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)*: *Bedford Borough 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: *Brian Hayward*

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

Contact telephone number: *07823 363 133*
Email address: *brian.hayward@bedford.gov.uk*

Postal address:
4th Floor Borough Hall
Bedford Borough Council
Cauldwell Street
Bedford
MK42 9AP

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.bedford.gov.uk/parking-roads-and-travel/transport-policy/transport-bids/

SECTION A - Scheme description and funding profile

A1. Scheme name: *UTMC Data Warehouse Bedford*

A2. Headline description:

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

Scope
The project will provide access to the Council's developing Common Database (CDB) by means of an abstraction layer for third parties to make commercial and research use of the data.

Background
The technology element of TB2020[1] has enabled the Council to replace unreliable traffic control technology with equipment and systems which can interface to provide an unprecedented level and complexity of information. This information can be used to develop digital based products which have the potential to change the way traffic and travel information is delivered to transport users.

Product
The data warehouse will,

- *Receive feeds from the UTMC CDB*
- *Hold data for longer than typical periods*
- *Allow data transference on a 1:1 basis at pre-set intervals (or as requested)*
- *Allow data to be translated and held in an open format*
- *Hold data not capable of being held in the CDB, e.g. LINSIG / VISSIM*
- *Allow 3rd party software apps to connect to the warehouse*
- *Allow offline scenarios testing*

Rationale
The added value of the project is that by opening access to the data warehouse, opportunities will be provided for technology businesses and academia to develop additional levels of benefit from the outputs, which will contribute to local economic growth and develop artificial intelligence and machine learning.

A3. Geographical area:

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

Ampthill Road is a residential road linking the strategic A421 to the town centre, and carrying around 25,000 vehicles a day. Congestion and delay are caused by conflicting traffic demands along the route compounded by multiple side roads and turnings, a bus lane and a shared cycle / footway.

OS Grid Reference: **504651, 248274**
Postcode: **MK42 9PP**

[1] The Urban Traffic Management and Control Data Warehouse will cover the whole of Bedford town centre but the initial deployment will be focused on the Ampthill Road smart corridor. Full details of the investment can be found here.

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.

Appendix 1 shows a plan of all the schemes included in Transporting Bedford 2020.
Appendix 2 shows how the smart corridor approach could 'manage' an incident.

A5. Equality Analysis

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

The Equality Analysis for Transporting Bedford 2020 can be found here.
This covers all aspects of TB2020. Officers will review the Equality Analysis when the outcome of this funding bid is known.

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[1].

History

In November 2017, Mayor Dave Hodgson announced 'Transporting Bedford 2020'[2] an £18 million investment to tackle traffic congestion across Bedford town centre. Major infrastructure works to reduce congestion are planned at key points on the town centre road network, including the creation of a 'smart corridor' on Ampthill Road.*

Summary

The data warehouse is part of the UTMC and Technology element of TB2020 and works towards the Council's aspiration of developing an intelligent highway network.

Initially, the data warehouse concept will amalgamate traffic count data, signal data and offline models into a single platform which can be accessed in a standardised open format.

