addresses:

- Interactions between incidents on the strategic network (M25) and their effects on access to the corridor
- Network resilience issues, in particular to support travel times for the essential freight and export industry located around the regions ports
- Maximising network capacity to accommodate new development within considerable geographic constraints
- Greater real-time management, enabling modal shift while maintaining and enhancing access
- Implementing air quality strategies (Appendix C) within key corridors and AQMAs

Parking is a further access and economic growth barrier, 56% of Southend businesses perceive parking as a constraint The Parking & Access strategy (Appendix B) identifies a supply and demand mismatch, highlighting requirements for more effective capacity management

What options have been considered and why are the dataset(s) you have prioritised offer the best solution and value for money?

1. **Do-nothing**, capacity is seen to further erode as new demand comes online
2. **New physical infrastructure**, many key routes within the corridor are geographically constrained meaning impacts are limited.
3. **Restrictions on access**, not strategically desirable given the economic reliance on tourism and freight access.

Digital solutions will maximise existing capacity, promote modal shift and cost-effectively enable improved network management. SBC's SMART City Strategy, UTMC upgrade business case and Air Quality Strategy referring to Digital and Open Data as critical enablers

UTMC has been prioritised, holding critical network performance data extending through the corridor and interacting with essential M25 linked journeys. Unification of parking data through a SMART City approach was identified in Southend's Parking Strategy, with the investigation of data availability, cleansing and standardisation from a multitude of systems

What are the expected benefits / outcomes of your strategy?

- Enhance real-time information, insight and network management, improving travel times for key freight and export sectors
- Enhance journey planning, promoting access for tourists, shoppers and visitors
- Active network management, maximising existing capacity, access to services, housing and key economic zones
- 'Real-time' monitoring and predictive analytics, actively managing the network to improve air quality

- Linking data across multiple modes, providing travellers with high quality information to promote optimal mode choices

What is the predicted impact of opening the data and how will you measure the benefits?

Benefits will be assessed based on the initial controllable APIs of the project (primary KPIs), including the number of partner systems enabled for integration and the number of organisations engaging with the data Monitoring beyond initial phases focuses on enabled outcomes project, such as working with third party developers to evaluate how their use of data has delivered against the expected outcomes

How will you transform the data into intelligence and how will this help your value for money assessment?

Project partnerships with academic and private sectors will transform data into intelligence Professor Sena's team of experts in predictive analytics and artificial intelligence from the University of Essex Business School, will enable data sharing for the public good, enabling innovation and high value applications to be developed (Appendix K)
Private sector organisations through Tech Southend, the Digital Working Group and key collaborators such as Cisco and Siemens, will link data with other sources to develop meaningful outputs and support the Corridor's emerging digital cluster

B3. The Financial Case – Project Costs

Before preparing a proposal for submission, bid promoters should ensure they understand the financial implications of opening the data (including any implications for future resource spend and ongoing costs relating to maintaining and updating the data), and the need to secure and underwrite any necessary funding outside the Department for Transport's maximum contribution

Please complete the following tables. **Figures should be entered in £000s** (i e £10,000 = 10).

Table A: Funding profile (Nominal terms)

Bidders should provide a cost breakdown, and justification, of the different stages of opening data that the Department will provide funding for.

Phase	Activity	Cost
Mobilisation	Project mobilisation	£5,200
Discovery	Data Exploration & User Requirements Gathering	£17,900
Implementation	Initial Implementation - Schema build, Data Processing, Security & Privacy Requirements	£20,000
Implementation	Develop Data Integration (cross border)	£28,000
Implementation	Test data feeds & connect to platform	£14,000
Implementation	Development of Siemens Stratos feeds	£66,243
Delivery	Dashboard availability, Documentation & Training	£8,000
Evaluation	Develop Evaluation Strategy & Reporting	£4,900
	Total	**£164,243**

£000s	2018-19	2019-20	Total
DfT Funding Sought	*£5,200*	*£92,800*	*£98,000*
LA Contribution	*£0*	*£66,243*	*£66,243*
Other Third Party Funding	*£0*	*£0*	*£0*

Notes
(1) Department for Transport funding must not go beyond 2019-20 financial year
(2) A local contribution of 5% (local authority and/or third party) of the project costs is required

B4. The Financial Case - Local Contribution / Third Party Funding

Please provide information on the following points (where applicable)

a) The non-DfT contribution may include funding from organisations other than the scheme promoter Please provide details of all non-DfT funding contributions to the scheme costs This should include evidence to show how any third party contributions are being secured, the level of commitment and when they will become available

In order to initiate this project, Southend-on-Sea Borough Council will be making an investment of £66,243 through the implementation of the Siemens Stratos solution during the 2019/20 financial year, this includes.

