

Prospectus:

SMART LOCAL HIGHWAYS & AV LIVE LABS

August 2018

ADEPT

The Association of Directors of Environment, Economy, Planning & Transport

FOREWORD

Neil Gibson, President of ADEPT

Executive Director, Transport Economy Environment, Buckinghamshire County Council



Eighteen months ago ADEPT and its Commercial Partners set off on a journey. We aimed to discover not only how innovative technologies could future-proof the local road network in local places, but also how to speed up adoption in a fragmented system.

Digital innovation and smart data use has the potential to revolutionise our localities and its highways system, improving roads, network management, and user experience as well as contributing to the UK's future success in the global economy.

We found that the sector has a clear ambition to deliver digital innovation and uncovered a multitude of exciting initiatives and best practice. Despite this, it was apparent that even with the determination of ADEPT members to transform and innovate; progress would still be slow and piecemeal without proactive intervention. The major pressures experienced by local highways authorities such as constraints of scale and organisational cultures delay both adoption and scale-up at that critical local level.

This is where I strongly believe ADEPT can add value, by acting as an advocate and catalyst for intervention.

Over the last 6 months we've been working closely with our Commercial Partners to develop three prototype projects to harness the power of data, develop a knowledge aggregator and run integrated 'live labs' in local areas.

Co-funded by the Department for Transport, we are inviting applications for the **Smart Local Highways and AV live lab** in what is a fantastic opportunity to test new, innovative, intelligent solutions without fear of failure, to learn, share and develop.

One of the core principles underlying this entire research programme is that everyone benefits. Whether from 'doing' or 'observing', we want all applicants to share in our results; using data, sharing knowledge and to be able to deploy proven technological innovation.

We have designed a streamlined application process, requiring only a short Expression of Interest and determining the final selection via a 'Dragons' Den' style approach. To ensure applicants have the very best chance of success, we will be providing ongoing technical support throughout the process. Gaining backing from colleagues is essential, so we encourage you to secure the support of Elected Members and other local key partners too.

I would like to thank our Commercial Partners; Atkins, EY, Kier, Ringway and O2, plus the Department for Transport for their continued intellectual and financial support.

ADEPT members are amongst the most committed innovators in public life and I look forward to taking this project from theory to practice and to receiving applications for this exciting project.

FOREWORD

Steve Berry OBE

**Head of Highways Maintenance, Innovation, Resilience,
Light Rail and Cableways Branch**



The Department for Transport is pleased to be working with ADEPT and its Commercial Partners in this exciting initiative as now is the time to rethink how we manage and maintain our local highway network.

Britain's transport system is on the cusp of a major transformation. New technologies and business models, such as automated vehicles, electric cars, unmanned aerial systems and mobility on demand, have the potential to dramatically improve the safety, efficiency, competitiveness, accessibility and sustainability of how we travel and use our transport networks.

Asset management plans and strategies have begun to transform how highway authorities approach local roads maintenance. The introduction of incentive funding in England, outside London, has encouraged local highway authorities to plan their maintenance but we now need to consider how we can use new innovative technology, data sources and tools to improve how authorities and the wider sector, including contractors, can make investment and operational decisions, as well as how we better engage the user.

Mobile applications already allow residents to report potholes allowing authorities to quickly respond to road maintenance needs. We now live in a world where there is a demand for greater openness, transparency, fast-paced technology and instant experience feedback. Mobile apps, such as TripAdvisor, feedback mechanisms in the health service and social media is providing information that easily allows people to have simple easily understood data at their fingertips on a service. Whilst we are not necessarily advocating a 'TripAdvisor approach' to roads, we are conscious that we need to get better at helping taxpayers and communities see easily that councils are providing the best they can with resources. The time is now for us all to be working together to seek how we can embrace these advances in data collection, technologies, navigation systems, communication and mobile technologies and robotics to change the way we manage and maintain our local highways.