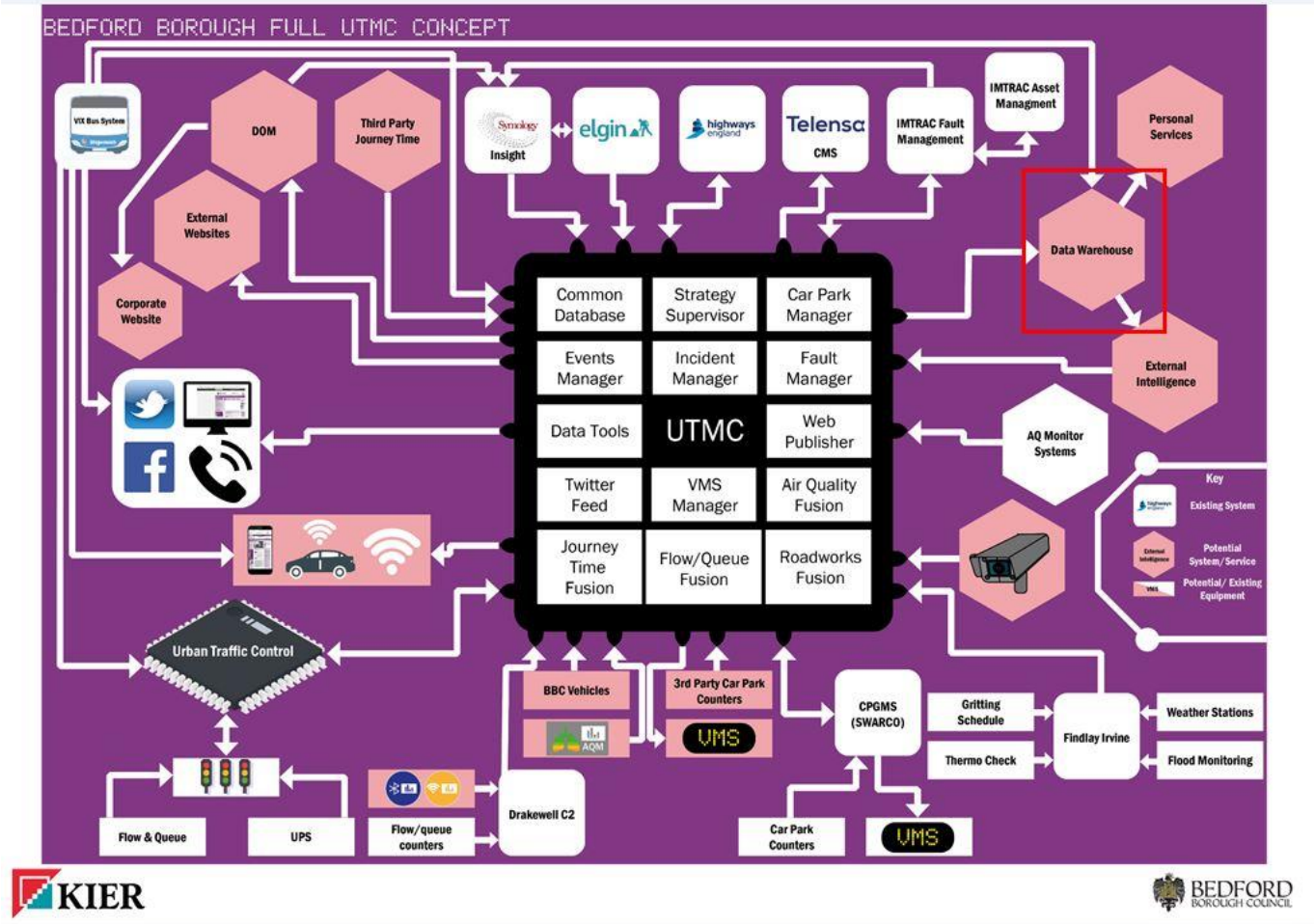
The interface from the common database to the data warehouse will be based on XML, and data tools will provide a facility for scheduled or one off operator instructed data export of selected data objects to the data warehouse.

The project approach is to liaise with partners with expertise in traffic data and application innovation who have an interest in digital business and growing the economy (e.g. Transport Systems Catapult, England's Economic Heartland).

A pictorial representation of the common database is shown. Although a data receptor, the UTMC Data Warehouse Bedford is also shown capable of output to external sources.

[1] We will work with suppliers on data management compliance in accordance with GDPR regulations. All data within the data warehouse will be derived data and will therefore be anonymized if it returns to the common database. No personal details will be stored.

[2] Full details of the investment can be found here. The total funding package is being administered through the South East Midlands Local Enterprise Partnership (SEMLEP)



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?

TB2020[3] is the response to traffic and travel problems which were identified in the Bedford Town Centre Study. The Business Case for TB2020 has been through an extensive due diligence process and funding milestones continue to be met to progress the 4 year programme.

[3] Full details of the investment can be found here.

Within TB2020, the UTMC and Technology Measures package provides the context for this project. The UTMC Data Warehouse Bedford sits within the technology package and will enhance the capability of the common database. Opening the data in a standardised format will provide opportunities to develop digital based products which will be of benefits to businesses, academia, and ultimately the travelling public.

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

The aim of the UTMC and Technology package is to enhance the efficiency of highway network operations. Ampthill Road smart corridor was selected as the optimum location because UTMC works best in urban areas with high concentrations of traffic movements and multiple data receptors. Opening the data to third parties is a core principle of the technology package and is recognised as a key output.

Two other options for use of the datasets have been considered,

1 – Do nothing. In this case, data would be discarded after the initial period

2 – Bedford Borough Council could make use of the stored data to manage the network more efficiently

In both cases, the full potential of opening the data would fail to be realised and opportunities to grow the economy would be missed. Ultimately, the Council's core business does not include developing digital based products, and partnerships with businesses and academia is considered as a mutually beneficial way to enhance the value of the captured data.

What are the expected benefits / outcomes of your strategy?

