

Funding for Innovation: Cooperative Intelligent Transport Systems



Department
for Transport

Application Form

The level of information provided should be proportionate to the size and complexity of the scheme proposed. As a guide, we would suggest around 10 to 15 pages including annexes would be appropriate.

A separate application form should be completed for each scheme.

Applicant Information

Local authority name(s)*: Lancashire County Council

Bid Manager Name and position: Martin Porter, Principal Officer, Community Services

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PR1 8XJ

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.lancashire.gov.uk/council/strategies-policies-plans/roads-parking-and-travel.aspx>

SECTION A - Scheme description and funding profile

A1. Scheme name: C-ITS Lancashire

A2. Headline description:

The project is to develop and pilot the use of C-ITS technology to assist the safety, mobility and priority of visually impaired people in shared space road environments. The project is in collaboration with the University of Central Lancashire's (UCLan) Intelligent Systems Group. Lancashire County Council have completed a shared space style scheme on Fishergate in Preston and are currently working with UCLan on their Masterplan highway changes which follows similar design principles. The benefits are for the individual user and to assist the further development of shared space schemes. The C-ITS technical proposal is appended.

A3. Geographical area:

The bid focuses on Fishergate, the main shopping street in central Preston, Lancashire. Fishergate has been recently transformed by a shared space scheme which created a dramatically improved pedestrian environment, with more space and less clutter, making a more attractive central shopping area to attract investors and economic growth.

OS Grid Reference: 353395,429196

Postcode: PR1 8XJ

A map is appended



A4. Type of bid (please tick relevant box):

C-ITS: Connected Vehicle

C-ITS: Real Time Information

C-ITS: Smart Parking

C-ITS: Vulnerable Road Users - Yes

Other (please specify)

A5. Equality Analysis

Has any Equality Analysis been undertaken in line with the Equality Duty? Yes

SECTION B – The Business Case

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

The implementation of shared space highway schemes provide excellent benefits from reducing road accidents to improving the economic viability of high streets. LCC has experienced this through the award winning Fishergate scheme in Preston. The design and implementation of such schemes can be challenging, especially as some visually impaired people identify a disadvantage, often due to the removal of traditional traffic light controlled crossings. Due to this issue other local authorities have found the planning of shared space schemes difficult and may therefore not have maximised benefits from significant scheme investment. The project aim is ultimately to ease the challenge of implementing shared space schemes by developing the C-ITS technology to improve the mobility of visually impaired people in these modernised pedestrian environments.

B2. The Strategic Case

DfT's LTN 1/11 advises that traffic signal controlled crossings can cause drivers to behave in ways not entirely compatible with the shared street ethos. Preston's Fishergate scheme, amongst others nationally, has removed signal controlled crossings. The Fishergate scheme still has defined kerbs and is therefore not considered a strict shared space scheme, although many of the design principles contained in LTN 1/11 have been adhered to. The principles of the Fishergate design are now being taken forward with the University of Central Lancashire Masterplan highway scheme.

From workshop consultations with visually impaired groups as part of the Masterplan development there was clear support for the highway proposal but there was still residual concerns. Lord Chris Holmes and others nationally have greater concerns about the impact that shared space scheme can have on visually impaired pedestrians.

Prior to the scheme on Fishergate the concentration of road traffic accidents occurred at the traffic signals, but the early indications are that the scheme has now halved the accident rate. There is also anecdotal evidence that the Fishergate scheme is also having positive economic benefits on the viability of Preston's high street, with fewer vacant units.

However a remaining concern is the impact this scheme and future ones may have on the mobility of some visually impaired people. C-ITS is seen as the way of addressing this issue whilst maintaining the ethos and aesthetic objectives described in LTN1/11.

Although the project is currently focused on Fishergate and, possibly later, the UCLan campus area, a successful demonstration will lead to wider use across Lancashire and provide a transferable national solution.

B3. The Financial Case – Project Costs

Table A: Funding profile (Nominal terms)

£000s	2016-17	2017-18	Total
<i>DfT Funding Sought</i>	£19k	£95K	£114k
<i>LA Contribution</i>	£0.5k	£2.5k	£3.0k
<i>Other Third Party Funding</i>	£0.5k	£2.5k	£3.0k

Notes:

- (1) Department for Transport funding must not go beyond 2017-18 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

- a. The bid is a collaborative project with the University of Central Lancashire. The bid proposal is for a total of £120k with a 5% local contribution. This would be £3000 from LCC and £3000 from UCLan. The LCC contribution derives from an existing capital budget already approved to deliver UTMC systems, which this project is applicable to.
- b. A letter of support from UCLan is appended.
- c. No other funding applications have been made for this scheme or project or variants thereof.

B5. The Financial Case – Affordability and Financial Risk (maximum 300 words)

The project costs derive from 3 elements; LCC staff time and project advisory costs (£20k), UCLan C-ITS engineering including staff time and hardware (£60k) and the on street pilot implementation (£40k). The LCC staff time and project advisory cost risks are mitigated by careful project management including clear roles and responsibilities set out at the project initiation. LCC have a good understanding of the civil engineering infrastructure required for the pilot test, they have recently completed the Fishergate scheme. The UCLan engineering element, being a new development exercise, has more uncertainty and therefore more contingency has been applied to this element. However, with this being a short 12 month project the opportunity for cost overrun is minimised.

Cost overruns would be dealt with by reducing the option development testing of the project and or seeking financial support from UCLan and LCC budgets.

B6. The Economic Case – Value for Money

The benefit of better pedestrian crossing facilities for visually impaired people based on a willingness to pay was \$3695 per year in 2002. (source: Towards an Accessible City: Empirical Measurement and Modelling of Access to Urban Opportunities for those with Vision Impairments, Using Remote Infrared Audible Signage - James Robert Marston 2002).

