TERRAGO

# The Practical Guide to Implementing Operational AI Today

*Achieve Breakthrough Results with AI Today—Using the Data, Systems, and Operations You Already Have*



**A field-focused guide for utility and city leaders who need to improve the speed, quality, and control of daily operations without replacing the systems they rely on.**

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TERRAGOTECH.COM

FROM OPERATIONAL CONTEXT INTO FIELD ACTION

# A Practical Starting Point

Operational AI gives organizations a disciplined way to improve field execution with the data, applications, devices, and operating rules already in place. It can begin creating value in a focused workflow without an enterprise-wide replacement program.

## What This Playbook Covers

- How Operational AI differs from an AI tool that only produces answers.
- Four solution areas that can deliver measurable value in current operations.
- A realistic restoration event that combines smart meter and smart streetlight signals.
- The controls that keep recommendations governed and people accountable.
- A focused approach to choosing a first use case and measuring results.

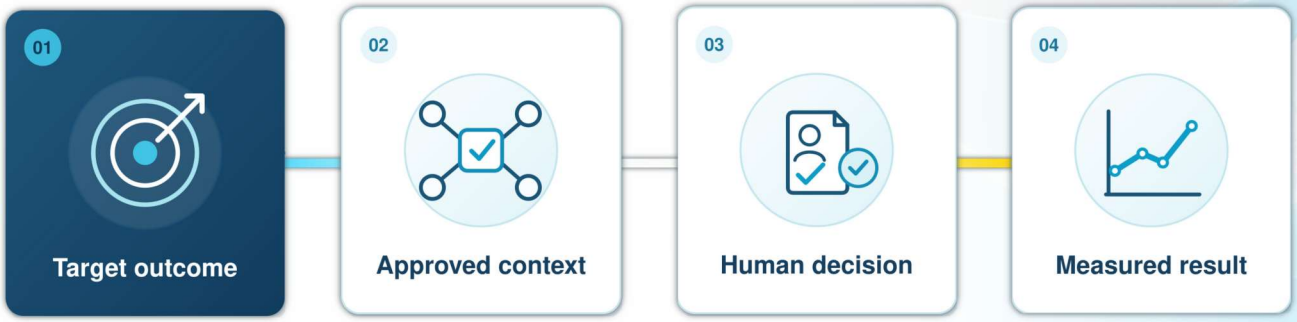
## The Operating Principle

Start with a real operational outcome: reduce time to assess an outage, improve first-time completion, strengthen an inspection record, or reduce repeat truck rolls. Connect only the approved data needed for that outcome. Apply the organization's rules within its workflow. Keep the appropriate person responsible for material decisions. Then measure the result against a baseline.

**A practical playbook is outcome-led.** Technology choices follow the workflow, controls, and measure of success.

FROM INFORMATION TO ACTION

## How Operational AI helps work move forward



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01

# Delivering Value Starts With What You Have Today

Operational context is the combination of information, conditions, and experience that helps a team make a sound decision. It may include asset details, work history, current conditions, field observations, crew availability, customer commitments, safety requirements, and the rules that guide the work.

Utilities and cities do not lack data. They have data spread across operational technology, enterprise systems, mobile applications, customer channels, asset records, and field documentation. Each system may work well for its purpose, yet the people responsible for execution still have to assemble the picture manually when conditions change.

That gap is especially visible during a storm, a service interruption, a lighting circuit failure, or a surge in customer contacts. Dispatchers need current location and status. Supervisors need priority, capacity, and safety context. Crews need a complete work package. Asset teams need evidence that field conditions match the record. When those details remain separated, experienced people spend their time searching, calling, reconciling, and re-entering information.

Operational AI works across this existing environment. It can draw on approved subsets of smart meter telemetry, lighting network alarms, GIS, outage records, work orders, crew qualifications, inspection history, customer commitments, and field media. It does not make those systems disappear. It makes their operational information easier to use at the moment of work.



