

SMART LONDON INNOVATION NETWORKS

Infrastructure Network

Challenge-led competition:

Utilities' shared asset location and monitoring

Competition pack



SUPPORTED BY
MAYOR OF LONDON

bre

Background

[BRE](#), in partnership with the [Mayor of London](#), has launched a challenge-led competition to encourage SMEs and entrepreneurs to come forward with technology that will help the capital's major infrastructure providers gain a shared understanding of the location and state of their underground assets.

Winners will earn the opportunity to pitch their innovations directly to organisations involved in providing key infrastructure across the capital, including UK Power Networks, National Grid and Thames Water.

The organisations are members of the [Smart London Infrastructure Network](#), created by the Smart London Board, in collaboration with the London Infrastructure Delivery Board, with the aim of supporting the Mayor of London's vision for 'smart city' innovation.

Infrastructure Network members are looking for smart solutions using digital technology which will allow them to accurately identify the location of their own and others' underground assets and/or determine their condition.

This knowledge will support them in their ambition to improve safety, and to reduce operational downtime, cost, environmental impact and disruption to London's residents and businesses during repair or replacement operations.

Reasons to enter

- Winners will be invited to pitch their innovation directly to the Infrastructure Network members, who represent some of the largest infrastructure providers in London. Infrastructure Network members are actively looking for new and innovative solutions to their real world challenges, which could be trialled in situ
- Winners will be profiled by BRE and may be included in the Mayor of London's Office, and other partner, publicity
- All entrants will be profiled on a pan European innovation database where buyers of clean technology are actively looking for innovative solutions.



Criteria

Infrastructure Network members are looking for solutions which will allow them to:

- A. Accurately identify the location of their own and others' assets – in terms of precise geographical position, depth, size, and asset components (e.g. joints, meters, valves etc) and/or
- B. Determine the asset condition - in terms of damage, degradation or failure to deliver the required operational performance.

Solutions could be software, hardware or a combination of the two and should meet the following criteria:

- Be market ready or close to market
- Use digital technology
- Be cost effective – in terms of both return on investment (ROI) for implementation and ongoing operational costs
- Deliver a safe solution for operator and the public
- Minimise destructive analysis of assets
- Cause minimal disruption, (ideally no dig) or reduce the requirement for additional excavations at a particular location
- Require low levels of user training to operate
- Deliver data in a format which is easily adapted and integrated into existing asset management and maintenance systems
- Provide solutions across all types of utility networks – in particular gas, electricity, water, telecoms - or able to be combined to provide a shared dataset
- Ensure no disruption to other utility providers during operation.

In addition, solutions should meet the criteria listed under either A, or B, or both.

A. Location mapping should

- a. Provide an accurate picture of ALL utility services in a particular underground location – i.e. gas, electricity, water and telecoms
- b. Quantify location, depth, size and route of assets
- c. Identify material (s) of construction
- d. Flow rate / current, i.e. operational status, where feasible.

B. Condition monitoring should

- a. Provide an indication of failure status (relating to the failure mode of the asset) – e.g. partial operation / leakage rate or catastrophic failure
- b. Enable the ability to predict issues eg understanding where the condition of the pipes highlights a likely failure in the future
- c. Enable fixed point monitoring or real time monitoring where feasible
- d. Allow for either physical or virtual inspection of asset (with a preference for non-intrusive technologies)
- e. Suitable for 1 or more utility networks – e.g. gas and water



Outcomes

The outcomes of an improved understanding of the Infrastructure Network members' underground assets include:

1. Reduced risk of injury to workers and members of the public
2. Reduction in accidental disruption to other utility assets during repair/ replacement operations – e.g. cutting through another's pipe
3. More effective planning of operations leading to reduced time and cost on site for planned or reactive maintenance activities
4. Improved operational uptime leading to improved customer satisfaction
5. Reduction in environmental impact – e.g. reduction in leakage or waste created by repair operations
6. Reduced public disruption (e.g. road closures / disrupted public transport routes / disruption to local businesses).

Submission selection process

After the competition closing date, entries will be reviewed by the BRE project team against the competition criteria. Successful innovators will be invited to pitch directly to members of the Smart London Infrastructure Network, including UKPN, National Grid and Thames Water.

