Street Hubs
Beyond connection

Supporting local councils with
digital street communication

Street Hub Product Statement

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Beyond connection

BT are continuing to push public connectivity forward with our move to Street Hubs – a sleek, modern answer to the demands of a digitally connected, converged-media society.

We have made great progress so far, with over 960 Street Hub units live across the UK. Local Authorities across the country use Streets Hubs to meet key challenges head-on such as upgrading local infrastructure, tackling the digital divide, and freeing the high street from unnecessary furniture.

With Street Hubs, we are further transforming the payphone estate by making streets smarter, with ultrafast Wi-Fi, public messaging, and better mobile connectivity. We are making them safer with ready emergency services. And we are making them more sustainable, with sensors allowing for 'smart city' planning and reduced street clutter.

Serve your citizens and gain greater insights into your streets for targeted improvements – all at no extra cost.

What is a Street Hub?

- **Street Hubs are free to use, fully accessible community assets connecting and improving local streets in urban areas.** At no cost to taxpayers or end users, Street Hubs provide communities with an unprecedented suite of essential urban tools:

- **Ultrafast public and encrypted Wi-Fi**

- Powered by **100% renewable carbon-free energy**

- **Inspected weekly and cleaned at least every two weeks**, monitored 24/7

- **Free phone calls**

- **Display community and emergency** (i.e. police) awareness messaging

- **Ability to house IoT sensors** such as air quality, traffic etc.

Contributing to the community

We are committed to ensuring that Street Hubs make a positive contribution to the public realm as well as the communities they are in.

- Street Hubs are smaller than comparable street furniture, and their installation facilitates and **funds the removal of up to two existing BT payphone kiosks**, giving back valuable pavement space for each installation

- **876 hours of free council advertising** per unit per year

- **Community notice board** with over 1,000 hours of content per year – the Street Hub team can work with local groups to promote events and activities

- **Discount advertising for local business groups** (such as BIDs and Chambers of Commerce) and their members through our Street Hub Partners Programme

- Business rates for each location are paid when requested by the council, ensuring Street Hubs **make an ongoing financial contribution to the local area**

Community feedback

Street Hubs are helping to improve streets and public spaces across the UK, as well as helping to better connect local communities.

"We have always been a city with an eye for opportunity and believe the range of free services the Street Hub 1s provide is a significant contribution to the Greater Manchester Digital Strategy. As a city, we plan to continue to encourage and support digital innovation which strengthens businesses and investment."

Sir Richard Leese
Leader of Manchester City Council

"By providing facilities for people to make free calls, access free WiFi and information and charge their phones, we move one step closer to becoming an attractive modern city where people are proud to live and work."

Councillor Chris Hammond
Leader of Southampton City Council and Cabinet Member for Clean Growth & Development

"We're delighted to be on Street Hub 1s. At Childline we're always looking at new ways to increase our reach and help as many young people as we possibly can."

Grania Hyde-Smith
National Services Communications Manager for Childline

Our approach

Our approach to planning is to be collaborative with councils wherever possible, working closely with relevant stakeholders to identify suitable sites for Street Hubs and to select which payphones are to be removed.

Once the appropriate permissions have been gained, we progress with removals and installations with the minimal possible disruption to residents and businesses.

Activation is as automated as possible to minimise the time our engineers spend setting-up and checking the units are ready for service.

We welcome the opportunity to collaborate on all stages of the rollout in an area wherever possible.

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Street Hub design

Street Hubs are free-standing structures featuring digital HD display screens on two sides. The screens display content at 10-second intervals, both the commercial content that funds the service as well as a wide range of local community and council content.

The two screens automatically dim at night to 600cd/m2, following daylight hours and in accordance with the levels set for this type and size of screen (those under 10m) by the Institute of Lighting Professionals, Professional Lighting Guide 05 2015: The Brightness of Illuminated Advertisements. This minimises disturbances to residents in the evening.

There is a video camera above each screen. These are not currently connected or used in the UK but are ready to deliver community benefits, after consultation and notifying the public and stakeholders through multiple channels.

Our Wi-Fi in detail

Street Hubs connect their communities to the fastest and most robust free public Wi-Fi service in the UK, 1Gbps within 150m. Full fibre connectivity enables speeds up to 13.9[1] times faster than standard fixed line home broadband and can handle large numbers of connected users without any reduction in speed.

An omnidirectional outdoor Wi-Fi access point at the top of each Street Hub is connected directly to the fibre broadband network, with co-channel interference mitigated by directing Wi-Fi signals away from neighbouring access points. Our full fibre solution allows capacity upgrades by orders of magnitude (e.g. 1Gbps to 10Gbps) without street works.

