

Procurement-Ready Brief

Pedestrian footfall and public-realm monitoring for councils and BIDs

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A supplier-neutral brief for councils, business improvement districts (BIDs), combined authorities and smart-city teams buying pedestrian footfall, occupancy or public-realm monitoring. It is written so that a project officer can lift the scope wording, requirement rows and acceptance criteria straight into a specification or request for quotation, and score responses on evidence rather than on brochure claims.

What this document is

A scope template, 32 scoreable requirement rows across eight sections, a compliance and permissions checklist, pilot and acceptance criteria, an evaluation weighting, ten questions to put to every bidder and a referenced source list. Each requirement row states the requirement, why it matters and the evidence to request, with a blank score column.

Who it is for

Town-centre, economic development, highways and active-travel officers; BID managers; smart-city and digital teams; information-governance and DPO functions; procurement and legal teams reviewing the final specification.

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This brief is guidance for public-sector buyers and is not legal or procurement advice. Confirm the procurement route with your procurement team and data-protection conclusions with your DPO.

1. Define the decision before the technology

Monitoring projects fail when the brief asks for "footfall data" without saying which decision it must support.

State, in one sentence per use case, the decision the data will inform and who will act on it. This sets the measures, the sites, the reporting cadence and the accuracy you actually need.

Typical use case	Decision it supports	Measures to specify
Town-centre and high-street performance	Where to target investment, events and marketing; evidencing recovery	Pedestrian counts by direction and hour; weekday/weekend and year-on-year comparison
BID reporting and levy-payer value	Demonstrating impact to members; renewal ballot evidence	Counts per zone, event uplift versus baseline, dwell or return-visit proxies where lawful
Public-realm or regeneration scheme	Before/after evaluation for funders	Baseline period of at least several weeks before works; same count lines after completion
Events and crowd management	Staffing, stewarding and safety interventions	Live occupancy against thresholds; alerting; peak entry rate
Active travel and mixed-use streets	Space allocation between pedestrians and cycles	Separated pedestrian and cyclist counts where the sensor supports classification

Scope template. Copy and complete:

- Sites: number of locations, street or asset names, and a map or grid reference for each count line or zone.
- Measures: counts in and out by direction; occupancy for bounded areas; optional classification (pedestrian, cycle) only where needed.
- Hours and duration: continuous 24/7 or defined hours; pilot length; contract term and extension options.
- Mounting: permitted assets (lamp columns, building façades, existing CCTV poles), owner consents required and who obtains them.
- Power and connectivity: mains, switched lighting circuits, battery or solar; cellular, council network or LoRaWAN.
- Outputs: dashboard access for named users, scheduled reports, CSV export, API access and open-data publication rights.
- Governance: DPIA owner, data controller and processor roles, retention period and publication of privacy information.

2. Requirement rows

Score each row 0–3: 0 no answer, 1 asserted, 2 evidenced by the bidder, 3 independently verified.

A. Accuracy and validation

#	Requirement	Why it matters	Evidence to request	Score
A1	State the counting accuracy for each proposed site type, the conditions under which it was measured, and the method used.	Headline accuracy figures are often measured indoors at a single doorway and do not transfer to open streets.	Validation report with method, sample size, date and site conditions; a named reference site of similar geometry.	
A2	Commit to an on-site validation against a manual or recorded ground-truth count during the pilot.	Only your own sites prove fitness for purpose.	Written validation plan: sample hours, peak and off-peak periods, who counts, pass mark.	
A3	Describe how counts are corrected or flagged when a sensor is obstructed, moved or offline.	Silent gaps and drift corrupt year-on-year comparisons.	Data-quality flags in the export; example of a gap report; alerting workflow.	
A4	Handle groups, prams, wheelchairs, cycles and people lingering on the count line.	Mixed street traffic is where low-grade sensors fail.	Test footage or results for each scenario; stated behaviour for cycles.	

