

The City Can Measure. Who Authorizes the Response?

Municipal Air Quality: From Legal Obligation to Authorized Action

A modular, evidence-first governance pathway for cities, asset owners, infrastructure operators, and institutional partners. Prepared as a technical-commercial discussion document for Asset Leadership Network engagement.

THE CITY ALREADY HAS	TA14 EXAMINES	THE OWNER CAN EVALUATE
Sensors, reports, assets, policies and responsible teams	Admissible Evidence, Applicable Authority and Established Standing	Traceable decisions, bounded interventions and verifiable outcomes

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This document is a proposed governance framework, not a certification, legal opinion, deployed system, municipal endorsement, or guarantee of regulatory compliance or reduced litigation exposure. All case-study actors, measurements and dispositions are hypothetical.

01 / The market entry point

The first product is not a new sensor network or a mandatory full-stack city platform. It is a bounded examination of a real proposed consequence using existing data, obligations, and responsible parties.

The owner-facing question

When environmental evidence indicates a possible problem, can the organization show what was observed, which requirement applies, who is entitled to decide, what action was permitted, and what happened afterward?

Why a modular route matters

- A city may already own ambient monitors, local sensor networks, traffic systems, public-building management systems, maintenance logs and agency reports.
- Not every city needs ONUMA, Anto, Tristan, or another integration component to begin a TA14 governance examination. Connections may be added when justified.
- TA14 does not claim to directly measure PM2.5, NO2, ozone, or any other pollutant. Source measurement and QA remain with qualified systems and parties.
- The first commercial deliverable should be a documented, jurisdiction-specific pilot assessment, not a claim that every alert automatically creates a legal duty.

The practical value hypothesis

Better documented environmental decisions may improve internal accountability and evidence readiness. Any reduction in enforcement, operational or civil-liability risk must be assessed separately by qualified legal and operational reviewers.

02 / What inputs must already exist?

INPUT FAMILY	MINIMUM EVIDENCE TO REQUEST
Measurements	Pollutant, units, raw readings, sampling period, timestamps, location, instrument ID, QA/calibration and siting metadata.
Context	Weather, traffic, source conditions, occupancy or building operations as relevant; clearly distinguish observed from inferred.
Assets and actors	City asset inventory, ownership, responsible department, operators, delegated roles, current contact paths.
Authority materials	Potentially applicable statutes, rules, permits, ordinances, orders, policies, contracts and emergency procedures.
Decision history	Existing alerts, work orders, inspections, approvals, overrides, commands, outcomes and retention rules.

Data acceptance rules

- Preserve raw observations and derived/adjusted outputs as separate records.
- Record provenance and transformations; do not infer independent corroboration from duplicated upstream feeds.
- Assess fitness for the specific consequence: an inspection may require different support than a road closure or equipment shutdown.
- Document missing records explicitly and choose HOLD or ESCALATE where necessary.

03 / The legal applicability boundary

Air-quality law is not one uniform rule. Applicability depends on jurisdiction, pollutant, source, regulated entity, permit, location, activity, and the proposed response.

LEGAL / POLICY FAMILY	WHAT IT MAY ESTABLISH	WHAT IT DOES NOT AUTOMATICALLY ESTABLISH
Clean Air Act and NAAQS	Ambient standards and the framework for state planning and regulatory implementation.	That a particular building violates an indoor-air limit, or that a city employee may shut equipment down.
State implementation plans and permits	Specific approved implementation measures, source requirements or permit conditions.	A universal duty applying identically to all municipal assets.
State/local ordinances and agency powers	Location-specific rules, enforcement or traffic/land-use authority.	That a software operator has delegated standing to execute.
Workplace / indoor-air obligations	Separate occupational, building, contractual or facility-specific requirements where applicable.	That ambient NAAQS are indoor occupational exposure limits.

Legal screening sequence

- Identify jurisdiction and current effective legal text.
- Determine regulated party, triggering conditions and competent authority.
- Separate legal duty from organizational policy, contractual obligation and voluntary health target.
- Have qualified counsel or responsible regulator confirm contested interpretations before any consequential action.

04 / The eight examination lessons

01 Existing inputs

Identify the systems and records the city already possesses. Determine data owner, access permissions, source integrity, and gaps.

Teaching boundary: A monitor alert may initiate inquiry, but does not authorize a restriction.

02 Legal applicability

Identify the specific jurisdiction, legal obligation, regulated entity, competent agency and applicable thresholds or conditions.

Teaching boundary: An ambient standard is not automatically an indoor building rule.

03 Reality and record

Preserve what was actually observed, then distinguish modeled exposure, corrected readings, forecasts, and causal hypotheses.

Teaching boundary: A prediction is not a measured fact.

04 Continuity and admissibility

Check calibration, representativeness, timestamps, completeness, lineage and fitness for the particular consequence.

Teaching boundary: A complete audit log cannot cure invalid sensor siting.

04 / The eight examination lessons (continued)

05 Authority and standing

Identify actor, capacity, standing basis and authority relationship for this asset, place, action and time.

Teaching boundary: System access is not a municipal mandate.

06 Binding and commit

Bind evidence, rule, asset, actor, approver, geographic scope, method, safety constraints and expiration.

Teaching boundary: A regional request cannot silently transfer local execution authority.

07 Execution and safeguards

Constrain execution to authorized scope; record acknowledgments, overrides, stop conditions and exceptions.

Teaching boundary: Command success is not outcome verification.

08 Outcome and accountability

Compare verified results with the authorized objective; retain uncertainty and reviewable evidence.

Teaching boundary: A cleaner dashboard does not prove a cleaner environment.

