



Department for
Science, Innovation
& Technology

RyE·Tait
Consulting

Connected Places Technologies

Local Authority Communications and Consultation
Guide

Contents

PART 1: Background and Context.....	3
1. Purpose of this guide	3
2. About connected places	4
3. About connected places technologies	4
4. Public attitudes – evidence and needs	6
PART 2: Key Steps for Local Authorities	7
STEP 1: Articulate your connected places strategy	7
STEP 2: Clearly explain the use of people’s personal data	9
STEP 3: Provide appropriate cyber security reassurances.....	11
STEP 4: Build effective local community engagement.....	12
PART 3: Further Reading.....	16

PART 1: Background and Context

1. Purpose of this guide

This guide has been created with local authorities in mind. However, DSIT recognises that there are many other types of organisations that manage connected places. DSIT encourages all organisations deploying or considering deploying connected places or ‘smart city’ technologies to utilise this guide. Your feedback is welcomed and DSIT can be contacted at: secureconnectedplaces@dsit.gov.uk

The purpose of this guide is to provide your local authority with information and tools to help you better respond to the questions, concerns and interests of members of the public with respect to the development, implementation and on-going management of connected places and associated technologies.

This guide draws on insights from 2023 research commissioned by the Department for Science, Innovation and Technology (DSIT) that explored what members of the public want to know about connected places technologies and what is happening in their local area. It also covers the types of reassurances they need, particularly around aspects of data privacy and cyber security.

This guide is intended as a starting point for your local authority to help you develop plans for communicating and consulting with your local community about your connected places. It is not intended to be exhaustive or prescriptive.

At the end of each chapter, the guide signposts you to relevant sources of information, guidance and resources.



Links to key sources of guidance:

DSIT: [Secure Connected Places Playbook](#)

The Secure Connected Places Playbook has been developed to support local authorities when implementing connected places so they are as cyber secure as possible. This is in line with what is important to members of the public. It covers such topics as governance, procurement, supply chain management, and how to conduct a threat analysis.

NCSC: [Connected Places Cyber Security Principles](#)

The above guidance is designed to help your local authority build awareness and understanding of the security considerations needed to design, build, and manage your connected places.

2. About connected places

The National Cyber Security Centre (NCSC) defines a **connected place** as:

- A community that integrates information and communication technologies and Internet of Things (IoT) devices, to collect and analyse data to deliver new services to the built environment, and enhance the quality of living for citizens.

The concept of **connected places** expands upon that of ‘**smart cities**’.

Smart cities are predominantly urban environments deploying connected places technologies. The UK has a strong track record in developing and commercialising solutions and has fostered substantial innovations in digital technologies.

For example, London was one of the earliest UK innovators through its Oyster Card ticketless transport system, while Birmingham, Manchester, Cambridge, Bristol, Glasgow and Edinburgh are now recognised for their ground-breaking initiatives and thriving technology clusters and ecosystems.

Managers of connected places commonly include (but are not limited to) local authorities, but can also include regional government, transport authorities, planning authorities, energy departments, ports, university campuses, train stations, and airports. These examples fall outside of what is considered a ‘smart city’. Therefore, the umbrella term ‘connected places’ is used throughout this guide.

Connected places can provide a range of functions and services to citizens, such as improving safety, environmental monitoring, making public services more efficient and accessible, and – through doing so – boosting productivity and creating jobs.



Links to sources that help to explain connected places or smart cities:

[DSIT Infographic \(2024\) What are Connected Places Technologies?](#)

[DSIT Video \(2024\) Introduction to Connected Places](#)

[Department for International Trade \(2020\) UK Smart Cities Directory](#)

3. About connected places technologies

As highlighted in the NCSC definition, a connected place uses technologies such as a system of sensors, networks and applications to collect data to improve its operation. These technologies also help to develop public spaces by allowing managers of connected places to understand and evaluate changing demands and needs in infrastructure.

Specific technologies and services in the connected places ecosystem may be grouped as follows:

- Internet of Things devices (sensors and actuators) in a place-based context.
- Networks for data transmission, including WiFi, mobile networks, Bluetooth and IoT networks.
- Data aggregation for visualisation and insight.
- Whole stack solutions (e.g. across all the technologies involved in the delivery of connected places).
- Consulting, strategy and managed services.

Examples of functions ('use cases') of connected places technologies – not intended to be exhaustive – may be grouped as follows:

Critical infrastructure and utilities

This may include technologies such as crowd monitoring, to provide people with information on busy and quiet periods in town centres, or the use of smart local energy systems to reduce pressure on the grid.