The population in general, with travellers as a subset, is becoming increasingly familiar with interactive technology, and there is an expectation that digital based products can help with decision making. The direct benefits / outcomes are set out in more detail in section C1. However, in term of indirect benefits, these can be summarised as follows,

+ Reduced delay particularly at congestion hotspots
+ Improvements to localised and general levels of air quality
+ Increased journey time reliability
+ Increased opportunities for sustainable transport
+ Increase in technology jobs and opportunities

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

The benefits of TB2020 will be measured in response to the roll out of the project and initially benefits associated with journey time will be monitored. As increased levels of data are added into the common database, and the opportunity for app development becomes apparent, we will work with partners and local businesses to promote ideas and technical solutions which will deliver the core objectives of TB2020.

Section C2 sets out initial metrics which will be used to monitor the benefits.

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

The ultimate outcome is to encourage a community of developers which delivers commercial products. By working with our partners (Transport Systems Catapult, EEH) and Bedford's Economic Development Team, we will identify opportunities for technology and development businesses to access the data in order to develop applications which will deliver benefits to all highway and transport users across the Borough.

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.

£000s	***2018-19***	***Total***
DfT Funding Sought	*92*	*92*
LA Contribution	*38*	*38*
Other Third Party Funding	*182*	*182*

The DfT contribution is 29% of overall funding for this initial stage of the project. One of the benefits of developing the data warehouse within the context and remit of TB2020 is that there is inherent scalability associated with its progress, both in terms of the type of data being fed into it, and in terms of the geographical scope. The Council has ambitions to extend the geographical scope over the whole of Bedford Borough.

The funding detailed above will be used to open the datasets for traffic signal control, traffic flow / journey time monitors, and current traffic models (SATURN and VISSIM), which is scheduled to start entering the common database in Feb 2019.

As the scheme progresses over the next 3 years, additional levels of data can be opened to third parties. These will include car park, air quality and roadworks data.

The level of funding allocated is considered to be sufficient. The data warehouse is an add-on to the common database, which is fully funded by TB2020. The Council has submitted an internal bid for increased revenue funding to cover the additional costs associated with this project e.g. maintenance, licences, comms costs.

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 support the bid with £38k of its own resources from an existing budget code. Third party funding is being provided by the South East Midlands Local Enterprise Partnership (SEMLEP) – see below.

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

A letter of support from SEMLEP is attached at Appendix 3. The letter sets out the LEP's confidence in Bedford Borough Council's management of the project within the framework of Transporting Bedford 2020.

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):

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

A Quantified Risk Assessment has been carried out for the Technology elements of the Transporting Bedford 2020 project and a risk allowance equivalent to 16% of estimated costs has been applied. While a QRA of 16% is the established practice level of risk for infrastructure based projects, we are aware that it is generally higher for IT projects, and as a consequence, we are working with Transport Systems Catapult to review and monitor QRA for this project.

b) How will cost overruns be dealt with?

The Council has experience in delivering major and complex infrastructure and has developed strong project management practices which involve thorough risk management and review. As a result, cost overruns are not expected for this project. In the unlikely event that cost overruns which are not identified in the QRA (see above) are incurred, these will be funded from BBC budgets.

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

The main risks to delivery timescales include,

* *Data compatibility issues*
* *Procurement undefined or non deliverable as a single package*
* *Inability to source data*

The impact of these risks is likely to delay implementation rather than increase costs. However, within a project management approach, any increase in time or cost should be avoided, and safeguards will be put in place so that mitigation action is avoided. An action plan of risk management is included in section B10

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 overall TB2020 package of scheme measures is anticipated to derive a wide range of benefits. See the Full Business Case here

The UTMC and Technology package will reduce journey times through enhanced network management and is aimed specifically as enhancing the reliability of the transport network and improving individual travel choices.

The UTMC Data Warehouse Bedford scheme has the potential to provide commercial and research opportunities to third parties, either in the form of digital based products or academic outputs. The scale of the benefits, and hence the value, will initially be reflected in the scale and coverage of the open data in the data warehouse, and the business opportunities which result.

The Council has taken advice from the Transport Systems Catapult on the outputs from a recent report[4] by Deloitte consultants on the value to the UK of opening up and sharing transport data nationwide. Scaling the GVA using ONS released figures, suggests that success in obtaining funding for the data warehouse has the potential to unlock up to £8.6 million of direct GVA benefits per year once the system is fully operational, within the Bedford Borough.

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.

The procurement process will be governed by the Council's own constitutional procurement Rules. The strategy will be subject to review by the Project Governance Board including the Council's Procurement Manager, senior Legal officer and senior officers from across the Council who are highly experienced in strategic procurement and contract management.

[4] Working Paper on the value of data in transport, produced by Deloitte for Transport Systems Catapult, 2018

Express approval by the Project Board will oversee the release of tender documentation and secondly to enable the procurement to move to the award procedure stage following review of the award recommendation.

