

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)*: Nottingham City Council

Bid Manager Name and position: James Ashton – Transport Strategy Manager

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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:

<http://www.nottinghamcity.gov.uk/transport-parking-and-streets/transport-strategies-funding-bids-and-current-consultations/transport-funding-and-bids/>

SECTION A - Scheme description and funding profile

A1. Scheme name: Nottingham Live Transport Data

A2. Headline description:

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

The Council is a repository for a wide range of transport data. Currently the data is gathered and used by separate departments for separate functions. The proposals focus on the collection and dissemination of transport data in an integrated manner to provide benefit to commuters and visitors. The Council will use the funding to create an application and data hub aimed at sharing the following datasets:

- Traffic and congestion levels obtained from existing traffic signals equipment;
- Parking data showing availability of spaces in key car parks in the city;
- Road works permit data would be used to show the location and duration of road works;
- Electric vehicle charging point availability;
- Air quality from the existing monitoring network.

The data would be collected and shared in as near to 'real time' basis as possible. The Council's in house IT department would be employed to help with the construction of the data hub website. The website would be constructed to share the data with three key audiences.

- 1) **Citizens** - We intend to work with Nottingham University to improve visualisation of the data making it more accessible and understandable by the public. This data will then be disseminated via the existing [Let's Keep Nottingham Moving](#) website.
- 2) **3rd Party Developers** – the data would be made available to developers for commercial purposes.
- 3) **Urban Traffic Control Centre** by collating a number of datasets in the same place it enables better decision making by the Urban Traffic Control Centre (UTC).

£50,000 funding is being sought from the Department for Transport.

The Council will work with the University of Nottingham who will draw on their behavioural research to use formats that are most likely to engage the public

A3. Geographical area:

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

Data would be collected from existing sources within the Nottingham City Council administrative area. See plan in Figure 1

OS Grid Reference: SK 57876 39139

Postcode: NG2 3NG

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.

A5. Equality Analysis

Has any Equality Analysis been undertaken in line with the Equality Duty? Yes No

SECTION B – The Business Case

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

Nottingham City Council's Smart Cities Strategy has three main areas of focus: Health, Energy and Transport. The transport focus identifies the need for 'real time' data collection and dissemination.

Availability of real time transport data will help to feed a higher level of intelligence of the traffic and public transport network operation to users.

To facilitate this the Council is commencing a trial of a real time data collection and decision-making system, supplied by Vivacity Ltd and Ancoris. The system will be deployed over an area known as the Nottingham Enterprise Zone. **See Appendix A** for more information.

The purpose of this bid is to secure funding to collate both the new real time data and the existing transport data to create a new application and transport data hub. The Data hub and application will share the combined data with the public through our existing website and with third party organisations. This data will also be used to enhance our own decision making when managing traffic through our UTC.

This project will not collect any personal data. Any third party data is stored on secure servers. The Council is compliant with the Data Protection Act 2018 and the General Data Protection Regulation. A dedicated Data Controller employed by the Council is in place.

A logic map for this project is contained in **Appendix B**

B2. The Strategic Case (Maximum 500 words)

The **Nottingham Transport Data Website** will improve its ability to manage the transport network and improve air quality through the collection and dissemination of real time transport data. This aim is supported by the Council's [Smart Cities Strategy](#).

The Council currently collects transport data from a number of sources. This data is then stored and may be used at a later date for example in junction design or network analysis. This project will unlock the true potential of this data by using the Council's travel website to publish the data in real time enabling travelers to make decisions about their mode and route.

Figure 2 below shows the types of data that will be shared and to which audiences. Initially data will primarily be aimed at car users so they have the best information available to optimise their route and journey time. The number of data sources could be expanded to include real time bus and tram information together with cycle hire docking station availability, car club availability/costs to encourage use of sustainable alternatives.