B. Privacy and surveillance compliance

#	Requirement	Why it matters	Evidence to request	Score
B1	Process video or imagery on the device and transmit only anonymous counts or metadata.	Minimises personal data and the scope of the DPIA.	Architecture diagram showing what leaves the device; data-flow description.	
B2	Confirm that no facial recognition, biometric identification or tracking of individuals across sites is used.	Keeps the deployment proportionate and avoids special-category processing.	Signed statement and product documentation; configuration evidence.	
B3	Provide the information needed for your DPIA and support Surveillance Camera Code of Practice compliance where cameras are used.	Local authorities must have regard to the Code when operating surveillance camera systems.	Completed supplier DPIA input; Code self-assessment or equivalent evidence.	
B4	Supply signage and transparency wording and a retention schedule for any stored data.	Transparency is a legal requirement and a public-confidence issue.	Draft signage text; retention schedule; deletion procedure.	

C. Hardware and installation

#	Requirement	Why it matters	Evidence to request	Score
C1	State mounting height range, field of view and the count-line width covered by one sensor.	Determines how many units each site needs and the true cost.	Datasheet; site-specific coverage drawing from a survey.	
C2	State the ingress protection, operating temperature range and vandal resistance for outdoor units.	Street furniture is exposed to weather and interference.	Datasheet and test certificates.	
C3	Carry out a site survey and obtain or support all asset-owner and highway permissions.	Permissions are the most common cause of programme delay.	Survey report template; named responsibility for each consent.	
C4	Install with accredited operatives, provide RAMS and remove all equipment at contract end.	Work at height on the highway carries safety and liability duties.	RAMS example; insurance certificates; decommissioning method.	

D. Power and connectivity

#	Requirement	Why it matters	Evidence to request	Score
D1	Operate from the available power source at each site, including switched lighting circuits if relevant.	Many lamp columns are only powered at night.	Power design per site; battery hold-up time where needed.	
D2	Buffer data locally during connectivity loss and back-fill automatically.	Prevents permanent data gaps.	Stated buffer duration; demonstration of back-fill.	
D3	Include all SIM or network costs for the contract term.	Hidden connectivity costs distort price comparisons.	Itemised connectivity line in the price schedule.	
D4	Monitor device health remotely and alert on failure.	Early fault detection protects data completeness.	Screenshot of health monitoring; alert routing.	

E. Data platform, ownership and access

#	Requirement	Why it matters	Evidence to request	Score
E1	Confirm that the authority owns the count data and can export it in full at any time.	Avoids lock-in and supports open-data duties.	Contract clause; example CSV export.	
E2	Provide a documented API with no additional per-call or per-user charges.	Integration with existing dashboards should not carry hidden fees.	API documentation; licence terms.	
E3	Allow publication of aggregated counts as open data.	Supports transparency and reuse by partners.	Licence statement.	
E4	Host data in the UK or under an adequate transfer mechanism.	Required for data-protection compliance.	Hosting location; sub-processor list.	

F. Reporting and insight

#	Requirement	Why it matters	Evidence to request	Score
F1	Provide dashboards for named users covering hourly, daily, weekly and year-on-year views.	Different teams need different time horizons.	Live dashboard demonstration using real data.	
F2	Deliver scheduled reports suitable for members, boards and funders.	Reduces officer time spent compiling data.	Sample monthly report.	
F3	Support event and scheme comparisons against a defined baseline.	Core evidence for evaluation and funding bids.	Worked example of a before/after comparison.	
F4	Offer optional live occupancy alerts for events.	Supports safety management.	Alert configuration evidence.	

G. Security

#	Requirement	Why it matters	Evidence to request	Score
G1	Describe device hardening, firmware update process and credential management.	Street devices are network endpoints.	Security statement; patching policy.	
G2	Encrypt data in transit and at rest.	Baseline security expectation.	Technical description; certificates where held.	
G3	Provide role-based access and audit logs for the platform.	Controls who can see and export data.	Screenshot of user roles; log sample.	
G4	State any security certifications held by the named contracting entity.	Certificates held by a parent or partner may not cover the service offered.	Certificate with scope, entity and expiry date.	