The Council's preferred route (based on delivery of the Technology Elements of the Transporting Bedford 2020 project) is to use industry experts to help shape and specify requirements and to make best use of existing framework contracts (for example the CCS Traffic Management & Technology Framework to source delivery.

The Council has recently procured a new Cloud based UTC system using this methodology and is in the process of procuring a UTMC/Mobility platform with the assistance of TSC. Work will continue to define a 'road map' towards the data warehouse using the UTC and UTMC – and the procurement methodology used to deliver them - as foundations for this proposal.

*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.

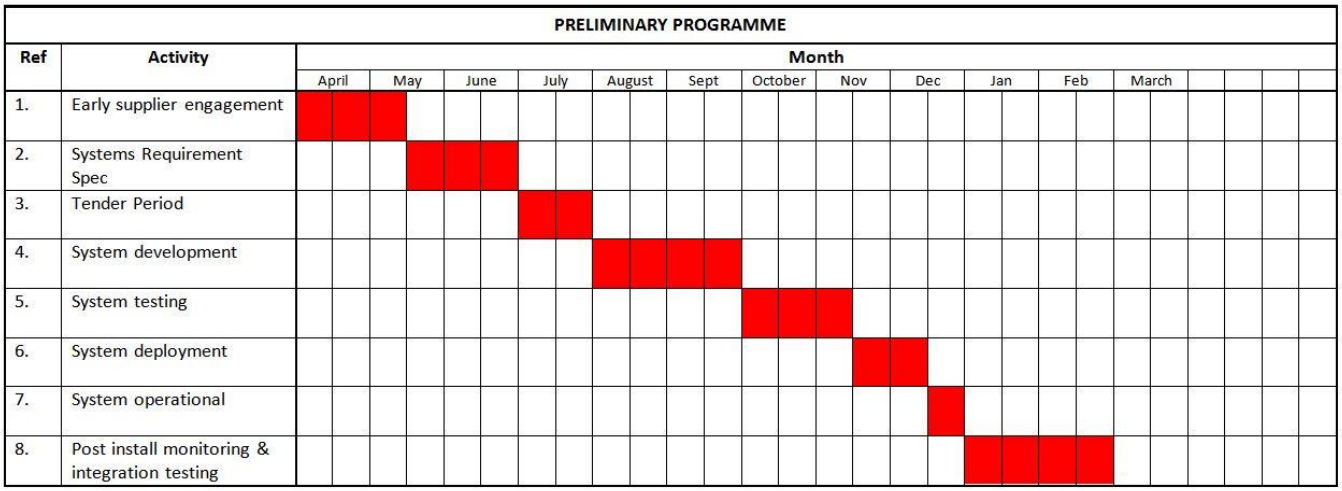
B8. Management Case - Delivery (maximum 200 words)

Deliverability is one of the essential criteria for this Competition and as such any bid should set out if any statutory procedures 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.

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

   The project plan is included below



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

Dave Hodgson MBE is the Elected Mayor and leader of Bedford Borough Council. Dave's statement of support for this project is below,

Mayor Dave Hodgson - Statement in Support of Bedford Borough Council Funding for Innovation Bid

With a professional background in IT development I am highly appreciative of the benefits that access to robust real time data can bring in the development of advanced and innovative solutions.

As Chair of England's Economic Heartland Strategic Transport Forum, and with Bedford making up one of the central pillars of the CaMKOx knowledge arc, I am an enthusiastic champion of scalable transport initiatives that can unlock potential future growth.

Bedford has strong record of delivering large Highways and Transport projects on time and on budget. This can be seen in the recent completions of Bedford Western Bypass and the DfT Challenge fund delivery of a project to upgrade the Council's street lighting asset and introduce a cloud based asset management and control system.

We are also in the process of delivering our own Digital Operating Model - a transformation programme that involves the whole of the Council, redesigning the services currently provided by us, and in particular making more services available online.

The success of projects such as these relies upon high level of support and guidance from the senior management of the Council, and I look forward to continuing that commitment by fully supporting this pioneering scheme.