Signing up is simple – a one-time email address registration allows automatic connection whenever a user is in range of an active Street Hub, subject to MAC Randomisation not being enabled on user devices. Our customer-first policy means we do not sell email addresses on and have no pop-up adverts when users reconnect. Content filtering also prohibits access to adults-only websites.

Interactive tablet

Every Street Hub includes a fully accessible interactive tablet that provides a series of icons that give users access to:

- Local council services
- Local weather information
- FAQs and instructions.
- One touch connection to four national charities for support

Sessions timeout after 30 seconds of inactivity or when selected, wiping all user sessions clean. The ring-fenced system **does not allow open web browsing.**

Free calls for everyone

Street Hubs allow users to make free calls. Calls aren't time-limited, but almost all have lasted no more than a few minutes as people use them to call friends, family, local services, taxis, etc... unlike payphones, Street Hubs do not include or need a handset, nor accept incoming calls.

Providing capacity and mobile coverage with small cells

Small cell mobile infill meets the increasing demand for connectivity in the UK, particularly useful in busy urban areas where it is needed most and installing mobile antennae is difficult.

Street Hubs boost 4G and 5G with installed small cells, improving coverage and capacity. Residents, local businesses, and visitors get a fast, reliable connection for calls and internet access. Your citizens can enjoy mobile gaming, virtual reality, and video streams wherever they are.

Useful real-time information

We are currently running real-time information from a range of sources, including local weather and transport information. LBC content displayed on the unit shares up-to-the-minute news with local communities, enhancing the outdoor experience.

In the future we are looking to create relevant community content with open APIs. Similarly, we happily work with local authorities, transport providers, and others to determine what real-time information is most useful to the area and how it can be integrated.

For example, in London we display real-time Transport for London (TfL) tube status information. We are also working with TfL to explore how to incorporate other transport information to help people get around the city.

A platform for community and council content

The rotating content on each Street Hub includes a ring-fenced allocation for community content provided by the local council and community.

Each local authority is provided with 5% of screen time on each Street Hub to promote and educate, equivalent to 876 hours per unit or 438 hours per screen.

This content would be scheduled and (where needed) developed in partnership with BT and Global, and can tell residents and visitors about local services, local events, and news, as well as warnings and public notices.

Street Hubs designers also create 'house content' throughout the year relating to key events and holidays. Recent examples include supporting the local council elections through encouraging residents to register to vote, free events during school holidays, London Pride, Black History Month, and a diverse editorial calendar throughout the year, supporting our vision for a 21st century community noticeboard.

Street Hubs are more than an advertising screen – they are a key point of reference for local information and **an asset to the community.**

Advertising for businesses of all sizes

Street Hubs represent **the latest in advertising platforms** – an affordable, accessible digital advertising solution that specifically targets Street Hubs close to small businesses.

The Global sales team (responsible for all 'paid for' messaging on Street Hub screens) is set up to **work in partnership** with small and medium-sized enterprises, letting them use the screens to reach audiences and drive business growth.

This advertising revenue lets us provide all our services free of charge, and further rollout of Street Hubs.

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Our Global team have increased the accessibility of Street Hubs in two ways:

Programmatic connection

Global have connected Street Hub to DAX, their programmatic platform. This allows Demand Side Platforms (DSPs) to purchase individual ad
slots automatically.

Automated scheduling

Global are connecting the scheduling of Street Hub directly to their inhouse booking system. This allows key business partners who use API-enabled platforms to easily book and execute complex
and flexible schedules.

Global's award-winning Data Planning team manages G-IQ, a data management platform that is used to ingest first and third-party data to prove the efficacy of our products and the value of the audience. Using trusted data sources and intelligent mapping tools we can plan effective campaigns.

Their unique position as a media owner of channels like Outdoor, Radio and Online allows for more creative scope. For example, it is seen innovative multiple-media campaigns deliver both digital Outdoor messaging coordinated with Radio commercials.

Content standards

Street Hubs are funded through the display of advertising in conjunction with other council and community content.

Our Global team coordinate with advertisers, brands and specialists on commercial content, guided by:

- Committee of Advertising Practice (CAP) Code of Practice
- Guidance for Digital Roadside
- Advertising and Proposed Best Practice from Transport for London
- Non Broadcast Advertising and Direct Promotional Marketing (CAP) Self Regulation Guidelines
- and resources from other authorities as necessary.