H. Commercial and support

#	Requirement	Why it matters	Evidence to request	Score
H1	Offer a priced pilot with defined success criteria before full rollout.	Limits risk and proves value locally.	Pilot price, duration and exit terms.	
H2	Separate hardware, installation, connectivity, software and support in the price schedule.	Enables like-for-like comparison and whole-life cost.	Completed price schedule.	
H3	State service levels for data availability and fault response.	Defines what happens when things go wrong.	SLA with measurable targets and remedies.	
H4	Provide exit arrangements including data return and equipment removal.	Protects continuity at contract end.	Exit plan.	

3. Compliance and permissions checklist

Tick each item before contract award or before installation, as indicated.

Item	Owner	When
DPIA screened and, where required, completed and signed off by the DPO	Authority / DPO	Before award
Controller and processor roles recorded; data processing agreement in place	Authority / supplier	At award
Surveillance Camera Code of Practice considered where cameras are used	Authority	Before installation
Privacy notice and on-street signage wording agreed	Authority / supplier	Before installation
Procurement route confirmed under the Procurement Act 2023 and local contract standing orders	Procurement	Before tender
Asset-owner consent for each mounting point (street lighting, building owners, CCTV)	Supplier with authority support	Before installation
Highway and work-at-height permissions, RAMS and insurance checked	Supplier	Before installation
Retention period and deletion method recorded	Authority / supplier	At award
Open-data publication decision recorded	Authority	Before go-live

4. Pilot and acceptance criteria

Buy a validated pilot first and a rollout second.

- **Pilot scope:** one to three representative sites, including at least one difficult geometry (wide pavement, mixed cycle traffic or event space).
- **Duration:** long enough to capture weekday, weekend and at least one event or market day — typically four to eight weeks.
- **Validation:** compare sensor counts with a manual or recorded ground-truth count over agreed peak and off-peak sample hours; state the pass mark in the specification.
- **Data completeness:** set a minimum percentage of expected reporting intervals received, excluding agreed outages.
- **Usability:** named officers can produce the monthly report and a before/after comparison without supplier help.
- **Go/no-go:** rollout proceeds only if validation, completeness and usability criteria are met and documented.

5. Suggested evaluation weighting

Adjust to local priorities; keep explicit pass marks as well as weights.

Section	Suggested weight	Pass mark guidance
A. Accuracy and validation	25%	Any 0 score triggers clarification; no award without a validation plan
B. Privacy and surveillance compliance	15%	Any 0 score is a fail
C. Hardware and installation	10%	Survey commitment required
D. Power and connectivity	10%	—
E. Data platform, ownership and access	15%	Data ownership and full export are mandatory
F. Reporting and insight	10%	—
G. Security	5%	—
H. Commercial and support	10%	Priced pilot required

6. Ten questions to ask every bidder

- Where has this exact product been validated outdoors, and can we speak to that client?
- What exactly leaves the device, and could any of it identify a person?
- How many units does our busiest site need, and what drives that number?
- What happens to data when the connection drops for a day?
- Who obtains the lamp-column or building-owner consents, and what happens if one is refused?
- What will the total cost be over the full term, including connectivity, licences and support?
- Can we export all historic data in a standard format today, without a fee?
- How will you prove accuracy on our sites during the pilot?
- What is your fault response time, and how will we know a sensor has failed?
- What happens to the equipment and the data when the contract ends?

7. Sources

Information Commissioner's Office — Video surveillance (including guidance for organisations using CCTV): ico.org.uk/for-organisations/uk-gdpr-guidance-and-resources/cctv-and-video-surveillance/

Information Commissioner's Office — Data protection impact assessments: ico.org.uk — DPIA guidance

Home Office — Update to Surveillance Camera Code of Practice: gov.uk/government/publications/update-to-surveillance-camera-code

Surveillance camera code of practice: a guide for local authorities: gov.uk — guide for local authorities

Procurement Act 2023: legislation.gov.uk/ukpga/2023/54

Want help applying this brief to your sites?

Smart Urban Sensing offers a free site/data feasibility review: we look at your count locations, mounting and power options, data needs and governance, and tell you what is practical before you go to tender. [Book a site/data feasibility review.](#)