Our local roads are the lifeblood of the country's infrastructure but potholes and maintenance continue to be one of the biggest concerns to users, residents and business. It is right that we start these trials with ADEPT and highway authorities to ensure that we can work and collaborate with all parties, not just the highways sector but road users and their associated groups, charities, politicians, think tanks, business groups and other interested parties to see how we can make our roads future-proof and utilising the various new technology and materials to do this. This should include seeking what you can offer to make the change that is needed to bridge the gap between our traditional engineering excellence and the experiences that users are facing day-to-day.

Further details are below but we hope this initiative will help us assess the suitability of solutions allowing for a higher efficiency and availability of use, with potentially lower maintenance costs and we expect those successful to create and to explore, amongst others, infrastructure options for:

- New highway materials
- Kinetic roadways
- Weather warning roads
- Smart and dynamic networks
- Self-healing / de-icing surfaces
- Travelling tunnel advertisements
- Solar roads
- Innovative energy generation
- Charging lanes
- Automated bicycle storage
- Automated, space saving car parks
- Utility corridors

Background

ADEPT is a membership based voluntary association comprising around 75 'Place' Directors from county, unitary and metropolitan local authorities, together with 15 Local Enterprise Partnership and 15 Corporate Partner members.

In 2017, ADEPT, with its Commercial Partners undertook collaborative research addressing the fundamental question, ***“How can the adoption of innovative technology be accelerated for the construction, maintenance, operation and use of highway assets in the context of increasing demand, greater financial pressures and deteriorating highway assets?”***

An intensive work programme followed including desk-based research, surveys and workshops, cumulating in two reports which were published in the Autumn, ***‘Digital innovation: the route to the highways of the future’*** and ***‘Planning SMART Places: unlocking growth and place making through innovation’***.

Their findings can be broadly summarised as follows:

- ADEPT members, partners and central government have a clear ambition to create SMART Places, where digital innovation and innovative approaches are adopted to shape places that are sustainable, accessible and promote well-being.
- Much of the research, thinking and innovative action to date has been focused on SMART Cities. In addition, the spotlight has largely been on digital infrastructure and the opportunities presented by 'big data'.
- The ADEPT members and partners interviewed feel that SMART approaches being taken in the UK, whilst driving change, are often piecemeal and service-specific.
- Local authorities and their partners are experiencing some real challenges in bringing forward innovative proposals.

To develop this agenda further, ongoing financial and intellectual support was secured from the project sponsors and Commissioning Board in 2018, namely the Department for Transport (DfT), Atkins, EY, Kier, O2, and Ringway, with a keen focus on rapidly developing three 'prototype' projects;

1. Getting to grips with data
2. Running smart local highways and AV live labs
3. A knowledge hub 'aggregator'

Consultants WSP were appointed to work with the Commissioning Board to drive the projects forward. Two rounds of workshops for ADEPT members were held during Spring 2018 as well additional one-to-one discussions.

The workshops and discussions concluded that ADEPT members' activity in the SMART infrastructure space varies hugely between at scale deployment of Internet of Things (IoT) devices through to small scale, localised pilots and tests of new technology, materials or deployment methods. Whilst there are also a number of larger scale projects piloting Connected and Autonomous Vehicle technologies, these trials have largely been on the Strategic Road Network or in urban / city environments.

Following agreement between the Commissioning Board and DfT, this document presents our ***Prospectus*** for the ***Smart Local Highways and AV live labs*** project and associated ***call for participation***, which provides real opportunities for agile innovation, at scale.



Our mission and goals

Transportation, particularly highways, is on the cusp of a revolution, a revolution led by new materials, methods of manufacturing, digitisation, the electrification of transport and the use of robotic and autonomous technologies. These changes, along with others in the shape of new services and the vehicles using our networks could lead to significant challenges, but they also provide us with huge opportunities. We would like to know more about the needs of the road user and the types of things they, as the ‘customer’, would like to see developed for the future. This would also help to demonstrate that the sector is listening.