For full specifications of our screens please refer to page 15, 'Digital Display Screen Technical Specification'.

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Safer Communities

Wherever a Street Hub is installed we work with local stakeholders like councils and the police to ensure they're a positive contribution to the area. We're committed to addressing the few users in limited locations who abuse this service.

Emergency messaging

Back-end systems allow us to control screens dynamically through our head office. Groups such as the police can quickly display emergency and community awareness messaging – see our case study from Camden for an example.

In the event of an emergency or major event, regular content can be replaced with urgent, useful messaging alerting the public to major incidents and offering advice.

As each Street Hub is addressable, we can give specific instructions on individual screens steering people away from a particular area or providing alternatives to travel.

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Combating anti-social behaviour

Street Hubs are operated in accordance with the Street Hub Anti-Social Behaviour Management Plan that was developed with assistance from the police and a number of local authorities.

Automatic anti-social call blocking technology uses anonymised data to identify suspicious call patterns and phone numbers. Identified numbers are blocked on Street Hubs across the UK, while still allowing genuine users to benefit from the free phone call service.

Depending on circumstances, other measures can be taken including further such as reducing call volumes.

Recommendations from groups like the police may mean quicker implementation of measures, for example temporarily restricting mobile calls

where a Street Hub has been misused to buy illegal drugs. Subject to internal processes, the police can 'whitelist' a specific number where there is an operational need, i.e. involved in an active investigation.

People can contact StreetHub@bt.com to report technical issues, antisocial behaviour involving a Street Hub, or to claim their number has been flagged in error. Their case will be considered in consultation with the police and local council where appropriate. This option will be highlighted on the screen when a call is attempted to a restricted number. Emails sent from police.uk or .gov email addresses will be treated as a priority.

Should it not be possible or convenient to send an email, it's possible to call the Street Hub helpline on 0800661610 (open 24 hours 7 days).

As BT is designated by OFCOM as a Universal Service Provider of public call boxes, any decision to restrict phone service will need to be made exclusively by BT. Decisions to change any service will be based on details provided by police and local authorities:

- A description of the issue and when it occurred / occurs
- Location of the Street Hub(s) involved and how they contributed.

Changes will be viewed as temporary (typically 3 months, or 12 in high-risk areas) and reviewed later.

Environmental Performance

All Street Hubs are **powered by 100% renewable carbon-free energy**, with energy efficiency prioritised throughout the design process.

- A state-of-the-art LED-backlit LCD screen that consumes approximately 60% less power than Cold Cathode Fluorescent Tubes
- Screen filters reflect light reducing the need for high power, noisy cooling systems typically seen in competing solutions
- Industrial-grade components designed to function at high temperatures lower the need for cooling without compromising performance
- Passive design for cooling, i.e. aluminium casing for better thermal dissipation
- High-efficiency power supplies providing 80% or better efficiency, compared to 65-70% of typical components.

IoT Capability

Street Hub has been designed with the future in mind. It has its own dedicated IoT cabinet which can be used to enhance urban connectivity and services. We continually look for new ways to create smarter, more connected cities across the UK which improve the experience of our users. We are currently trialling various air quality sensors housed in our IoT cabinets, as well as monitoring CO2 levels.

Additional smart city sensors and data collection for community benefit

Street Hubs have the capability to collect and display useful, real-time data and insights from communities to help government officials and local decision makers get more from the space around them.

As with the air quality trial highlighted above, the modular nature of Street Hub enables improvements to evaluate and invest in tools/techniques to collect meaningful insights, i.e.:

- Counting pedestrian numbers
- Measuring traffic congestion

- Bike and vehicle counting
- Environmental factors like sound and light.

Continued investment allows 'smart cities' to improve public well-being and health with data. This kind of **data is most powerful when shared**, so we would look to make these insights available to communities as permitted by law and within our Privacy Notice and Terms of Use.

Installing a Street Hub

Several steps are involved in the installation of a Street Hub once approval is obtained from the relevant local authority:

1. **Preparation works**
   Before work starts each site is surveyed to identify services and other underground infrastructure (e.g. water or gas pipes) so our teams do not disrupt services.

2. **Safety comes first**
   Our deployment teams will set up barriers to restrict access to the work area. These are based on permits obtained from the local authority.

3. **Payphone removals**
   Street Hubs are often installed on the same location as an existing BT payphone so the first works you may see are teams disconnecting and removing existing kiosks.