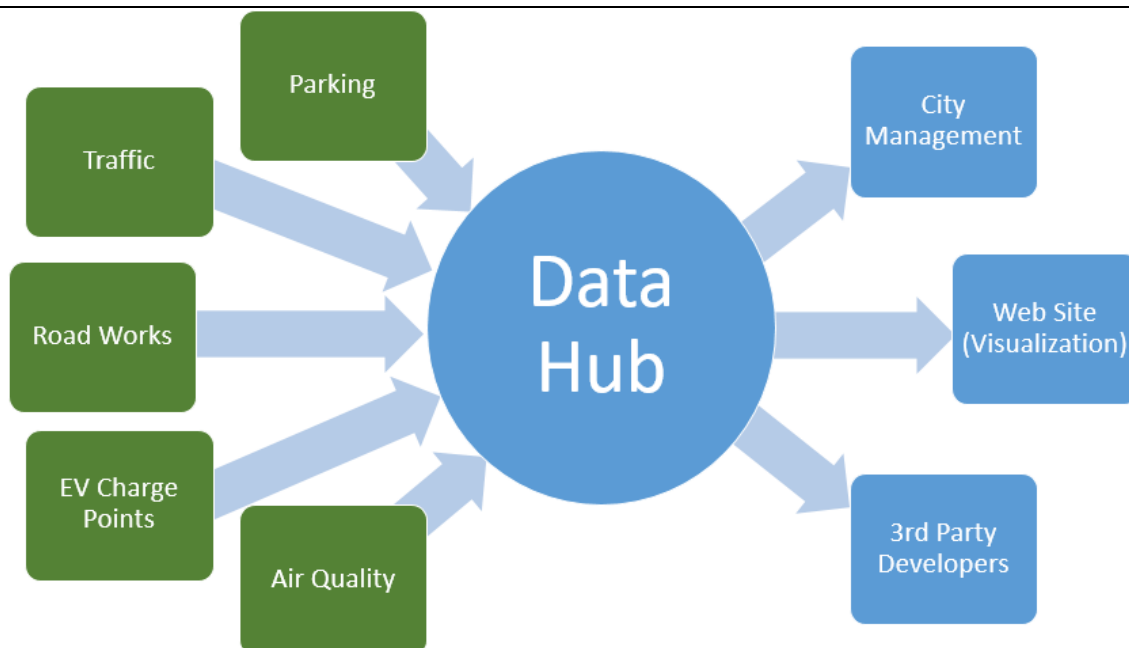


Figure 2: Data sources and key audiences.

The data to be shared include:

- **Parking** – Parking data for all Council carparks is currently collected in real time using the Siemens Stratos system which is managed by the Urban Traffic Control Centre (UTC). Data is updated on a 5 minute basis and is stored in XML format.
- **Traffic** – Live Traffic data will be sourced from our existing traffic signals which currently operate using SCOOT. There are a number of SCOOT corridors in the city and on key arterial routes. This system is used by our UTC to adjust signal timings to meet traffic demand. Live data from this system will be shared to the public in a format which is easy to understand. The raw data will also be made available to developers and researchers. In addition, real time data will be fed to the site by the Vivacity based cameras outlined in section 1.
- **Roadworks** – The Council issues a permit for all works that take place on the highway. The permit is then stored in a database by the UTC. This project will gain access to the database and will use the location and duration of the works as a guide for motorists and other road users.
- **Electric Vehicle Charge Points** - The Council is currently rolling out a network of publically available EV charge points across the Nottinghamshire/Derbyshire areas through our [Go Ultra Low Project](#). The usage data of these charge points is accessible by the Council and will be shared live. This will give EV owners real time information on the location and availability of charging points.
- **Air Quality** – The Council sees air quality improvement as a priority. Air quality is currently monitored on a 5 minute basis by the AURN sites. Data for NO₂, particulate matter and other pollutants such as benzene are measured and the data is collected by the city on a 12 hourly cycle. This data will be published together with [related health messages](#).

The data will be shared with the public in a legible and appealing format. This project will provide value for money by reducing the number of unnecessary trips made cars looking for parking spaces, better intelligence of roadworks will give car drivers clear advanced warning of delays and the route planner already in the site will give drivers alternative routes to avoid delays. Benefits will be realised in the form of reduced congestion and improved air quality.

The Council will work in partnership with the University of Nottingham both in the delivery of this project and also in the delivery of our Real-time Trial. The University will help us understand which messages will provide the most impact and provide the greatest benefits. The University

of Nottingham will have a key role in developing the scope of the project, it will advise on data visualisation techniques and how best to make the data as legible as possible. The University will also advise on the technical aspects of data manipulation.

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.