Technology alone cannot solve many of the problems our sector faces, but it can help deliver significant operational efficiencies, improve network reliability and resilience and, importantly, improve the experience of those who are dependent upon our roads. By carefully considering today's problems alongside tomorrow's challenges, in an agile and innovative way, we can develop the foundations for future local roads.

The Government's Industrial Strategy describes the four grand challenges; Artificial Intelligence and data, ageing society, clean growth and the future of mobility. These challenges all impact on highways, as an industry we must recognise and engage with them.

The application of technology in the highways space is long established. Highways England and authorities in urban conurbations have made numerous investments over recent years in innovative information, traffic control and other systems to deliver improved operational outcomes and customer experience.

Air quality and low carbon agendas are beginning to influence all parts of the transportation and mobility landscape. The electrification of vehicles is gathering pace with potential impacts for energy generation, storage and use in all transportation applications, inevitably impacting the shape and form of road based movement and its infrastructure.

The recent emergence of connected and autonomous technologies has led to significant investment with several area-wide and corridor pilots to demonstrate technology and potential benefits. However, these pilots have generally focused on deployment in city and urban environments or highly trafficked corridors such as on the Strategic Road Network, with few actively considering local road networks, particularly those in rural areas. The rapid development and deployment of autonomous vehicles will place new pressures on highways authorities to make provision for new forms of mobility which will impact infrastructure design and operation.

There is a wide range of innovation in the use of new technologies including new road surface materials, digital networks and sensors, and construction / maintenance techniques but many of these have not been deployed at scale or been subject to commercial, real world rigour.

Another possible avenue is to consider the social value of having well maintained highways and a successful asset management strategy. The importance of this could be considered from the perspective of the needs of local residents and businesses, rather than just within the prism of functionality or innovation.

Technologies, such as automated pothole repair, have thus far failed to be trialled at-scale in the UK, a missed opportunity given the scale of the issues facing most of our ADEPT colleagues. The pre-fabrication of assets within the highway realm is also unusual in the UK, potentially missing out on significant cost and time savings. Whilst there are academic developments with regards to new materials and techniques, such as self-diagnostics and self-healing, these have also traditionally taken time to be deployed in ‘live’ situations due to a reliance on traditional solutions.

The trajectory towards a data-led approach for highways through BIM, rapid prototyping and artificial intelligence within the design process provides for new opportunities to deploy SMART infrastructure. With digital connectivity being the next major shift in highways there are options to use intelligent devices to help better manage, monitor and maintain assets within a digital eco-system. Through the adoption of an intelligence-led approach to asset design, deployment and management, significant benefits could be realised in terms of efficiencies, network resilience and customer experience. Third party companies are data-hungry and may be able to commercially capitalise on data from such SMART technologies.

There are significant needs and pressures that could be satisfied by the application of new technologies at scale, to deliver operational, resilience and reliability benefits now.

Therefore, considering these challenges the mission of ADEPT and the DfT for the smart local highways and AV live labs project is simple;

“Through deployments at scale we will achieve a step change in the normalisation and uptake of new techniques, materials and solutions in the local highways realm to meet the needs of today and tomorrow”.

We have also defined a number of **goals** vital in achieving our objectives and importantly providing a framework for enabling replication across the UK and elsewhere, namely demonstrating;

- **Attention to a specific need and / or problem**
- **Focus on outcomes rather than (just) technical capabilities**
- **Improved maintenance regimes and revenue cost savings**
- **Minimised capital costs through innovative deployment**
- **Improved network performance, reliability and resilience**
- **Improved customer experience**
- **Reduction in infrastructure / asset costs**
- **Ageing assets being replaced / supplemented by ‘SMART’ alternatives**
- **Active private sector collaboration**
- **Wider benefits within and outside the highways sector**
- **Enhanced speed of delivery**
- **Open and interoperable to create innovation eco-systems**
- **Potential scalability to other locations, UK and internationally**

To do this, in co-operation with the DfT, we are launching a competition to **develop up to six smart local highways and AV live labs** with innovation, collaboration and agility at their core. We recognise that there have been numerous competitions over recent years and therefore with the support of DfT we are adopting an accelerated ‘Dragons’ Den’ type approach.