Built environment efficiency and safety

The built environment may include such technologies as systems to monitor energy efficient street lighting, waste level sensors within public bins to better inform pickup schedules, and potentially facial recognition cameras that help to identify criminals and find missing persons.

Social care, health and wellbeing

To encourage safer living conditions for the more vulnerable, temperature and moisture sensors could be installed in housing, so that local authorities and care home managers can monitor and improve living conditions. Similar sensors can be used to help protect those in assisted living conditions, as they may be able to detect accidents and improve emergency response times.

Environmental monitoring

To monitor potentially high-risk environment areas, water level sensors may be implemented to relay important information about flood risks. Additionally, air quality monitoring could be undertaken to provide people with clean air walking routes around their local area.

Transport and new mobility solutions

To improve upon transport and commuting, the installation of smart traffic light systems could ease congestion on busy roads, and car park monitoring could indicate the level of free

spaces. Additionally, futuristic air transport solutions could be implemented, such as drones to make home deliveries or transport medical supplies to those who may have mobility issues.

DSIT is responsible for encouraging the secure and sustainable deployment of connected places technologies across the UK. Its policy work includes providing appropriate guidance and support to managers and suppliers of these technologies to help make systems more resilient to cyber threats.



Links to explainers about connected places technologies aimed at members of the public:

[DSIT Infographic \(2024\) What are Connected Places Technologies?](#)

[DSIT Video \(2024\) Introduction to Connected Places](#)

4. Public attitudes – evidence and needs

In 2023, DSIT commissioned Pye Tait Consulting to independently explore and understand public awareness and attitudes relating to connected places technologies, identify key concerns and how they could be addressed. The research involved several rounds of qualitative engagement with 37 members of the public spanning diverse backgrounds and characteristics.

Snapshot of the findings

The research found common perceived benefits of connected places technologies to be the following:

- Potential for improved convenience (especially in terms of transport around places)
- More effective monitoring and response times where there are problems (notably in the health and care sector)
- Delivering environment benefits (notably flood risk management and air quality monitoring)

Key public concerns about connected places technologies relate to transparency, such as why they are being implemented and how; what they comprise; who will have access or be in control of the resulting data; what types of data will be held and why. Other prominent concerns span how securely data are held, how securely individuals' privacy is protected, and the associated costs involved.

These various concerns signal a lack of public confidence in the deployment of connected places technologies, further exacerbated by individuals not knowing which specific

technologies are already being used in their own communities and if they are being used safely and securely.

Many members of the public would like local authorities to better inform them about certain aspects of how connected places technologies are implemented, would welcome greater reassurance that potential unintended consequences have been worked through, and would be interested in having more direct involvement in the development of their local places.

Additional outputs to help your local authority:

The research directly informed the development of two explainer resources (an infographic and video) aimed at members of the public to respond to their questions and concerns about connected places technologies. Links to these resources can be found in Part 2, Step 4 – ‘Build effective local community engagement’.



Link to the public attitudes research report:

[DSIT/Pye Tait Consulting \(2024\) Public Attitudes to Connected Places](#)

PART 2: Key Steps for Local Authorities

This chapter provides a starting point for your local authority to consider how to improve the visibility of connected places within your local community, raise awareness about the technologies involved, including important cyber security arrangements, and communicate and consult with members of the public about the use of technologies and the data they collect.

STEP 1: Articulate your connected places strategy



If your local authority does not already have a strategy in place for the development, deployment and management of connected places technologies in your area, you should consider preparing one.

You should also consider creating a publicly accessible version available and proactively communicate this to members of your community. More about building effective local community engagement can be found in [STEP 4](#).

The information you produce and share should help members of the public understand what connected places technologies are being deployed in your local area, the benefits, potential drawbacks (and mitigations), and how the technologies and resulting data are being securely managed.

This should include tailored information for residents in more rural or remote areas who may not receive as wide a scale of technological implementation – a point mentioned by focus group participants in the public attitudes research.

Whilst not intended as an exhaustive list, the information you share about your connected places (including technologies involved) should include the following:

1. A clear statement of need for connected places technologies in your local area.
2. What your local authority's priorities are associated with connected places technology deployment and why.
3. Which types of connected places technologies are already in operation and which are expected to be introduced in the future (with timescales for implementation).
4. Features of connected places technologies, i.e. how they work and fit together as part of a system.
5. Where in your community the technologies are already implemented/expected to be implemented.
6. Benefits of the technologies i.e. intended outcomes, what they will bring to the local area, how they will help to improve the quality of living, and particular benefits they can bring for those with physical or mental health conditions.
7. Possible cyber security risks associated with the technologies and mitigations in place to reduce the exposure to a possible cyber attack.
8. How the technologies are being tested, piloted and verified to ensure they work as intended and are as cyber secure as possible.
9. What cyber resilience measures are in place to detect, monitor, respond to and recover from a possible cyber attack.
10. How data collected, processed, stored and shared from the technologies will be protected.
11. How the technologies are being funded, any council tax implications, opportunity costs involved and potential implications for other local services.
12. Potential negative outcomes and possible unintended consequences, such as job displacement.
13. A full risk assessment associated with the deployment of connected places technologies, along with mitigating actions, reassurances and disaster recovery arrangements to show these have been thought through.

