

Trust as Infrastructure

What the Next Wave of Urban AI Needs from Cities

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Where I speak from

National

- **Smart City Dialog (BMWSB)** – Germany's national platform for common-good-oriented digital urban development.
- **Modellprojekte Smart Cities** – 73+ funded municipalities; all solutions must be open source.
- **Hinge function** – translating EU frameworks down, carrying municipal practice out.

International

- **ISCN** – BMWSB initiative implemented by GIZ; exchange contacts in more than 40 countries.
- **Formats** – Online Advisory Programmes, Global Mixer, Spotlight, peer-to-peer, University Challenge.
- **Anchored globally** – Living-in.EU, OASC, and the U4SSC indicator work.

Not an institution speaking, but a discourse infrastructure – and that is what makes transfer possible.

It started with a fork

01 June 2025

At ISCN Online Advisory Programme #16, Helpful Places presents DTPR – an open standard for labelling technology in public space.

02 Mid-presentation

A participant from Germany opens the freely available material in the browser and forks it, on the spot, for their own sensor project.

03 Outcome

Probably the fastest solution transfer in the history of the format. No contract, no procurement cycle, no delay.

Trust tools travel – if they are open, legible, and carried by a network.

Source: ISCN Online Advisory Programme #16, “Communicating Smart City to citizens”, Smart City Dialog, June 2025.

The next wave: four shifts, one consequence

Generative AI

Drafts text, images, code and plans. Already at work in municipal back offices: reports, translations, replies to citizen enquiries.

Provenance: who actually wrote this?

Agentic AI

Systems that plan and act – routing, allocating, escalating, procuring – with limited human intervention in the loop.

Accountability: who decided, and can it be reversed?

Spatial Intelligence

Foundation models on imagery, sensor and geodata: land-use detection, simulation, forecasting at city scale.

Legibility: the model now reads the city faster than the city can read the model.

Citiverse

Interconnected, AI-powered virtual worlds synchronised with their physical counterparts, anchored in a shared spatial foundation.

Representation: whose city is being modelled, and who is missing from it?

As AI gains agency, it loses visibility – the sign on the sensor no longer describes what the system does.

Urban AI inherits a trust deficit

The inheritance

- **No stable ground of trust:** for many, “smart city” still means a technology-driven grip on the city whose effects stay opaque.
- **A reasonable reaction:** a first generation of projects staged technology as an end in itself and treated citizens as a data source.
- **The shift under way:** common-good-oriented approaches – in Germany, Modellprojekte Smart Cities since 2019.

What citizens actually ask for

- **Not primarily privacy fear:** the demand for communication grows out of an active interest in understanding what the technology does for them – and to them.
- **A right to information:** trust is therefore a question of comprehensibility, not of reassurance.
- **Consequence:** trust is not a state that is reached once and then administered. It is a continuous communication and participation task.

Trust is not a state to be reached and administered – it is a continuous communication and participation task.

Trust is negotiated on four levels at once

European frame	AI Act in force since 2024: a municipality operating an AI system is a deployer – duties begin at procurement. Living-in.EU declaration · Cities Coalition for Digital Rights.
National dialogue	BMWSB Smart City Dialog as the hinge: it translates the European frame into the federal context and gives 73+ model municipalities a stage and a repertoire.
Network exchange	ISCN – contacts in 40+ countries. Online Advisory Programmes, Global Mixer, Spotlight, peer-to-peer advice, University Challenge; U4SSC indicators for comparability.
Street level	The sensor mast, the sign, the QR code, the conversation. This is where trust is actually won – or quietly lost.

Each level translates the one above it – and none of them can substitute for the one below.

Interoperability is a trust question

The mechanism

- **Minimal Interoperability Mechanisms:** a set of lean, open specifications from OASC that secure a sufficient degree of interoperability between data, systems and services.
- **Standardised by the ITU as Y.4505:** solutions become replicable and scalable, innovation costs fall.
- **Explicitly against vendor lock-in:** dependence on a single supplier is designed out rather than negotiated away later.

Why it decides trust

- **Control:** a city that cannot exchange or extend a system has already handed over its own room for decision.
- **Continuity:** citizens are asked to trust an institution, not a supplier – so the institution must be able to keep its promise beyond one contract term.
- **Scale:** a disclosure standard only travels as far as the systems underneath it can interoperate.

Standards decide whether a city keeps the ability to explain, change and switch off its own systems.

From framework to street

Three quality-checked building blocks from the ISCN discourse – and what they teach about the conditions of successful communication.

Toronto

Helpful Places / DTPR

A nutrition label for technology in public space.

Symbol taxonomy plus a QR depth path, co-developed with residents and experts.

Porto

Porto Digital

Trust made measurable at pilot sites.

More than 70% want public-space technology labelled; ~2.5 minutes average dwell on each info page.

Regensburg

Smart City Regensburg

One message, many channels – and one very short sign.

Communication shifts from the How of the technology to the What of the benefit.

Toronto: a nutrition label for urban technology

Digital Trust for Places and Routines (DTPR)

An open, co-developed visual standard that makes technology in public space legible.

The analogy: a nutrition label. Just as a package tells you in standardised, quickly readable form what is inside, a DTPR sign bundles the essential facts about an installed technology – with a QR code as the path into the detail.

A silent sensor becomes an object you can address.

1

What purpose does it serve?

2

Which type of technology is it?