Dave Hodgson

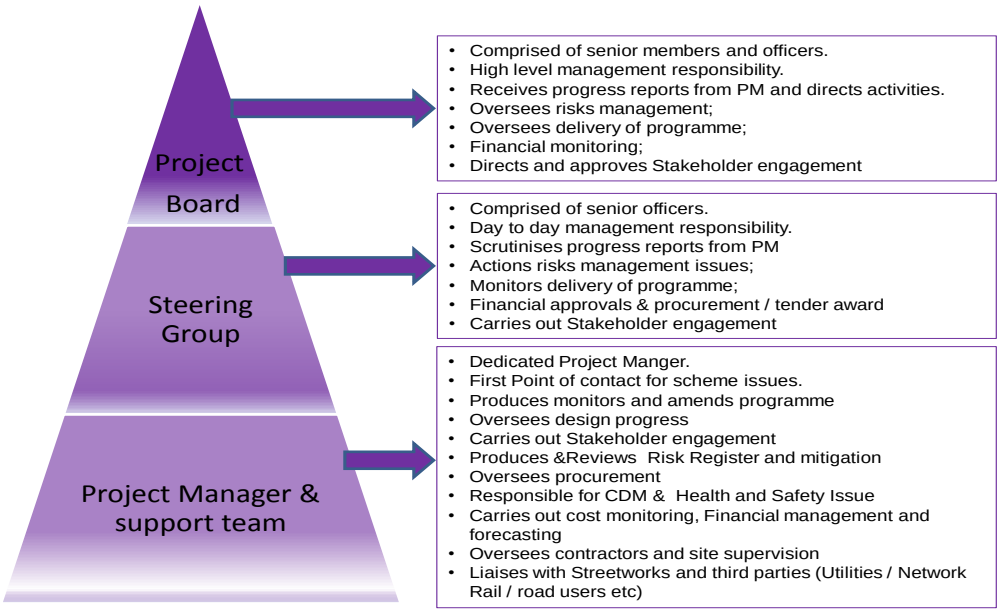
Mayor Dave Hodgson

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.

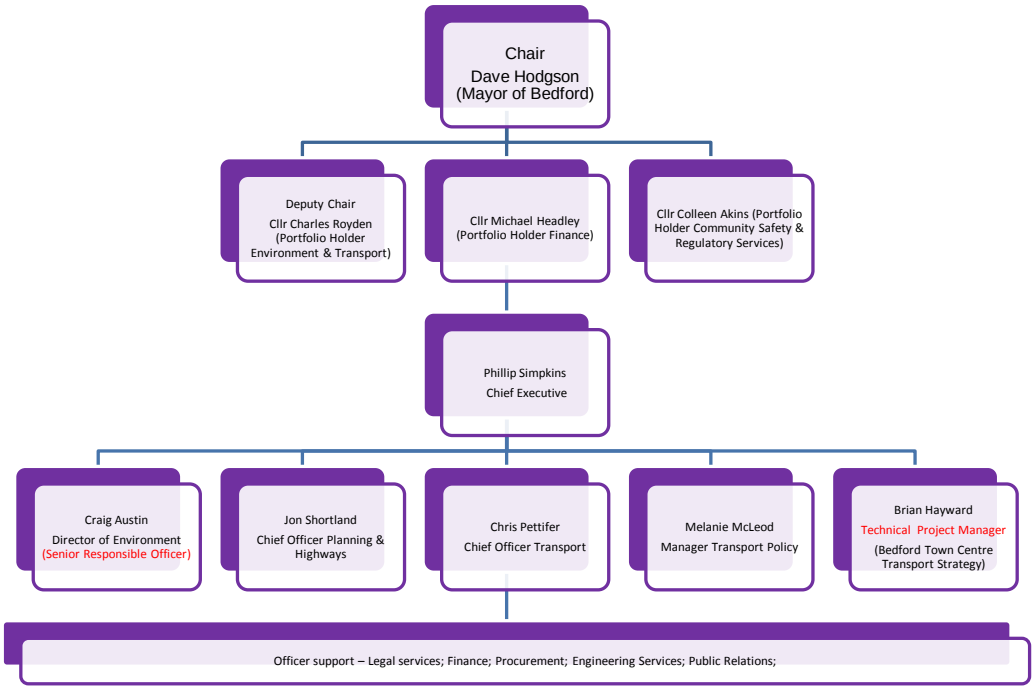
Delivery of the scheme will follow the model being used to deliver the Transporting Bedford 2020 LGF funded scheme, with BBC, directly managing overall project management role. The hierarchy of the project management governance structure is shown in the figure below

Bedford Town Centre Transport Strategy – Governance arrangements diagram



The Project Board includes the Mayor; Portfolio Holders for Environment and Finance; Chief Executive; Director for Environment; Chief Officer for Transportation and the Project Manager. The Project Board structure is shown below:

Bedford Town Centre Transport Strategy – Project Governance Board



The Project Board makes key decisions in relation to the TB2020 project and has the final say on committing funds; awarding contracts and managing risk. The Board receives technical input from a Steering Group which meets fortnightly. Standing items on the Project Board agenda include:

- *Review of programme and delivery*
- *Receive Checkpoint Reports*
- *Detailed review of scheme design progress*
- *Stakeholder engagement*
- *Review of Risk Register*
- *Review of Health and Safety Issues*
- *Procurement & approvals*
- *Financial management and cost monitoring*
- *Outcome monitoring*

The data warehouse project will be added as a separate standing item to the Project Board agenda.