ADEPT members are encouraged to develop and submit an initial Expression of Interest. These submissions will be reviewed and feedback provided with the aim of encouraging as many ADEPT members as possible to participate in the ‘Dragon’s Den’ stage. Senior representatives, along with their partners, will be expected to make their case, to a judging panel. Up to six projects will then be selected for funded development work in 2018/19 with monitoring thereafter.

This project links closely with the ‘getting to grips with data’ initiative, which aims to capitalise on data and associated applications in the highways realm and the knowledge hub project which aims to provide a sharing platform for ADEPT members and wider industry.

The following pages describe the challenge and scope for the highways and AV live labs, the partnerships we expect to see, the competition process in further detail and our anticipated next steps.

To date, many ADEPT members have developed their own largely singular approaches to highway technology driven by their immediate needs, with in-house resources and in the absence of a cohesive, industry wide approach. These constraints aside it is notable that some of these deployments are already proven at scale with demonstrable benefits.

In parallel, sub-national and regional transport bodies are developing their own large-scale approaches to innovation driven by their operational and customer needs within their (generally) larger available capital and revenue resources.

Highways England has developed numerous technological solutions on their network and is investing heavily in pilots for connected technologies. However, these don’t generally extend beyond the Strategic Road Network thus creating ‘hard’ technological as well as administrative boundaries.

We fundamentally recognise that ADEPT members must balance day-to-day network needs and pressures (such as pot holes, surface water, network capacity and resilience as well as responsibilities under the TMA) with rising expectations surrounding both existing and emerging future technologies.

The rate of change of innovation is arguably outstripping the ability for many local authorities to deploy technology leading to a ‘wait and see’ approach in moving from traditional techniques and infrastructure. In addition, many local authority term

and other maintenance contracts aren't structured around the use of new technologies and or innovative solutions leaving little flexibility to make meaningful large-scale change quickly or easily.

Generally local highway authorities have generally been risk-averse to the use of new materials, techniques and technology due to risk of failure and associated re-instatement impacts on the network. Emerging pre-fabrication and modular techniques in adjacent industries such as housing and commercial developments have failed to gain traction in the highway sector.

Given the resource pressures (both funding and manpower), the pooling of knowledge and resources could enable new methods and models of delivery to help tackle perennial problems and prepare for the future.

Doing nothing is not an option

The use of traditional techniques and technology may offer increasingly less value for money and ultimately become obsolete, leading to missed opportunities.

Innovation in local roads is lagging behind the Strategic Road Network potentially creating a two-tier highway network, whilst doing nothing could be a catalyst for further divergence. A lack of inter-operability between local roads systems and those of Highways England, sub-national and regional bodies' systems fails to serve the needs of an increasing mobile society. Thinking around the Major Roads Network and how this interfaces with the Strategic Road Network could provide a touchpoint for integration and technological innovation.

Using connected devices to monitor assets and their performance not only provides real-time information but using machine learning techniques could derive operational insights and efficiencies hitherto impossible with manual techniques. Given the rate of technological change and the emerging electric, connected and autonomous agenda it could be argued that local road networks aren't particularly future ready and being constructed using traditional techniques.

With the myriad of potential 'SMART' solutions available there is an inherent risk of adoption of proprietary solutions which are either superseded by emerging standards or reduce interoperability possibilities with other systems or networks. A coherent approach for local roads would help avoid unnecessary cost and redundancy.

To date there has been a failure to capitalise on opportunities to work with contractors, developers and other third parties to develop new business and operational models to achieve improved outcomes and efficiency benefits.

We recognise the ongoing pressures on ADEPT revenue budgets contrasted with the relatively availability of capital funding. Using technology and associated data to provide an evidential approach to maintenance regimes could help to not only reducing operating costs, but potentially delivering improved outcomes focusing effort where needed.