The **Nottingham Live Transport Data Website** project is seeking £50,000 funding contribution from the Department for Transport. This will be matched with £2500 of local funding. The project will be delivered in 2019/20 and will be complete by March 2020. The Council will also be making a wider contribution of £99,000 to the collection of real time transport data through it’s Real time transport data project. The University of Nottingham are adding staffing support without charge and also considering contributing to the real time project by extending the coverage of real time data across it’s campus.

| £000s | 2018-19 | 2019-2020 | Total |
|----------------------------------|----------------|------------------|--------------|
| <i>DfT Funding Sought</i> | | 50 | 50 |
| <i>LA Contribution</i> | | 2.5 | 2.5 |
| <i>Other Third Party Funding</i> | - | - | - |

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.

The Council will provide a local contribution of £2,500 towards the ongoing maintenance of the website this contribution will enable the maintenance of the website and application for the next five years. In addition, the Council has allocated £99,000 towards the development of its real time traffic trial in partnership with Vivacity and Anchoris. One of the aims of the real time traffic trial is to make traffic data open to all the both this project and the Vivacity real time trial will run in tandem and a contribution from the trial will be made towards the development of the website.

- 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.

The Council will not require funding from external sources to complete this project.

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

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

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

- a) What risk allowance has been applied to the project cost?
A Risk Register is Included in **Appendix C**. The Council has allocated 10% of the total funding for risk mitigation.

- b) How will cost overruns be dealt with?

Cost overruns will be dealt with using the city council's own funds. A cost plan is contained in **Appendix C**

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

The main risks are;

1) Technical issues over data supply – this risk relates to the problems that may be encountered in obtaining data from its original sources. Early engagement with the data holders (such as the UTC) has already taken place. All specified data sources are already held by the Council therefore it would be unlikely that any issue result in cost increases.

2) Lack of available resource – Delays to the project may occur due to lack of key skills. Early engagement with all teams involved in the project has already taken place. All teams have agreed to be involved in the project and have made resources available.

3) Application delayed by unforeseen technical issues – the programme makes available a total of 13 weeks for application development. Throughout this period regular update meetings will be held with IT and the PM. These meetings will help to identify issues at the earliest stage and mitigation measures will then be put in place. If necessary additional resource will be provided in order to overcome technical issues.

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

Value for money will come from four main areas:

The project will make use of existing data to provide better information for travellers to plan their journeys. Better planning of journeys will help to cut the length of each trip. Information about parking occupancy levels is particularly important in reducing unnecessary car journeys. Reducing journey times and unnecessary trips will result in significant economic benefits derived from the value of time savings.

The data will be made freely available to 3rd party organisations in order to help the creation of commercial opportunities for mobile app developers and create research opportunities through our partnership with University of Nottingham

As stated in the strategic case, the Council is investing in a trial of a real time traffic data system. The data from this system will be shared on the website thereby creating value by leveraging the investment in the real time system.

In addition to these four main areas the Council will look to expand the capability of the website outside of this project. Plans to expand the capabilities of the system include the use of real time public transport and cycle docking station information. These information sources together with journey times associated with each mode would be used to encourage the use of modes of transport other than the private car.

B7. The Commercial Case (maximum 200 words)

The Council will use in house expertise within its Information Technology Applications Development team. The team will collate, reformat and develop data applications that will be shared on the Keep Nottingham Moving website. The applications will be developed to continually draw the main data sets from their original data sources, the application will then present this data to the website. The data will be present in the website in a legible, easy to understand way.

Data will be stored on the Council's servers and made available to 3rd party developers and researchers. The Council's Keep Nottingham Moving website is currently maintained by an external provider called PDC. The development of the new data pages for the website will be provided by the Council's in-house Data and Information team and subsequently maintained by PDC using existing contracts.

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.

- 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.

A Gantt chart showing how the project will progress is contained in **Appendix C**. Assuming the project will begin in early April the project will take around 32 weeks to complete.

At the beginning of the project, the project manager (PM) will seek internal approval to start work. Once internal approvals are secured, the PM will instruct the IT department to begin sourcing and collating the data. At this point the format of each data set will be identified and reformatting will take place (if necessary) to ensure each data set is capable of being linked with the main application. IT will then begin the task of developing applications to draw down the data at regular intervals and provide this in a usable format to be presented on the website or by other 3rd parties. During the development of the application, GIS and Communications colleagues will develop a new page for the Keeping Nottingham Moving website. GIS and IT will

then work together to ensure that the new website content is consistent with the city council's transport messages.