4. **Preparation of foundations**
   Each Street Hub sits on a metal base plate, part of a concrete foundation, 30-40cm below ground level with ducting to allow connection to fibre and power. It's designed to easily withstand being pushed by individuals or high winds and fall slowly if struck by a vehicle – with internal sensors notifying us of the event.

5. **Connecting services**
   Power is connected by the Distribution Network Operator (DNO). Backhaul for the unit will be through a 5g mobile solution. Fibre may be connected by Openreach for Small Cell delivery. Both power and fibre may need ducting run from nearby infrastructure, such as broadband cabinets. The teams responsible for this work will typically receive work permits from the local authority in accordance with an area identified at survey.

6. **Lifting the Street Hub into place**
   Each Street Hub is typically lifted by small crane from a flatbed truck onto the metal baseplate about 1-3 days after the building of the foundation. At this time any remaining barriers are removed.

7. **Connecting services**
   Once installed, our engineering teams do the necessary testing and configuration to go live – typically within two weeks of installation, but sometimes longer.

Materials

Maintainability and durability were key considerations in the design, with regular cleaning and servicing planned – please see 'Management, maintenance and operational strategy' section below. High-quality materials ensure longevity, holding up to abuse and diminishing scratches.

- Galvanised mild steel structure, powder coated external grade stainless steel or complete aluminium design
- Painted powder coated cladding – attractive, durable, easy to service, and cooling
- Displays glazed with anti-glare glass to reduce reflection and increase image quality
- RF transparent radio compartment for small cell

The modular design of exterior and interior components makes servicing simple and economical.

Digital Display Screen Technical Specification

The technical specification of the two digital display screens are as follows.

Screen Panel Type:	LCD
Screen Dimensions:	95cm wide x 167cm high (75 inch in portrait)
Screen Area:	**1.586m²**
Resolution:	3840 x 2160 UHD
Maximum Daytime Brightness:	5000 cd/m² (Typ.)
Maximum Night-time Brightness:	**600 cd/m2 (Typ.)**
Contrast Ratio:	1200:1 (Typ.)
Display Colours:	10bit (D) 1.07 Billion Colours
Viewing Angle:	178/178 degrees
Lamp Type:	LED
Operating Temperature:	-10~+50°C
Sunlight Readable:	Yes

The proposed usage for the screens has been set in accordance with Transport for London's (TfL) policy document 'Guidance for Digital Roadside Advertising and Proposed Best Practice – 2013'.

In addition to the above conditions, each Street Hub location has been assessed against and would comply with the following additional criteria from the TfL guidance.

- There would be no conflict with any traffic signs, signals, crossing points, schools, hospitals or low bridges.

- No sightlines or clearances would be affected.

- The TfL guidance states that 'Static digital advertising is likely to be acceptable in locations where static advertising exists or would be accepted.' There are existing traditional advertisement on similar sections of the respective roads in many cases.

- The geometry of the roads is not complicated and the driving conditions are not considered to be demanding or complicated.

- The advertisements would not be experienced by a driver in conjunction with any other similar digital advertisements.

- As per the TfL guidance, the advertisements would be located as close to the driver's natural eyeline as possible and facing as head-on to the traffic as is practical.

The lighting levels noted above are within the levels set for this type and size of screen (those under 10m²) as set by the Institute of Lighting Professionals, Professional Lighting Guide 05: The Brightness of Illuminated Advertisements.

Management, maintenance, and operational strategy

BT is responsible for the management of Street Hub services with each unit physically inspected weekly across the estate.

Inspection regimes

The Street Hubs are visited every two weeks for cleaning, by hand and with pressure washers. The materials used make this process easy with defined materials and processes. Whilst cleaners are on site, they check for damage and ensure the tablets and screens are working.

In addition, our in-field quality inspection teams visit at least every two weeks on an alternative schedule to our cleaning team, performing several checks including (but not limited to):

• Full walk-around with supporting photos to check for damage, graffiti and black screens

• Functionality checks to test calls and Wi-Fi

• We can also send out emergency visits if reported as necessary by internal

sensors.

Monitoring and repair management

Street Hubs are monitored remotely 24/7, our primary mechanism to spot faults with the above local inspections ensuring the effectiveness of this monitoring.

Once identified, we have processes to resolve issues within agreed service levels. Most will be resolved within three working days, with safety and power issues having a more rapid resolution target than cosmetic issues like graffiti.

Future upgrades

We plan to make changes as needed to address identified faults or to improve services. Whilst some may involve physical attendance at the unit, the majority will be done remotely via software upgrades. All updates are rigorously quality assured before release.