Recognising the challenges ahead

Clearly there are differing needs and priorities between ADEPT member authorities and differences in availability of resources to manage new programmes of work. We also acknowledge there may be limited flexibility within existing contractual structures to undertake innovative trials, especially where there are performance risk implications.

Similarly, existing design standards could be perceived as a constraint to innovation especially if risks are perceived in deviating from long established specifications. However, it can be argued that many of the assumptions that underpin our local roads were developed in an age which is vastly different from now and will be radically different from that which we face in the future.

We must not forget that the local road network performs an essential economic function enabling every trip that every person makes each day and we must not risk that functionality but equally we must recognise that how it is constructed, maintained and operated could be undertaken in a more efficient manner.

Acknowledging the risks and liabilities associated with any innovative project is essential, often providing learning and an iterative approach to development. We recognise that issues relating to potential failure and rectification are significant and could be an unwelcome distraction for any local authority, but the risk of doing nothing is greater.

Finally, the narrative, both politically and within the wider community, as to why such innovation is necessary and what the benefits could be needs careful consideration. Not just to achieve political support but to also positively engage communities within live lab areas to integrate the network with those that rely upon it.

It is with these matters in mind that we have developed a dialogue-led approach to this competition which provides support to ADEPT members right through the process, to help address any fundamental concerns and to provide the foundations for true innovation.

The following pages describe the **smart local highways and AV live labs competition** to address these challenges head on.



Highways and AV live labs scope

Proposals should encompass areas linking SMART infrastructure with people, the assets they use, the places they visit and the activities they undertake. Live labs should embed SMART infrastructure in the everyday, in a meaningful way that communities can engage with and understand. The broad scope is defined as follows;


- *Implementation of live lab application(s) in new settlements / developments, suburbs and towns including rural areas*
- *Using innovative, intelligent solutions to achieve a step change in the performance of all types of local roads*
- *Encompassing new materials, pre-fabrication and modular design*
- *Capitalising on digital technologies and data capabilities*
- *Supporting anticipated technology changes and future network usage such as electric, connected and autonomous vehicles*
- *Spanning all use cases (people and freight) on the network*

Proposals should include a suite of technological and innovative improvements to future-proof the local road network in the town(s) / corridor(s) selected. They should provide the foundations for the digitally connected transport and mobility changes envisaged over the coming years. The ‘live lab’ will demonstrate the ability of SMART infrastructure to contribute to emerging transport and mobility needs and address challenges specifically seen outside urban areas.

This will be achieved through the following **four broad themes** within which we **encourage creativity and innovation**;


Deployment of SMART materials

The deployment and sustained use of next generation materials (e.g. recycled plastic) in a local roads setting including highway, pavement and urban realm materials, innovative drainage solutions, lines, signs and other ‘highways’ assets to enable ‘future ready’ needs. It should be noted that this theme could include use of emerging self-healing and diagnostic technologies as well as off-site pre-fabrication and modular techniques.



Use of SMART communications

The use of emerging digital technology and communications, capitalising upon existing (and in some cases new) fixed assets (such as lighting columns and traffic signals) as ‘nodes’ to facilitate IoT applications including parking sensors, air quality and noise sensors, gully / drainage monitoring, public WiFi, traffic monitoring, weigh in motion etc., asset monitoring to be enabled as ‘plug and play’ systems to perform as an integrated part of a wider network. Deriving digital intelligence to improve operational and customer outcomes from such solutions is seen as key for this theme including the use of in-vehicle and other data.



Adoption of SMART energy solutions

Wide scale adoption of the generation, storage and charging technologies for electric vehicles (people, logistics and other community uses) including innovations such as solar paving (solar roads) in lightly trafficked areas and the use of energy infrastructure for core social functions (local authority fleets, social / health care and education). Kinetic roadways and utilising wind energy on the highways network could form part of the trial. This theme should address existing and potential future challenges particularly with regards to electrical resilience.