Key Milestones are marked on the Gantt chart and are explained as follows:

- 1 internal approvals and approval to spend are obtained. (Weeks 1-2)
- 2 Data sets are sourced, cleansed, collated and reformatted ready for inclusion into the application. (Weeks 5)
- 3 inception meeting with UoN and Council
- 4 Internal storage space is allocated to store reformatted data (Week8)
- 5 Application development begins. (Week 8)
- 6 Application development complete (Week 20)
- 7 Website improvements complete and testing begins (Week 23)
- 8 Testing complete and beta stage testing begins (Week 26)
- 9 Beta testing complete and website goes live. (Week 30)

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

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

Appendix D contains a letter of support from the Portfolio Holder for transport Cllr Dave Liversidge and University of Nottingham Partners.

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.

The Council's Transport Strategy service will manage the delivery of this project. The Project Manager will be the Transport Strategy Manager (James Ashton). Transport Strategy Communications (TS Comms) was instrumental in the development of the Keeping Nottingham Moving website. TS Comms will therefore have a role forming the content and design of the website. The website itself will be delivered internally by the Council's Data and Information Team in consultation with TS Comms.

A key project milestone will be collating data from its original sources, the Council will employ our internal applications development team to source collate and clean the data ensuring that all data sources can be changed in to a common usable format. This data will then be stored on the Council's servers. At this point, a meeting will take place with the internal Council teams and the University of Nottingham to set out clear objectives and to assign clear tasks for the development of the application. NCC IT will then develop a bespoke application that will automatically draw data from its original source and feed this to the website. The application will be made to continually update the data in order that the website can be kept up to date. conference calls with the university will be held at regular intervals throughout this period.

University of Nottingham are collaborating with the Council on the Real Time Traffic data trial. The University and the Council are actively discussing ways in which the geographic area of the trial could be extended to the University Campus. The partnership would enable the sharing of data between the two organisations and also allow a wider area of data collection to be covered. This data will then be fed to the website thereby increasing the coverage of real time traffic data.

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

Risk Register is contained in **Appendix C**.

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 you 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.

A logic map is contained in Appendix F. The logic map shows that the key impacts of this project will be to improve the local economy, Improve air quality and improve public health. These impacts will, as articulated in the logic map, be realised by enabling the existing road network to be managed more efficiently and by providing travellers better information to optimise their journey. This in turn will lead to congestion constraint. These impacts will contribute to making Nottingham a better place to live and work.

Drawing from the approach taken in the North Highland report and stressed in section 5.5 of the assessment criteria in the funds guidance document it is possible to articulate the following objectives which are linked to activities/outcomes detailed in the logic map

1. Contribute to an improvement in air quality
2. Improve access to employment and services
3. Improve the efficiency of the existing transport network to reduce the costs of congestion
4. Enhance the experience of travelling within Nottingham
5. Facillitate economic erowth
6. Ensure that all data is stored and used according to all relevant legislation

A robust monitoring and evaluation plan will identify indicators and research methods capable of measuring progress towards the above objectives.

C2. Monitoring and Evaluation (maximum 150 words)

As outlined above an evaluation plan will be prepared for this project. An important component of the evaluation will be a survey of businesses and the public carried out prior to the start of the project to better understand the current availability and impact of the data itemised in this bid as well as the opinions of the Keeping Nottingham Moving website. It will include questions to find out what data would be considered helpful and how users prefer to have the data delivered further survey will be carried out once the website is complete and has been in use for a period of time to understand the impact of the improvements on the public and businesses and will focus on behavioural change. Other key outcomes such as improvements to air quality and reduced congestion will be monitored as part of the Council's existing transport monitoring regime. Nottingham City Council has a proven in house evaluation capability, with acknowledged experts in the field and is in a position to assist the department in the wider evaluation of to the impact of the fund if required.

SECTION D: Declarations


D1. Senior Responsible Owner Declaration

As Senior Responsible Owner for Nottingham Live Transport Data I hereby submit this request for approval to DfT on behalf of Nottingham City Council and confirm that I have the necessary authority to do so.

I confirm Nottingham City Council will have all the necessary powers in place to ensure the planned timescales in the application can be realised.

Name: *CHRIS CARTER*

Signed:



Position: *HMV & TRANSPORT STRATEGY*

D2. Section 151 Officer Declaration

As Section 151 Officer for Nottingham City Council I declare that the scheme cost estimates quoted in this bid are accurate to the best of my knowledge and that Nottingham City 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: *THERESA CHANNELL*

Signed:



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@df.gov.uk