- Implementing the Journey Time Management module, enabling data links to third party systems
- Direct connections from Stratos to SWARCO Red, Green, Blue (RGB) signs within the region.

b) Where the contribution is from external sources, please provide a letter confirming the body's commitment to contribute to the cost of the scheme. The Department for Transport is unlikely to fund any scheme where significant financial contributions from other sources have not been secured or appear to be at risk

Have you appended a letter(s) to support this case? ☐ Yes ☒ No ☐ N/A

B5. The Financial Case – Affordability (maximum 200 words)

This section should provide a narrative setting out how you will mitigate any financial risks associated with the scheme

Please provide evidence on the following points (where applicable):

SBC has extensive experience and learnings from a range of SMART City pilots covering public safety, air quality, energy and adult and social care From this experience SBC has developed a robust approach to financial risk management and a deep understanding of the complexities of data and IT projects The project has been defined such that maximum value can be achieved The core functionality has been costed based on our experience with SMART City pilot projects and through extensive research with potential suppliers

a) What risk allowance has been applied to the project cost?

Based on our experience, a risk allowance, providing for contingencies of 15% has been applied to the project costs

b) How will cost overruns be dealt with?

Suppliers will be invited to tender for the core components of the project on a fixed fee basis A fixed fee approach has been used previously to provide maximum assurance of project success within a defined budget Our team have considerable experience specifying the deliverables for external contractors and managing these contracts to ensure project success

c) What are the main risks to project delivery timescales and what impact this will have on cost?

Access to local authority data is key, the early identification of this risk has enabled SBC time to investigate in further detail with ASLEA members, providing higher confidence in accessibility to enable minimal or no impact on the project's cost

B6. The Economic Case – Value for Money (maximum 200 words)

Bidders are requested to provide at least a qualitative description of the benefits that will be delivered from the data opened and how these could provide potential benefits going forward

This should also capture any examples which generate revenue from the data collected and an indication on the number of users that benefits

The project will combine catalogue, clean and standardise datasets from local authorities and private sectors datasets in human (through SBC website) and machine-readable (APIs) formats Data will be published consistently and using open standards to enable the access and exchange of data Delivering.

- Enhanced real-time monitoring and information, assisting insight and network management to improve travel times for key freight and export sectors and improve air quality
- Enhanced journey planning and parking availability information to promote access for tourists, shoppers and visitors enabling the region
- Active network management to maximise existing capacity, improving access to services, housing and key economic zones
- Linking data across multiple modes to provide travellers with high quality information to promote optimal mode choices
- Working with experts in predictive analytics and artificial intelligence University of Essex School of Computer Science and Engineering, the project will enable data sharing for the public good, enabling innovation and high value applications to be developed.
- Working with the private sector through Tech Southend, the Digital Working Group and key collaborators such as Cisco and Siemens, linking data with other sources to develop meaningful outputs and support the emerging digital cluster within the South Essex Corridor

B7. The Commercial Case (maximum 200 words)

This section should set out the procurement strategy that will be used to select a contractor and, importantly for this fund, set out the timescales involved in the procurement process to show that delivery can proceed quickly

What is the preferred procurement route for the scheme? For example, if it is proposed to use existing framework agreements or contracts, the contract must be appropriate in terms of scale and scope

As lead authority, Southend-on-Sea Borough council will seek to procure the services of consultant statisticians, data scientists and transportation subject matter experts as delivery partner.