Key dates

Competition opens: Friday 18 March 2016

Competition closes: Friday 29 April 2016

Pitch event with Infrastructure Network members: May/ June 2016.

Who should enter?

Responses are welcome from a wide range of organisations, including SMEs, universities, public sector bodies and sole traders, all of whom are eligible to compete for the opportunity to pitch their innovation to senior decision makers from organisations providing key infrastructure across the capital.

How to enter

We are working with Synoptica, who are managing and recording competition entries. You will need to register on their website and fill in an online application to enter the competition. By registering, you will be visible to hundreds of buyers actively searching for clean technology and community building solutions.

[Click here to enter the competition](#)



Frequently asked questions

Q Why should I enter?

- Winners will be invited to pitch their innovation directly to the Infrastructure Network members, who represent some of the largest infrastructure providers in London. Infrastructure Network members are actively looking for new and innovative solutions to their real world challenges, which could be trialled in situ
- Winners will be profiled by BRE and may be included in the Mayor of London's Office, and other partner, publicity
- All entrants will be profiled on a pan European innovation database where buyers of clean technology are actively looking for innovative solutions.

Q How will winners be chosen?

The solutions will be reviewed by the BRE project team and winners will be invited to attend a pitch event in London.

Q What are the assessment criteria?

The assessment criteria are provided above.

Q Will I receive feedback on my entry if I don't win?

If your innovation does not progress through the competition, we will contact you to let you know. Unfortunately, we cannot guarantee that you will receive feedback on your application.

Q Are the details of my solution shared with others?

Details of your submission may be shared with third parties for the purpose of the competition and other brokerage opportunities with innovation buyers. This information will be held by BRE and Synoptica, who may contact you in the future regarding other innovation activity.

NOTE: Submissions should only contain information which you are willing to share with third parties and should not include proprietary information.

Q How do I enter?

We are working with [Synoptica](#), who are managing and recording competition entries. You will need to register on their website and fill in an online application to enter the competition. By registering, you will be visible to hundreds of buyers actively searching for clean tech solutions.

Q What are the Terms and Conditions?

By entering the competition, you are agreeing to share information from your submission with third parties for the purpose of this competition and other brokerage opportunities with innovation buyers. In addition, when you register on the Synoptica website, you will be asked to agree to the Synoptica terms and conditions.

We are unable to guarantee that solutions will be demonstrated in situ.



About the Smart London Infrastructure Network

The Smart London Infrastructure Network is comprised of organisations delivering London's infrastructure services, primarily the utilities responsible for water, energy, telecommunications and waste management.

The Smart London Infrastructure Network supports the GLA's economic development and wealth creation aims, by helping to stimulate demand-led innovation and improve the environment through resource efficiency and social development. It has been created to support the Mayor of London's vision for 'smart city' innovation that addresses resource pressures whilst creating new economic and research opportunities. The network is a key commitment of the [Smart London Plan](#), developed by the [Smart London Board](#) and launched by the Mayor of London in December 2013.

About BRE

We are a world leading building science centre and the authority on all aspects of the built environment. We generate new knowledge through research that is used to create products, tools and standards that drive positive change across the built environment. We enable our government and private sector clients to meet the environmental, social and economic challenges they face by delivering higher performing, better quality, safer, more secure and more sustainable products homes, buildings and communities. We are owned by the BRE Trust, a registered charity, which funds research and education that advances knowledge of the built environment. We are committed to building a better world together. We are BRE. <https://www.bre.co.uk/>

About Synoptica

Synoptica is a web-based innovation discovery software that enables the world's leading brands to identify and adopt emerging technologies. By connecting corporates with the latest innovators, the software accelerates the marketisation of new products and services developed by startups, SMEs and researchers alike.

With over 5 years of experience with customers such as Engie, IKEA and Veolia, Synoptica offers tools to discover the best technologies from a global network of pre-market and market-ready solutions, as well as from a partnership community of accelerators, incubators, innovation hubs and universities spanning 67 countries. <http://www.synoptica.com/>

Who should I contact for further information?

For more information about the competition and for general enquiries, please contact Jackie Sharp Jackie.sharp@bre.co.uk

For technical assistance, or for help submitting your application on the Synoptica, website please email Aukse Ruseckyte a.ruseckyte@synoptica.com or call +44 (0) 7554 418702