The day-to-day management and delivery of the project will be the responsibility of the Technical Project Manager and Engineering support staff. They will work closely with specialist advisors and other delivery partners, and also form a point of contact for stakeholders.

The Council has strong background in project delivery and particularly on grant funded schemes. Examples of recently completed schemes with successful project management include the Great Ouse Way and the Street Lighting Project both of which were delivered on time and within budget.

The table below lists the project team responsible for delivery

Senior Responsible Officer	*Craig Austin*	*Director of Environment*
Bid Manager	*Brian Hayward*	*Project Manager, Bedford Town Centre Transport Strategy*
Technical Support Manager	*Sean Treen*	*Senior ITS Engineer, Kier*
Bid Liaison Officer	*Melanie MacLeod*	*Manager for Transport Policy*
Partnership Manager	*Rajinder Sharma*	*Business Account Manager, Transport Systems Catapul*

312 words

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

The risk register for the UTMC Data Warehouse Bedford is attached at Appendix 4

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.

Benefits will accrue following the formal launch of the Data Warehouse. We anticipate a 'soft' launch of the system, allowing access to a selected group of users to start off in a controlled manner prior to a full public launch.

As with all new services of this type we expect that there will be a ramp up of users of the system over the first year of operation (planned to be 2020/21). It is anticipated that there will be two broad external user groups:

- *Those developing personalised services for Bedford residents; and*
- *Those developing external intelligence which will provide new insight to support council activities (traffic management, planning etc.)*

As the council does not have this capability the baseline benefits derived from this source is zero.

The council will be licencing all data that is accessed from the Data Warehouse. The terms will be such to encourage access and use of the warehouse by start-ups/SMEs/academia as well

as existing supply chains/Tier 1 suppliers. The council will reserve the right to charge a fee for commercial uses of this data. The details of this will be agreed as part of this project with council legal advisors and data stakeholders.

This project will provide the following outputs and outcomes

Output	***Outcome***	***Benefits***
Data Warehouse system	*Companies and academia can access open data sets to develop new products and services or undertake research activities.*	*Potential to develop new products and services (and generate economic benefits)* *Potential to improve the travelling experience in Bedford.*
Open data sets		

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.

The council commit to monitor and evaluate the impact of opening our data as well as sharing our experience and knowledge that we gain through this process.

The following will be monitored:

- *No. licences issued per month for academic research;*
- *No. licences issued per month for industrial research & development;*
- *No. licences issued per month for commercial use of data;*
- *No. research articles published using council data;*
- *No. products and services launched using council data or insight;*
- *No. SMEs the council has interacted with regarding open data;*
- *No. Academic institutions the council has interacted with regarding open data; and*
- *No. non-SME companies the council has interacted with regarding open data.*

In addition, the council will seek feedback from all users regarding their use of the data warehouse.

The council will produce an interim report at 6 months and a detailed report at 18 months post opening using the above data.

SECTION D: Declarations

D1. Senior Responsible Owner Declaration

As Senior Responsible Owner for [*scheme name*] I hereby submit this request for approval to

DfT on behalf of [*name of authority*] and confirm that I have the necessary authority to do so. I confirm that [*name of authority*] will have all the necessary powers in place to ensure the planned timescales in the application can be realised.	
Name: Craig Austin	Signed: 
Position: Director of Environment	

D2. Section 151 Officer Declaration	
As Section 151 Officer for Bedford Borough Council, I declare that the scheme cost estimates quoted in this bid are accurate to the best of my knowledge and that Bedford 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: Andy Watkins Assistant Chief Executive, Enabling Services	Signed: 