05 / One realistic municipal demonstration

Hypothetical corridor air-quality alert

A city dashboard receives elevated roadside PM2.5 readings. An analytics system recommends restricting traffic and altering ventilation at a nearby city-operated public shelter. The readings are not proof of traffic causation, and the two proposed actions have different competent authorities.

GATE	EXAMINATION	ILLUSTRATIVE RESULT
Reality / record	Source ID, location, time, units and original readings retained.	PROCEED TO REVIEW
Admissibility	Calibration and siting evidence for the roadside sensor are missing.	HOLD traffic restriction
Authority / standing	Traffic powers and named delegated approver not yet established.	ESCALATE authority
Shelter operations	Building operator and life-safety constraints not confirmed.	HOLD HVAC change
Bounded investigation	A separately verified inspection assignment may be within a named officer’s scope.	POTENTIAL ALLOW, conditional
Outcome	No intervention performed; no environmental benefit can be claimed.	UNVERIFIED

Why this case sells the governance concept

The platform can display an urgent condition while TA14 keeps the proposed consequences separate. It identifies the exact evidence, authority, and standing that would have to be established before any execution. HOLD is a meaningful accountable outcome, not a system failure.

06 / A municipal pilot owners can buy

PHASE	SCOPE	DELIVERABLE
1. Discover	One city, one asset or corridor, one pollutant/use case, one proposed consequence.	Input inventory and responsibility map.
2. Examine	Source provenance, evidence quality, legal applicability screening, standing and decision boundary.	Gap register, authority map, proposed dispositions.
3. Establish	Validate governing documents and role delegations with owner and qualified advisors.	Agreed bounded examination protocol.
4. Operate (optional)	Connect decision records and execution/outcome evidence without replacing existing controls.	Reviewable decision and outcome trail.

Commercial structure

TA14’s published entry-route concept is \$149 for a first route and \$49 for additional routes, subject to confirming the actual offering and scope. These figures should not be presented as the price of a municipal integration, legal analysis, or enterprise implementation. Institutional deployment requires separately scoped commercial terms.

Acceptance criteria for a pilot

- A named owner and one defined decision boundary.
- Documented source inventory and evidence gaps.
- An applicable-authority map reviewed by the responsible organization.
- A traceable disposition with a reason, conditions and accountable actor.
- A practical next-step recommendation, including when to stop.

07 / How this stacks with other components

TA14 is proposed as an independently useful governance layer. It need not require a complete digital-twin, interoperability or automation stack.

COMPONENT	POSSIBLE ROLE	BOUNDARY
Existing sensors / labs	Measure and characterize environmental conditions.	Measurement quality and certification remain with the source.
Building / city data platforms	Organize asset context and operational observations.	Connectivity does not confer legal authority.
Digital twin / BIM / ONUMA-type systems	Represent assets, relationships and potential interventions.	Represented context is not a local execution grant.
TA14 governance	Examine evidence, authority, standing, binding and disposition.	Conceptual framework; no claim of independent certification or deployment.
Qualified operators / agencies	Carry out lawful and safe interventions.	Local approval, safety and operational controls remain mandatory.

Federation principle

Authority context may cross systems. Execution authority must be established locally. No partner endorsement, integration, or operational deployment is implied by naming an example technology family.

08 / Questions a city manager should ask

What do we need to buy first?

Potentially nothing new in measurement hardware. Start with a bounded inventory and examination of existing data and one proposed action.

Does TA14 tell us we comply with the Clean Air Act?

No. Applicability and compliance are legal and technical determinations by competent authorities. TA14 can organize evidence and decision accountability.

Will this prevent a class action lawsuit?

No guarantee is possible. Better records may support accountability and review, but legal exposure depends on facts and law.

Can the AI act automatically?

Only within a separately established, current, locally applicable authorization and technical safety boundary.

What does a successful pilot look like?

A city can reconstruct the evidence, legal basis, decision-maker, disposition, conditions, execution record and verified result - or clearly see why action was held.

09 / Source-linked research starting points

The following official sources are research entry points, not findings that any named municipality or building is subject to a specific duty. Verify current versions and jurisdiction-specific applicability before use.

U.S. EPA - National Ambient Air Quality Standards

<https://www.epa.gov/criteria-air-pollutants/naaqs-table>

U.S. EPA - Clean Air Act overview

<https://www.epa.gov/laws-regulations/summary-clean-air-act>

U.S. EPA - State Implementation Plans

<https://www.epa.gov/air-quality-implementation-plans>

U.S. EPA - Air Quality System (AQS)

<https://www.epa.gov/aqs>

U.S. EPA - Air Sensor Toolbox

<https://www.epa.gov/air-sensor-toolbox>

OSHA - Indoor Air Quality

<https://www.osha.gov/indoor-air-quality>

For municipal decisions, add the applicable state environmental agency, current local code, relevant permits, procurement rules, emergency authorities, and owner policies. No municipal legal conclusion is made in this document.

Begin with one decision that matters.

A city already has information. The missing link may be an accountable process for determining whether that information supports an authorized consequence NOW.

Proposed written scoping exchange

- Identify the municipal owner and one air-quality concern.
- List available data sources and the specific action under consideration.
- Name the responsible department, legal reviewer and operational decision-maker.
- Agree on a bounded pre-examination; do not claim a formal disposition before evidence review.
- Use the findings to decide whether additional technology or institutional collaboration is warranted.

GOVERNING QUESTION

Does this proposed consequence have sufficient Admissible Evidence, Applicable Authority, and Established Standing to become reality NOW?

Reality → Record → Continuity → Admissibility → Binding → Commit → Execution → Outcome

ALLOW / HOLD / DENY / ESCALATE

TA14 Authority Governance Institution | <https://www.ta14exchange.com>

Independent concept / discussion edition. No municipality, technology partner or professional body has endorsed this document.