Where **facial recognition cameras** are being deployed in your local area, it is important to make the following clear in response to typical concerns raised by members of the public, particularly that such technologies risk contributing to a 'Big Brother' society:

1. Purpose and rationale for installing facial recognition cameras.
2. A published contact point for access to information and complaints.
3. Where they are/will be installed.
4. How the technology works and what types of data they collect.
5. What happens to the collected data/how the data are used.
6. How the data are **never** used, such as to monitor the movement of individuals where there is no legitimate reason for doing so.



Links to guidance about the use of facial recognition cameras

Surveillance Camera Commissioner (2020) [Facing the Camera](#)

The above information provides good practice and guidance for the police use of overt surveillance camera systems incorporating facial recognition technology to locate persons on a watchlist, in public places in England and Wales.

STEP 2: Clearly explain the use of people's personal data



Connected places technologies can gather a variety of data, including people's personal data, in different ways. Members of the public need reassurance about:

- How these technologies collect data.
- How their personal data are used and stored.
- That arrangements in place are in accordance with the law.
- The privacy and data rights they have in relation to collected data.

As a manager of connected places technologies, your local authority must follow the law on what data you collect, control and process, including any personal data that can potentially identify a living person.

For example, your local authority needs to have clear privacy statements in place, clarify the data you hold and its purpose, and ensure that only trained individuals handle personal data.

You must also protect people's legal right to privacy. Data privacy is a very important consideration when deploying connected places technologies, especially as suppliers may export and store data outside of the UK as part of their service.

Links to existing guidance relating to data protection law are provided at the end of this section.

In response to the needs and concerns of members of the public with respect to connected technologies, your local authority should make the following clear.

1. Types of data (including personal data) collected by connected places technologies – particular attention should be given to any special category data, such as genetic, biometric and health data.
2. Whether or not members of the public have the right to opt in or opt out of their personal data being collected.
3. How your local authority manages and processes the collected data, including:
 - a. How personal data are used, including for what purpose.
 - b. How personal data are **never** used, such as 'selling on'.
 - c. How personal data are confidentially stored and for how long.
 - d. Who is in charge of the data; any sharing arrangements with third parties (what is shared, how, when, and with whom) and the role of automation in this process
 - e. Further information about all organisations that have access to personal data, including the data and cyber security standards they have in place, and their track record in data management, to help build trust among the public.
4. If/how members of the public are given access to the collected data and in what form, for example flood warnings, notifications about busy or quiet periods in town centres etc.
5. How the collected data are acted upon to help realise and improve connected places, for example where air quality sensors detect pollution levels, what your local authority does with this information and its end purpose.
6. Provide appropriate reassurances to members of the public with respect to any personal data collected, associated safeguards and people's privacy and data rights – in accordance with the Data Protection Act 2018 and UK General Data Protection Regulation (UK GDPR).

IMPORTANT NOTE: The above points are in addition to the minimum steps your local authority must take to ensure your organisation complies with data protection law.



Links to information about data protection law and privacy

The Information Commissioner's Office (ICO) has produced the following information and guidance aimed at organisations with respect to data protection compliance.

[An overview of the Data Protection Act 2018](#)

[The benefits of data protection laws](#)

[UK GDPR Guidance and Resources](#)

[A guide to individual rights](#)

[Special Category Data](#)

[Data sharing in local councils – six steps to take](#)

STEP 3: Provide appropriate cyber security reassurances



Government guidance sets out clear cyber security responsibilities for managers and suppliers of connected places technologies, which includes local authorities. These are covered in detail within the resources signposted at the end of [STEP 1](#), above.

For example, the NCSC Connected Places Cyber Security Principles states that it is important for local authorities to:

1. Understand the potential cyber security risks of a connected place.
2. Reduce the exposure of technologies to attack
3. Have in place good cyber security governance and skills.
4. Ensure that any suppliers meet your requirements for which your local authority is to remain accountable
5. Monitor for any data leaks or attacks in order to act quickly.
6. Understand your legal and regulatory requirements.