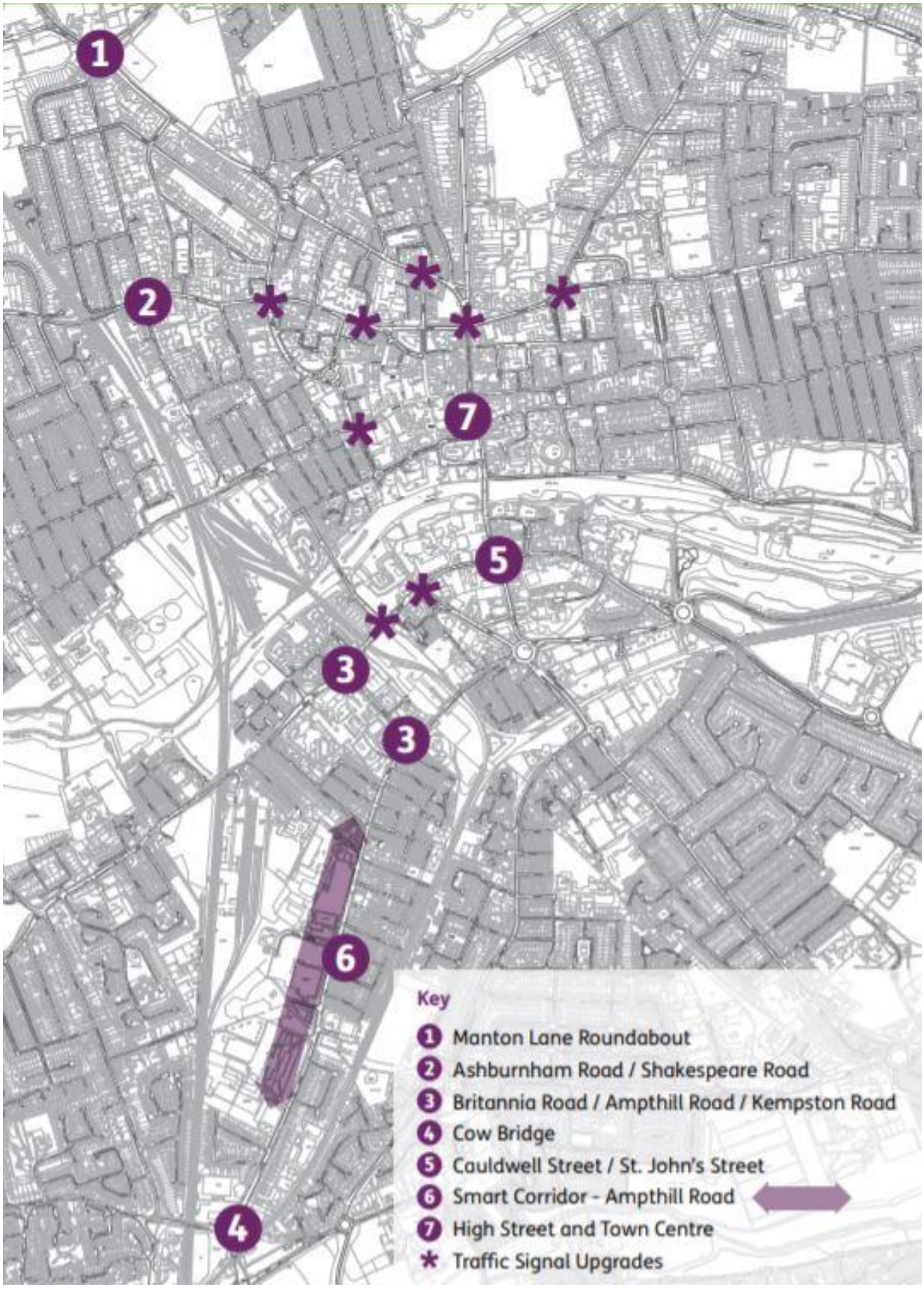
Submission of bids:

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@dft.gov.uk

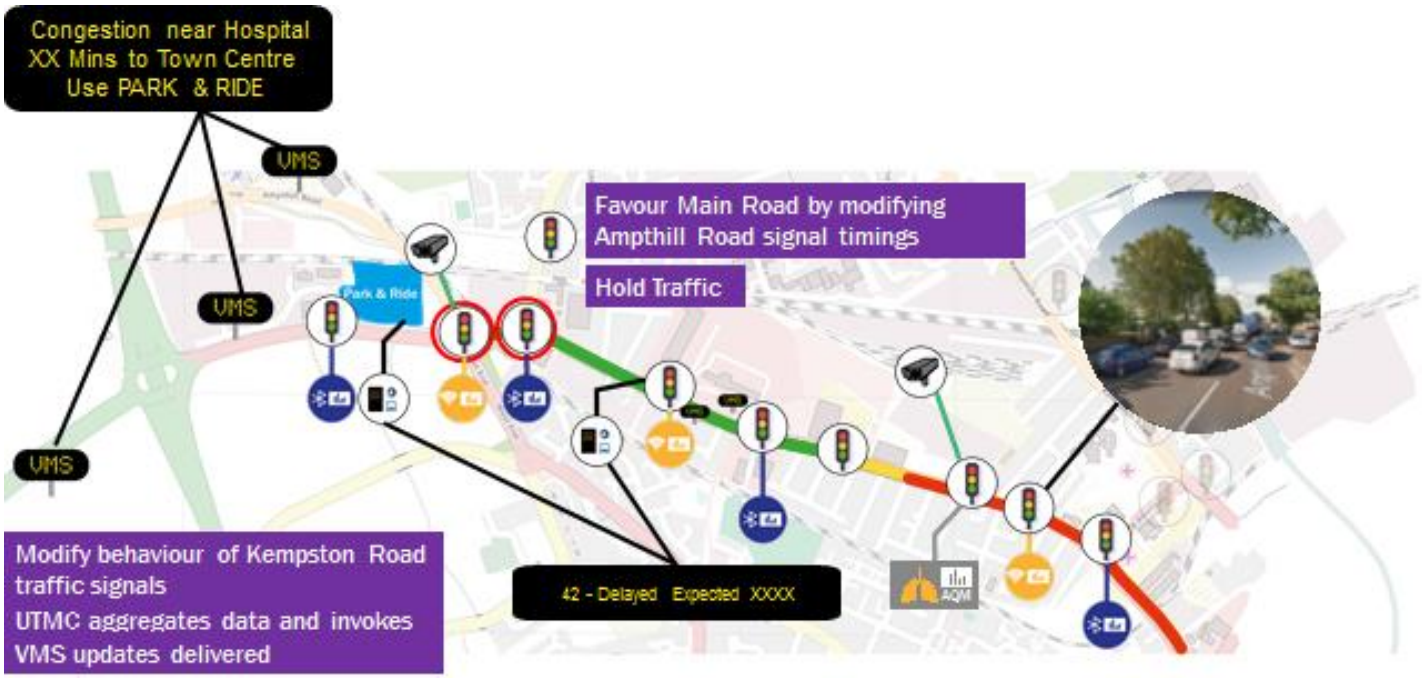
Appendix 1

Plan showing all Transporting Bedford 2020 interventions



Appendix 2

Detail of smart corridor managing an incident



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BEDFORD BOROUGH COUNCIL

Appendix 3

Letter of support from South East Midlands Local Enterprise Partnership

Appended as a separate file

Appendix 4

Risk Register for UTMC Data Warehouse Bedford

	C	D	E	F	G	H	K	L	M	N
1	**Risk**	**Potential Impact**	**Completed Mitigation Action (to date)**	**Probability**	**Impact**	**Risk Score/ Category**	**Action Plan**	**Action Owner**	**Next Action Target Date**	**Risk Status**
2										
3	Data compatibility issues	Disruption to scheme programme	Cloud based system to be used with common UTMC protocols	2	2	4	Engage specialist to delivery UTMC and Technology elements. Ensure procurement is sufficiently robust to minimise likelihood	**Brian Hayward**	31/03/19	OPEN
4	System design delayed due to specialist resource issues	Delay in finalising design and costs	Initial feasibility works completed. Framework contract in place with Keir to provide specialist design resource	1	3	3	Draft specification produced Dec 18	**Brian Hayward**	31/03/19	OPEN
5	Procurement undefined or nor deliverable as single package	Delays to programme	Industry market testing completed. Early activities with existing partners underway to refine scope. Gateway process to determine specifications, common protocols to be used to provide future proofing in fast changing sector	2	1	2	Draft specification produced Dec 18	**Brian Hayward**	31/03/19	OPEN
6	Estimated scheme costs inaccurate	Cost overrun (Technology)	Detailed estimate to be completed based on site investigations, lessons learnt from previous works in vicinity. 15% contingency to be provided in project cost	2	3	6	Key infrastructure elements to be procured through TMT2	**Brian Hayward**	31/03/19	OPEN
7	Technology elements - Stakeholder engagement not defined	Lack of engagement with scheme intentions or deliverables	Project plan in development; communication strategy and stakeholder engagement identified as early activities.	2	2	4	Stakeholder Management plan programme established as part of business case to be monitored	**Brian Hayward**	31/03/19	OPEN
8	Inability to source data	Delays to programme	Cloud based system to be used with common UTMC protocols	1	3	3	Specification to include data requirements	**Brian Hayward**	31/03/19	OPEN
9	GDPR requirements not met	Legaslative issue	Specification set to discount any personal data that would come under GDPR	1	3	3	Review specification at procurement stage	**Brian Hayward**	31/03/19	OPEN

Impact	**High/ Critical**	3	3	6	9
	Medium/ Serious	2	2	4	6
	Low/ Marginal	1	1	2	3
			1	2	3
			Low/ Imp	**Medium/**	**High/ Probabl e**
			Probability		