Enabling SMART mobility

The above three themes are all enablers for the next generation of transport and mobility solutions. Proposals should make provision (across all modes) for existing and emerging technologies and service models as well as downstream initiatives including autonomous vehicles for both people based and logistics use cases.



It should be noted that we expect to see the majority of these areas covered within an integrated set of interventions tailored specifically to **deliver identified 'future-proofed' outcomes** focused on local network needs. These include, but are not limited to;

<i>Reduced maintenance costs and whole-life cost reduction using new materials and techniques</i>	
<i>Reduced maintenance 'down time' across the project area / corridor</i>	
<i>Reduced instances of congestion and incidents</i>	
<i>Reduced noise impacts (during maintenance periods and generally)</i>	
<i>Improved network reliability and resilience</i>	
<i>Improved traffic flow</i>	
<i>Improved air quality</i>	
<i>Improved user / customer experience / perceptions and health</i>	
<i>Improved real-time network understanding (assets and their use)</i>	
<i>Improved citizen engagement</i>	
<i>Optimisation of network assets and whole system performance</i>	

Where possible we expect to see interventions that make the most of emerging materials, technology and services within a **digitally enabled eco-system** to provide **exemplar future ready infrastructure**.

In order to demonstrate the impacts and associated benefits of live lab solutions within proposals we expect **pre- and post-data collection, monitoring and analysis** to aid the **development of business cases** to support deployment elsewhere, in the UK and wider afield, as well as assisting wider commercialisation.

Importantly the smart local highways and AV 'live lab' is seen as a **knowledge sharing opportunity** with successful promoters agreeing to share their learning and insights with ADEPT members and the wider highways community, within the UK and on the international stage.

The following section sets out the **value-led partnerships** we would expect to come forward within live lab proposals.

Value led partnerships

Achieving a step-change in innovation within the local roads sector can only occur with a truly collaborative approach to delivery that recognises potential value and benefits between all partners.

A challenge mentality will be key to delivering scalable, commercialised outcomes and we expect participants to actively engage with stakeholders within and outside our industry including for the benefit of the live labs and wider learning. The following list is not exhaustive;

- DfT, BEIS, Innovate UK and the Transport and High Value Manufacturing Catapults
- Highways England and Network Rail
- Local Planning Authorities and Local Enterprise Partnerships
- Private sector business partners including developers (residential and commercial)
- The highways term maintenance community
- Technology companies
- The academic community
- The energy sector
- Adjacent industries such as the building and manufacturing sectors

We expect live lab proposals that specifically demonstrate the following;

- Collaboration between ADEPT authorities and their term maintenance providers to incentivise customer-focused outcomes with innovative forms of risk sharing
- Adoption of a collaborative approach with sub-national and regional bodies to enable wider cross-pollination of ideas, learning and insights
- Active and positive collaboration with other ADEPT members in the live lab programme and with those who are shadowing the project
- Demonstration of true partnership within ADEPT authority's organisations, with the private sector (including manufacturers, property developers and other industries) and importantly the education sector and academia
- An open approach to sharing learning / insights with ADEPT members, the DfT and wider industry in the UK and internationally
- Proposals must be scalable, demonstrate value for money, innovation and be directly relevant to other areas within the UK and beyond
- Live labs should showcase UK innovation and export potential

It is expected that DfT, with agreement by Ministers, will grant fund **up to six live lab proposals** with up to **£25m available in total across the live labs over the period to 2021**. Proposals that specifically address how that funding will leverage further contributions and investment, particularly from the private sector (including in kind contributions) and demonstrate how they will influence wider change will be judged as adding more value.

Suggested approaches could include;

- Term maintenance contractor contributions in terms of agile methods of working, demonstrable cost saving techniques and commercialisation advice
- Developer contributions such as innovative solutions to reduce local authority maintenance requirements, solutions to meet future mobility needs and place making
- Industrial / commercial contributions in the form of materials, products, data and skills to demonstrate innovation at scale
- Operator contributions in terms of new mobility services to demonstrate new eco-systems at scale
- Additionality with other funding streams (housing, education, healthcare etc.) already secured through demonstrable influence on designs and outcomes
- Innovation as part of potential invest to save cases using 'live lab' solutions

We also recognise that skills within the transport sector are changing and as such we are keen to see proposals that making linkages with local educational and academic establishments to further this agenda.