In response to the needs and concerns of members of the public with respect to the cyber security of connected places technologies, your local authority should do the following:

1. Provide adequate cyber security reassurances to members of the public, including the arrangements and tools you have in place to keep data secure, potential vulnerabilities (including human error), and what safeguards and fail safes your local authority has in place.
2. Make clear what accreditations/certifications your organisation holds relating to cyber security, such as Cyber Essentials, Cyber Essentials Plus, ISO 27001 etc.
3. Explain how your local authority – and any third parties responsible for controlling or processing personal data – follows and adheres to cyber security principles to ensure secure connected places.
4. Set out what actions your local authority would take in the event of a data breach, along with the potential implications and remedial actions that would likely follow.

Suggested ways of carrying out these actions are set out in [STEP 4](#).



Links to further resources covering cyber security within connected places

DSIT: [Secure Connected Places Playbook](#)

NCSC: [Connected Places Cyber Security Principles](#)

STEP 4: Build effective local community engagement



Most members of the public are not aware of the concept of connected places or how they operate, including the types of technologies involved. That said, some are familiar with the term 'smart cities'.

Existing research suggests that once this understanding is established, individuals can be keen to know more about what is happening in their local area and that this is in their interests. As understanding builds, so too can concerns relating to their privacy and data security (see steps 2 and 3).

These factors make it important for your local authority to communicate with members of the public in ways that will help them to receive accurate and helpful information about connected places technologies.

Through regular information sharing, especially where there are material changes to connected places technologies, this will help to:

- Keep member of the public sufficiently informed and reassured.

- Ensure fuller and more accurate understanding of connected places technologies.
- Help to ensure that connected places technologies have the buy-in of communities.
- Strengthen trust between communities and your local authority.

Ways of communicating and consulting with members of the public

Your local authority should consider how best to communicate with members of the public about connected places technologies to keep them sufficiently informed, involve them in decision-making, gauge their support for certain plans, identify aspects that are not well-received, determine how to overcome these obstacles, and deliver the right solutions for your area.

Suggested communications and consultation activity might include some or all of the following (not intended to be an exhaustive list):

1. Information sharing:
 - a. Online information, for example a dedicated connected places area on your local authority's website.
 - b. Social media postings.
 - c. Letters, newsletters or brochures delivered by post to people's homes, for example with council tax notifications.
 - d. Posters in public places.
 - e. E-newsletters or updates distributed via digital mailing lists.
 - f. In-person community engagement events, such as council meetings.
 - g. Sharing of educational tools or reports.

Consider (where data protection allows) publishing the data being collected (such as pollution data, or information on car parking availability), to show members of the public the specific data being collected, and how they might find it useful.

2. Consultations: Some members of the public wish to be actively involved in local decision-making, for example to share their opinions on proposals or suggest ideas. Such consultation activity could include:
 - a. In-person events and public gatherings with online joining option, for example so members of the public can voice their concerns, have questions answered, and even to vote on certain aspects of connected places technology deployment.
 - b. Remote consultations, for example so members of the public can respond to priority proposals in writing, via questionnaires etc.

3. Trial runs and piloting – to test attitudes towards certain technologies, or to study their deployment among a select cohort over a limited period of time.
4. Evaluations – to examine how well certain connected places technologies are working in practice, along with the difference they are making (outputs, outcomes and impact).
 - a. Should be undertaken in line with government guidance on public sector evaluations and associated methods, including the [Green Book](#) (appraisal and evaluation in central government), [Magenta Book](#) (what to consider when designing an evaluation) and [Aqua Book](#) (guidance on producing quality analysis).
 - b. Findings should be proactively shared with local communities to ensure continued buy-in and trust of the direction of travel.

Tailoring communication

Communications aimed at members of the public should be:

1. **Transparent** – Open and honest picture of what is happening, including as much relevant information as possible.
2. **Straightforward** – Information can easily be overwhelming, so communications should be clearly structured, with ease of navigation and avoid overly technical language or jargon. As such, it should be informative but concise, make appropriate use of visuals to help explain and simplify concepts and systems, and (where possible) include ‘short read’ and ‘longer read’ versions depending on how much time people can spare.
3. **Accessible** – Information should be communicated in ways that can be easily accessed and understood by individuals from diverse backgrounds, a wide range of characteristics and varying levels of pre-existing knowledge about technology and IT literacy.
4. **Include an opportunity to for dialogue:** Your local authority should provide a contact point so that members of the public can easily ask any questions about connected places technologies.



Links to guidance on community engagement

The Local Government Association (LGA) has developed an online Comms Hub comprising resources to help local authorities develop and deliver more effective communications.