This equates to £2468.15 at 2002 (sources: ukforex.co.uk, Wikipedia)

A figure of 2.9% per year has been applied to account for inflation between 2002 and 2015 (source: Bank of England inflation calculator)

Yearly benefit per visually impaired person is therefore approximately £3621

For an example, in March 2015 a series of classified pedestrian surveys were carried out in the UCLan campus area and the estimate is that 35 visually impaired people per day could make use of better crossing facilities.

The yearly benefits therefore approximate to £127k.

For the pilot on street test £40k has been allowed for, which equates to a BCR value of 3.2 for one year only. Over a more usual 15 year period the BCR value would be significantly higher.

B7. The Commercial Case (maximum 300 words)

For LCC's procurement activities they would use their existing framework contracts to secure traffic systems hardware if required. This would be through the existing contact with Dynniq. Civil engineering related activities associated with the pilot trial will be undertaken by LCC's in house operational highway delivery service. UCLan for their hardware procurement would seek 3 competitive quotes if required.

It is not envisaged that any formal tendering process will be required in this project/scheme.

*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 300 words)

The appended technical description of the C-ITS project explains the detailed work packages to be carried out. The appended Gantt chart then shows how these work packages fit into the overall programme. This shows that a critical element is the key safety process before the on street trial is undertaken.

A letter of support from John Fillis, Lancashire County Council's Cabinet Member for Highways and Transport is appended.

B9. Management Case – Governance (maximum 300 words)

Please refer to the appended project organogram and a brief outline of the experience that each team member brings.

LCC's Phil Barrett (Director of Community Services) is the SRO with Martin Porter the Project Manager. Phil Barrett will attend key project meetings and make decisions particularly in regard to the safety of the pilot testing. Martin will coordinate the activities of the wider team members with the UCLan team.

LCC's Jeannette Binns will advise and coordinate the project team from the visually impaired user perspective.

Dr Darren Ansell leads the Intelligent System Group at UCLan and will be the Engineering Manager for the project. He will be supported by Dr Wasiq Khan and Mr Ben Watkinson on the C-ITS development.

Lindsay Humblet, Ben Hamilton-Baille and Chris Oakley's roles are to advise and guide the project on shared space design integration.

Chris Webb will advise the project from the traffic systems supply side and the on street infrastructure installation.

B10. Management Case - Risk Management

Risk that software is difficult to interface with existing traffic systems infrastructure. Consequence is that additional systems integration time is required. Probability is medium, impact is low as there is low dependence on existing systems in our proposal. Risk mitigated by use of new low cost additions sensing to inform the system.

There is a risk that requirements demand the use of unconventional software development methods, such as formal methods, AI-based approaches, and artificial neural networks. Consequence is that limited number of staff are suitable to work on the project. Probability is high, impact is low. Mitigated by use of a team of highly qualified post- doctoral researchers who are well published in the area of AI based software development.

There is a general risk that personnel with critical skills needed for the project cannot be retained due to their own career progressions or aspirations. Probability is low, impact would be high. Mitigated through structured personal development planning and performance reviews with key staff members.

There is a risk that blind/visually impaired may trip or fall during trials of the technology. The risk of collisions with vehicles. Probability low, impact high. A risk assessment and method statement will be undertaken. Mitigated by carefully controlled trials with assistants to prevent accidents.

A risk register covering the specific risks will be updated through the project's key meetings.

Please ensure that in the risk register cost that you have not included any risks associated with ongoing operational costs and have used the P50 value.

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

SECTION C – Monitoring, Evaluation and Benefits Realisation

C1. Benefits Realisation (maximum 250 words)

Appended is a logic map for the C-ITS Lancashire project. A benefits realisation report will be produced prior to the completion of the project. This report will also set out the potential future path for further development or deployment.

UCLan's Innovation and Enterprise group would also assist in developing the path for C-ITS technology application with potential further research activities, spin offs and patent protection.

C2. Monitoring and Evaluation (maximum 250 words)


The appended table 1 on the C-ITS technical report sets out milestones and deliverables which include D1 Demonstration and Test Report and D2 Conference paper and journal article submission. The evaluation report would focus on the C-ITS technical development, the user interface design and on street trial.

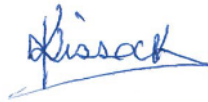
Ben Hamilton-Baille undertakes many presentations nationally and worldwide on street design and this project would be captured in his presentations. Likewise the same is for Chris Oakley and Lindsay Humblet who work nationally and therefore would disseminate this project activity to a street and highway design audience that would not normally be involved or aware of C-ITS.

The aspiration is that, if successful, the technology infrastructure would be embedded into the highway changes as part of UCLan's highway Masterplan proposal so that long term testing and evaluation could take place.

It is proposed to finish the project with a seminar presented to a wide interest audience.

SECTION D: Declarations

D1. Senior Responsible Owner Declaration	
As Senior Responsible Owner for C-ITS Lancashire I hereby submit this request for approval to DfT on behalf Lancashire County Council and confirm that I have the necessary authority to do so.	
I confirm that Lancashire County Council will have all the necessary powers in place to ensure the planned timescales in the application can be realised.	
Name: Phil Barrett	Signed:
Position: Director, Community Services	

D2. Section 151 Officer Declaration	
As Section 151 Officer for Lancashire County Council I declare that the scheme cost estimates quoted in this bid are accurate to the best of my knowledge and that Lancashire County Council	
<ul style="list-style-type: none">- 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: Neil Kisson, Director of Financial Resources	Signed:
	

Submission of bids:
The deadline for bid submission is 5pm, 30 September 2016 .
An electronic copy only of the bid including any supporting material should be submitted to: TRAFFIC.COMP@dft.gsi.gov.uk