ADEPT is keen that the local roads network is a key enabler for the local economies and live labs are way of bringing this to life. Proposals which demonstrate cross sectoral benefits in terms of economic investment, enabling developments, improving place making and improving access to services (including improving health, and access to healthcare and education) would be received with interest.

It should also be noted that we would welcome proposals from ADEPT members working in partnership be that in adjacent geographic areas tackling cross boundary challenges or from authorities remote from each other with similar needs.

Where applicable the project(s) should support the ongoing ‘getting to grips with data’ projects or similar data-led initiatives already underway in local areas.

The following section describes the competition process.



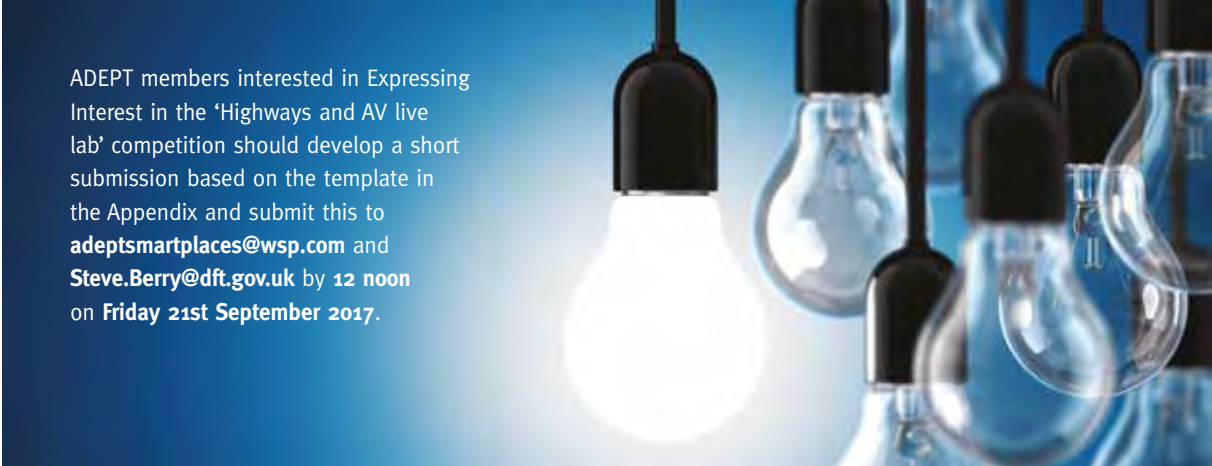
Smart local highways and AV live labs competition

The Smart local highways and AV live labs opportunity is envisaged as a means of demonstrating a step change in the way in which our industry embraces technological change for the benefit of ADEPT members, wider UK local authorities and our international peers. As such we have agreed an agile competitive approach to funding, one which has collaboration, trust and partnership at its core. The competition and implementation programme comprises the following broad stages;