3

Is data being processed – and if so, which?

4

Who has access to it?

5

How is the data stored?

DTPR helps close the gap between a technology's governance practices and the public understanding of those practices – the language the AI Act's transparency duties still need.

From sign to governance instrument

Adoption is not binary. A city can enter at four depths – and each one turns the same taxonomy into more governance value.

Try

Pilot the framework at a handful of sites and learn how residents react.

Require

Oblige suppliers in the procurement process to deliver the fields DTPR needs.

Embed

Make disclosure part of the administration's workflow and audit management.

Extend

Private operators use the same taxonomy to specify their connected products.

Open source is not a technical detail. It is what made the live fork possible – and what lets an ecosystem grow across sector and national borders. In the German Modellprojekte Smart Cities, every funded solution must be open source and publicly available.

Porto: trust made measurable

>70%

of surveyed residents want technology installed in public space to be labelled

~2.5 min

average dwell time on each information page reached from a DTPR sign

<1 min

typical dwell time on web pages across industries – for comparison

Why this travels beyond Porto

The process began with a survey, not with a sign. And the reason residents gave was not data-protection anxiety but the wish to understand benefit and risk – a right to information. Where people genuinely use the offer, the need is real. Porto therefore also shows where impact could be measured – a direct entry point for the indicator work led by the ITU and U4SSC.

Regensburg: one message, many channels

The diagnosis

- **Actors present the means:** technologies, platforms, infrastructures – while residents are interested in the tangible result.
- **The obstacles are shared:** the term is still new to many, audiences are highly diverse, many measures are mid-implementation, and digital solutions simply lack the visibility of a building site.
- **The move:** away from the How of the technology, towards the What of the benefit.

The toolbox

- **Children:** build smart-city solutions out of clamping bricks.
- **Adults:** prototyping platforms, events and guided tours.
- **The hurried:** a single sign – a picture of a sensor and the words “Look up!” Curiosity first, depth behind a QR code.
- **The lesson:** it is not the amount of information that builds trust, but the first contact that succeeds.

Differentiating audiences is not a luxury – it is the precondition for being understood.

The common pattern across all three



Comprehensibility before completeness

Communication that argues from results rather than from means reaches people. Full disclosure can overwhelm as much as silence conceals.



Audience differentiation is a precondition

Clamping bricks for some, prototyping platforms for others, one short sign for the hurried. Not a luxury – a requirement.



Openness works twice

As an open-source tool culture that permits appropriation and scaling, and as transparency about what happens in public space.



Communication and participation are one

Whoever informs without involving builds awareness, not trust. The one conditions the other.

These principles hold in Toronto, Porto and Regensburg alike – which gives them weight beyond the single case.

Where the next wave breaks the model

	A labelled sensor – solved	An acting system – open
Object	A fixed device in a known location.	An agent operating across systems, with no single location.
Question	What is being collected, and by whom?	What was decided, on what basis – and can it be reversed?
Time	Static disclosure, valid until changed.	Behaviour shifts with every model update and retraining.
Territory	One city, one installation, one operator.	Trained elsewhere, deployed everywhere, governed locally.
Addressee	The passer-by at the mast.	A resident affected by an outcome they never saw produced.

The taxonomy still works. What it points at has changed.

Four proposals for this Forum

- 1 Extend the taxonomy from devices to agents.** DTPR answers purpose, technology type, data, access and storage. An agentic layer needs three fields more: what the system may decide, what human oversight applies, and how an outcome can be contested.
- 2 Put disclosure inside the interoperability stack.** MIMs, standardised as ITU-T Y.4505, already carry the minimum mechanisms. A machine-readable disclosure profile would let a label travel with the service across platforms and jurisdictions.
- 3 Make trust measurable.** Porto shows that engagement with disclosure can be observed. Disclosure coverage and citizen engagement with it are candidate indicators for the U4SSC KPI work.
- 4 Use the existing networks as the transfer layer.** The fork happened because an open artefact met a live network. ISCN, Living-in.EU and OASC are ready-made channels – the citiverse does not need a new one.

Trust is not a state to be reached and administered – it is a process, and it does not stop at the city boundary.

Why cross-border networking pays for a city

Strategic and financial

- **Leverage proven solutions:** hardly any challenge in digital urban development is genuinely new. Building on validated, often open-source blocks saves time, lowers cost and reduces project risk.
- **Efficient use of public money:** every duplicated development avoided is saved tax revenue – plain budgetary reason under tight municipal finances.
- **A seat at the standards table:** those who are networked help negotiate the interoperability mechanisms that keep their own solutions exchangeable.

Capability and resilience

- **Capacity building:** small administrations reach specialist knowledge through peer networks they could never hold in-house.
- **Comparability:** U4SSC indicators give a robust baseline and support the legitimacy of digital projects.
- **Resilience and export:** learning from other cities' crises before your own – and publicly funded solutions gain export channels.

One condition throughout: international transfer does not replace local appropriation.

Trust is a process, not a state

The digital city becomes trustworthy in the measure that it stops being a technical promise and starts becoming a shared conversation.

Open artefacts travel.

Openness – of code and of process – is what made the fork possible in the first place.

Local appropriation still has to happen.

A borrowed solution is a beginning, not an end point. It has to be filled with life on site.

The conversation is the infrastructure.

Keeping it open and branching it into many channels is the real task – for cities and for this Forum.

Thank you

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