The preferred approach will be through an existing framework agreement and the intention is to use the Bloom procurement service, a solution well known to the Council

This approach has been chosen for its flexibility, its rapidity and its ability to deliver a wide range of options as a neutral vendor The approach offers value transparency and compliance to aid our sourcing decisions

It is envisaged that the process of identifying and appointing a delivery partner could be concluded within 15 working days of the advert being placed.

*It is the promoting authority's responsibility to decide whether or not their scheme proposal is lawful; and the extent of any new legal powers that need to be sought. Scheme promoters should ensure that any project complies with the Public Contracts Regulations as well as European Union State Aid rules, and should be prepared to provide the Department for Transport with confirmation of this, if required.

An assurance that a strategy is in place that is legally compliant is likely to achieve the best value for money outcomes is required from your Section 151 Officer below

B8. Management Case - Delivery (maximum 200 words)

Deliverability is one of the essential criteria for this Competition and as such any bid should set out if any statutory procedure are needed before it can be delivered

- **Mobilisation (March to April)** Forming appropriate project governance through a project board comprising representatives from the key partner organisations Key delivery resource will also be procured during this phase
- **Discovery (April to June):** Building on the evidence to date and extending the analysis to the cross-authority systems. User-centric design approaches will be employed to define how data should be delivered to maximise its use and discoverability across a range of internal and external stakeholders An architecture will be designed This will include deliverable architecture for the project and align to the longer-term aspirations of ASELA in order to future proof the data delivered through this project Data standardisation and cleaning requirements will also be assessed e g DATEX II and relevant outputs for open data consumption
- **Implementation (June to September):** Building and testing of data connections and information dashboard whilst ensuring data security and privacy Responding to feedback from pilot users

- **Delivery (September):** Launch of data dashboard with training provision for users and the publication of open data feeds, make further amendments and achieve steady state
- **Evaluation (July to February 2020):** Recording baseline measurements and datapoints throughout the delivery project phase to measure the project impact

a) An outline project plan (typically in Gantt chart form) with milestones should be included as an annex, covering the period from submission of the bid to scheme completion The definition of the key milestones should be clear and explained. The critical path should be identifiable and any contingency periods, key dependencies (internal or external) should be explained

Has a project plan been appended to your bid? ☒ Yes ☐ No

Please see Appendix H

b) A statement of intent to deliver the scheme within this programme from a senior political representative and/or senior local authority official.

Please see Appendix J

B9. Management Case – Governance (maximum 300 words)

Please name who is responsible for delivering the scheme, the roles (Project Manager, SRO etc) and set out the responsibilities of those involved and how key decisions are/will be made An organogram may be useful here This may be attached as an Annex

Our project organogram is provided in Appendix D, the project comprises of

- **Sponsors** – comprising of senior management / councillor sponsorship at local authority level and also at ASELA level DfT are included due to their role as main project funder
- **Project Board** – Comprising of key project stakeholders who will support the project by providing oversight and direction to the project team The board will also have decision making responsibilities, covering areas such as project risks and challenges, resource issues, schedule delays and project spend
  The board will meet on a bi-monthly basis for the duration of the project and comprises of:
  - SBC Lead Officer on the ASLEA transport infrastructure workstream
  - SBC Project Manager
  - Highways England
  - University of Essex
  - Private Sector Suppliers (e g Siemens and Cisco)
- **Procurement, Contract and Project Management** – Day to day project management will be through SBC as the lead organisation for the project The procurement will entail developing specification requirements, assessing tender responses and the appointment of the delivery partner. SBC will be responsible for monitoring and managing the delivery partner's project delivery, reporting project progress to the project board and sponsors and project quality assurance
- **Academia Input** – Computer Science and Engineering experts from the University of Essex Business School will provide support around predictive analytics and artificial intelligence enabling data sharing for the public good, enabling innovation and high value applications to be developed.
- **Delivery Partner** – The project requirements will be delivered by a delivery partner to be selected through a procurement process organised by SBC

B10. Management Case - Risk Management

Risk management is an important control for all projects but this should be commensurate with cost A risk register covering the top 5 (maximum) specific risks to this scheme should be attached as an annex

Has a risk register been appended to your bid? ☒ Yes ☐ No

Please see Appendix E

SECTION C – Monitoring, Evaluation and Benefits Realisation

C1. Benefits Realisation (maximum 250 words)

The competition is seeking to build up the business case for the relevant dataset(s) opened and use cases Please provide details on the profile of benefits, and of baseline benefits and benefit ownership and explain how your will lead to the outputs/ outcomes This should be achieved by logic maps, text descriptions, etc

We also request that your bid clearly articulates how you are expecting to use the data collected and the expected benefits for both users and road op Please also outline how you could measure the expected benefits from the application of the harvested data.