[Comms Hub – Communications Support](#)

[Building Council and Place Narratives](#)

[Resident Communications](#)

See also PART 3 – Further Reading – for case studies of connected places in action, including examples of community engagement activities.



Links to connected places resources aimed at members of the public

As outputs to the 2023 Public Attitudes to Connected Places research (see PART 1, section 4) DSIT has produced two explainers about connected places technologies aimed at members of the public. Your local authority is encouraged to share these links with members of your community, taking into account approaches to communication and consultation set out above.

[DSIT Infographic \(2024\) What are Connected Places Technologies?](#)

[DSIT Video \(2024\) Introduction to Connected Places](#)

PART 3: Further Reading

The following case studies provide a variety of examples of connected places in action, including guidance that may be helpful and transferrable.

The content below is taken/adapted from the source material available via the hyperlinks.

We are eager to promote best practice. If you believe that your connected place would make for a useful case study, please contact: secureconnectedplaces@dsit.gov.uk

Case Study 1: [Birmingham Council Digital City Programme](#)

The programme was established to provide institutions, communities and businesses with the digital infrastructure, data platforms and enablement initiatives required to thrive in the future, from citywide fibre and 5G connectivity to digital twins, data sharing and support for community initiatives. In a rapidly digitalising world, the local authority saw this as vital to supporting the city's businesses and communities to succeed and grow.

The programme engaged widely with stakeholders and the public and the linked joint article between the Catapult and Jacobs explains how that took place. Key to this was taking a place-based approach and partnering with communities to co-design and oversee the projects being built.

Case Study 2: [Smart Perth and Kinross](#)

Perth and Kinross smart city strategy involved their Open Data Platform. This online platform contains data collected from their connected places, including Electric Vehicle (EV) Charge Station usage, Superfast Broadband availability, and Air Quality data. The local authority has outlined how it plans to move towards an '[open by default](#)' policy, for data publication.

Case Study 3: [Oldham Aims High with Healthier Housing](#)

The above resource highlights work the work of the Connected Places Catapult to support Oldham to engage widely and pursue community-based retrofit of ageing housing stock.

The local authority and its delivery partner, Carbon Co-op, were keen for more private dwellings in the region to reduce their climate impact, while also improving the wellbeing of residents living in poorly insulated or heated homes.

The project involves investigating options for the procurement of new financial models for retrofit installations, identifying funding options and exploring ways of increasing the involvement of local supply chains in the delivery of services. The project will help to develop and test a model that the Catapult can hopefully scale up for other locations.

To unlock retrofit and support community resilience in the face of climate change, it is important that a wide range of groups are involved – from tenants, landlords and homeowners to community organisations, investors and policymakers.

The Catapult has also produced the [Retrofit 2050 report](#) to support the collective imagining of alternative and desired futures.

Case Study 4: [We Make Camden](#)

In 2018, Camden's communities said they felt proud to live in Camden, they loved the vibrant social mix, cultural and creative heritage, green spaces and strong local identity. But they felt much of what was special about Camden was under threat from rising house prices, deepening inequality and concerns about crime. Camden residents wanted more of a say over the future of their communities – they had power, energy and ideas that needed to be valued and supported.

Recent years have seen huge changes in approaches to working together to solve common problems with progress in tackling unemployment, building new homes, providing opportunities for young people and caring for the elderly. Through these activities, Camden has become a stronger, braver and more connected community.

We Make Camden represents a shared promise to protect what is special about Camden, involve every person in solving the problems they face and to stay optimistic about what the community can achieve together. It involves a User Centred Design (UCD) approach, which refers to processes, activities and tools aimed at creating a deeper understanding of users and their goals.

The first project was installed in Spring 2021 and installations continued throughout 2021 and 2022.

Case Study 5: [Station Innovation Zone Playbook and Strategic Guide](#)

This guide sets out how the Connected Places Catapult worked with a range of stakeholders to develop a shared vision for Bristol Temple Meads station, and then sets out how others could do similar work to build consensus.

The guide highlights actions, and critical enablers that can unlock the acceleration of innovation across UK stations more widely, to enable a transport system fit for the future.

By exploring principles for effective innovation, it also highlights practical next steps for stations on the way to reaching the 'future station'.

Case Study 6: [Promoting Drones for Good](#)

The 'how to' guide provides an effective communications framework aimed to driving public acceptance of increased drone usage in UK airspace.

The guide includes ways that local authorities can develop their messages about this type of technology. Topics span security and law enforcement; commercial parcel delivery; keeping people safe; use in the infrastructure, construction, agriculture and mining sectors; filming for leisure; transport of medical supplies and traffic monitoring.