- **Expression of Interest (6 weeks, closes Fri 21st September, 12 noon)** – following issue of this prospectus ADEPT members have 6 weeks to prepare an outline proposal using the template outlined in the Appendix. Advice will be provided to prospective applications during this stage via our consultants, details can be found in the Contacts section.
- **Initial review (week commencing Mon 24th September)** – Expressions of Interest will be reviewed by members of the Commissioning Board with support from our consultants. Feedback given to all participants with a view to refining and progressing as many submissions as possible through to the ‘Dragons’ Den’ stage. Confirmation of participation this next stage will be required from senior staff in both ADEPT authorities and their partners.
- **Dragon’s Den (week commencing Mon 22nd October)** – prospective teams will present their proposals to a ‘Dragons’ Den’ panel comprising representatives from the Commissioning Board partners. Presentations will be made by senior officers accompanied by appropriate portfolio holders and senior representatives from partner organisations including term maintenance contractors followed up by short questions and answers session. Presentation content will be judged by the panel and any further clarifications will be sought in writing following the event.
- **Selection of preferred live labs (late October to March 2019)** – up to six proposals judged as best meeting the goals stated earlier will be notified and invited to enter into a funded developmental stage. This will allow for proposals to be developed into a fully specified and costed programme of works with an associated procurement strategy. This stage will also include the specification of pre and post data collection, monitoring and analysis to demonstrate impacts and benefits of the live labs.
- **Procurement and deployment (April 2019 to March 2021, 2 years)** – following agreement of the specification and programme, appropriate procurement will be undertaken to enable deployment of agreed interventions.
- **Data collection, testing and analysis (throughout work programme)** – an essential part of the live labs application will be the comparative testing of interventions (versus do-traditional and other scenarios) and the quantification and analysis of impacts and benefits. Monitoring will be required to enable the development of exemplar business cases.

Throughout the programme, participants and their partners will be expected to share knowledge, learning and insights with ADEPT members and the wider community. Unsuccessful participants will be invited to shadow chosen live labs with a view to accelerating innovation across our membership.

This is an innovative and prestigious competition backed by the DfT. Successful applicants will receive support and encouragement to not only introduce innovation in all its forms to local roads, but to also tackle some of the legislative, regulatory and design challenges to unlock emerging technology at-scale. We will be providing support to potential applicants right through this process, details provided on the back cover.



ADEPT members interested in Expressing Interest in the ‘Highways and AV live lab’ competition should develop a short submission based on the template in the Appendix and submit this to adeptsmartplaces@wsp.com and Steve.Berry@dft.gov.uk by 12 noon on Friday 21st September 2017.

Appendix

Expression of Interest Template

(no more than 8 sides of A4 in total, 11pt Arial text)

Live lab title	Single line project title
Lead authority	Name of the ADEPT authority <i>(note: applications must be led by an ADEPT member)</i>
Owner & champion	Contact details for; a) Senior officer b) Political champion
Location(s)	Details of the proposed location(s) for the live lab. In the case of multiple ADEPT authorities teaming, please outline all
Elevator pitch	One succinct paragraph (no more than 8 lines) outlining the proposal
Short form proposal	Outline of the proposal no more than 4 sides of A4 , must include as a minimum; <ul style="list-style-type: none"> • Description of local needs to be addressed • Overview of live lab proposal and how it tackles these needs • Description of constituent elements and how they interlink • Overview of innovations in manufacture, deployment and operation • Overview of how the proposal enables a future ready approach • Description of interlinkages with other networks, systems and programmes • Overview of anticipated benefits and outcomes
Term contractor partner	Details of term maintenance contract and lead contact details
Educational / academic partners	Details of educational / academic partners, their role and contacts
Other partners	Details of any other partners, their role and contacts
Indication of scale	Outline of grant funding requirements with a high-level breakdown
Funding package, leverage etc.	Details of addition funding, leverage against existing programmes, private sector funding, contributions in kind etc.
Data, analysis and testing regime	Overview of pre and post data collection, monitoring and analysis to demonstrate impacts and benefits Overview of the proposed testing regime for live lab interventions against alternative scenarios
Approach to knowledge sharing	Overview of approach to knowledge sharing for; a) ADEPT membership b) UK local authorities c) International audiences
Approach to commercialisation	Overview of partners approaches to commercialisation of live lab solutions with the UK and to export markets

Contact and further enquiries

For further advice or enquiries please contact our consultants WSP.

A specific email address has been set-up for this competition, in the first instance please contact WSP and a member of the team will get back to you as soon as possible;

adeptsmartplaces@wsp.com

ADEPT

The Association of Directors of Environment, Economy, Planning & Transport

www.adeptnet.org.uk