Our Logic Map and Benefits Realisation document for the project are located in Appendix F.

Our work supports DfT's response to the North Highland report by opening up and sharing of high value data streams such as UTMC and UTC data, real time parking availability data, transport data with public safety / CCTV data and air quality monitoring data

The challenges encountered by ASLEA are common to local authorities across the country who are balancing continued economic growth with challenges around network constraints, parking availability and interactions with the strategic network Opening of data will allow Universities and the private sector to develop new ideas and strategies responding to these challenges. The outcomes and impact from our work will be of particular relevance for the other local authorities adjacent to the M25

Our project continues ASLEA's goal of collaborating across the 7 Councils, responding strategically to regionwide challenges along the South Essex growth corridor

Opening of data will result in superior real-time information, insight and active network management, with real time monitoring and predictive analytics, enabling improved provision of high-quality travel information to travellers using the network

Significant longer-term impacts can be achieved through this project, providing improved air quality for residents, modal shift, increased network and parking performance and resilience for this densely populated region, providing benefits to both local residents, tourists and freight operators

C2. Monitoring and Evaluation (maximum 150 words)

The Department expects bidders to set out a clear strategy and commitment to monitor and evaluate the impact of opening the data and share practical experience and knowledge.

Impact will be measured by the projects team throughout the project's duration.

For in-direct impact such as improved air quality and road network congestion, measurement will extend beyond the term of the project, enabling sufficient time for impact realisation. We will also look to normalise externalities that affect impact measurement.

Direct impact will be measured through measures such as: datasets made open, integrated datasets, the number of third-party organisations utilising open data and applications using artificial intelligence and predictive analytics.

In addition, we will endeavour to capture any unexpected quantitative and qualitive benefits.

An in-depth project completion report will be created, recording project activity, impact realised and lessons learnt. The report will be available for distribution to interested parties and stakeholders, with ASLEA open and willing to share their practical experience and knowledge of the project and the outcomes with other interested organisations.

SECTION D: Declarations

D1. Senior Responsible Owner Declaration

As Senior Responsible Owner for ASELA Open Transport Data Initiative I hereby submit this request for approval to DfT on behalf of Southend-on-Sea Borough Council and confirm that I have the necessary authority to do so.

Signature redacted

I confirm that Southend-on-Sea Borough Council will have all the necessary powers in place to ensure the planned timescales in the application can be realised

Name: NICK CORRIGAN	Signed: [redacted]
Position: DIRECTOR FOR DIGITAL FUTURES	

D2. Section 151 Officer Declaration

As Section 151 Officer for Southend-on-Sea Borough Council I declare that the scheme cost estimates quoted in this bid are accurate to the best of my knowledge and Southend-on-Sea Borough Council

- has allocated sufficient budget to deliver this scheme on the basis of its proposed funding contribution
- will allocate sufficient staff and other necessary resources to deliver this scheme on time and on budget

- accepts responsibility for meeting any costs over and above the DfT contribution requested, including potential cost overruns and the underwriting of any funding contributions expected from third parties
- accepts responsibility for meeting any ongoing revenue requirements in relation to the scheme
- accepts that no further increase in DfT funding will be considered beyond the maximum contribution requested
- has the necessary governance / assurance arrangements in place
- has identified a procurement strategy that is legally compliant and is likely to achieve the best value for money outcome
- will ensure that a robust and effective stakeholder and communications plan is put in place

Name. J CHESTERTON

[redacted]

Signature redacted

Submission of bids:

The deadline for bid submission is **23.59 on 8 February 2019**

An electronic copy only of the bid including any supporting material should be submitted to traffic comp@dft gov uk