**It is not about adding AI for its own sake.**

It is about helping the people responsible for utility and city operations make better-informed decisions and keep essential work moving.

02

# The Gap Between Traditional AI Answers & Operational Action

A general-purpose AI assistant can summarize a manual, answer a question, or draft a message. Those are useful capabilities, but they are not enough when a dispatcher must decide which crew to send, when a field supervisor needs to confirm a safety condition, or when a city must defend why a repair was prioritized.

## Traditional AI Answer

- Explains likely causes of an alarm
- Summarizes a work order history
- Lists open tickets
- Drafts a response to a customer

## Operational AI Action

- Associates the alarm with the affected assets, customers, current work, and relevant rules; proposes a next step for review.
- Builds a field-ready work package with mapped assets, prior defects, safety notes, materials information, and required closeout evidence.
- Groups related signals, identifies probable duplicates, and highlights the work that needs a decision now.
- Uses approved status information and communication rules to prepare a response that can be reviewed and sent through the existing channel.

**The distinction is accountability.**

An answer can be informative. An operational action has an owner, a defined workflow, source data, applicable rules, and a record of what happened next. Together, those elements make the decision reviewable and the result measurable.

# 03 What Makes AI Operational?

**Operational AI is designed around execution.**

It brings together the context needed for a real decision, applies the guardrails that already govern the work, and routes the resulting recommendation into the workflow where people can review, approve, dispatch, document, and learn from the outcome.



## It is measured against the operating scoreboard

The right measure depends on the workflow. A utility may track outage assessment time, time from identification to dispatch, mean time to repair, first-time completion, repeat visits, backlog age, inspection coverage, or customer updates delivered on time. A city may track dark-light reports resolved within service level, patrol efficiency, emergency response time, or the completeness of asset records. These measures connect the technology to the work people are accountable for delivering.

## It uses governed information

A useful deployment does not require every enterprise dataset. It uses the minimum approved data required for the specific outcome. That scope reduces complexity and makes it easier to validate sources, roles, retention, and access. The system should identify where recommendations came from and should distinguish observed facts from inferred conditions.





## It fits existing workflows

The recommendation must arrive where work is already managed: a work order, dispatch queue, outage process, field app, or supervisory review. A separate screen that asks teams to recreate their operating process is less likely to produce durable value. The aim is to reduce friction around the work, not create another place to manage it.

## It improves through completed work

The field result matters. When crews confirm a condition, attach a photo, record materials used, or identify a different root cause, that evidence should improve the asset record and refine future recommendations. The learning loop remains grounded in approved operational evidence, not unsupported assumptions.



# 04 City and Utility Solution Areas

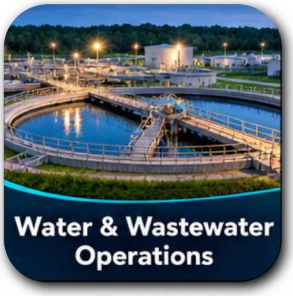
Operational AI is not another layer that summarizes information after the fact. It applies intelligence to the assets, work, crews, customers, operating rules, and real-world conditions that shape each day—helping teams understand what matters and support the next action.

Operational AI isn't a future promise. TerraGo is putting it to work with customers right now. Because our no-code framework overlays the existing platforms cities and utilities already use, customers can apply Operational AI within their current operations and begin realizing benefits in these solution areas today.





































A solution area may begin with an alarm, inspection finding, customer report, field observation, changing condition, or work request. In each case, the opportunity is to bring together approved context so the right people can assess the situation, prioritize the work, and move it forward with better information.

Organizations do not need a perfectly connected environment to start. They can build on the data, systems, workflows, and experienced people already in place—beginning with a focused use case and expanding over time.

**Operational AI helps turn operational signals into better-informed action and better service outcomes.**

05

# Four Ways TerraGo Can Deliver Immediate Value

TerraGo's Operational AI services can be adopted independently or combined around a priority workflow. Each is intended to improve an observable operational result while fitting the systems and governance model already in use.

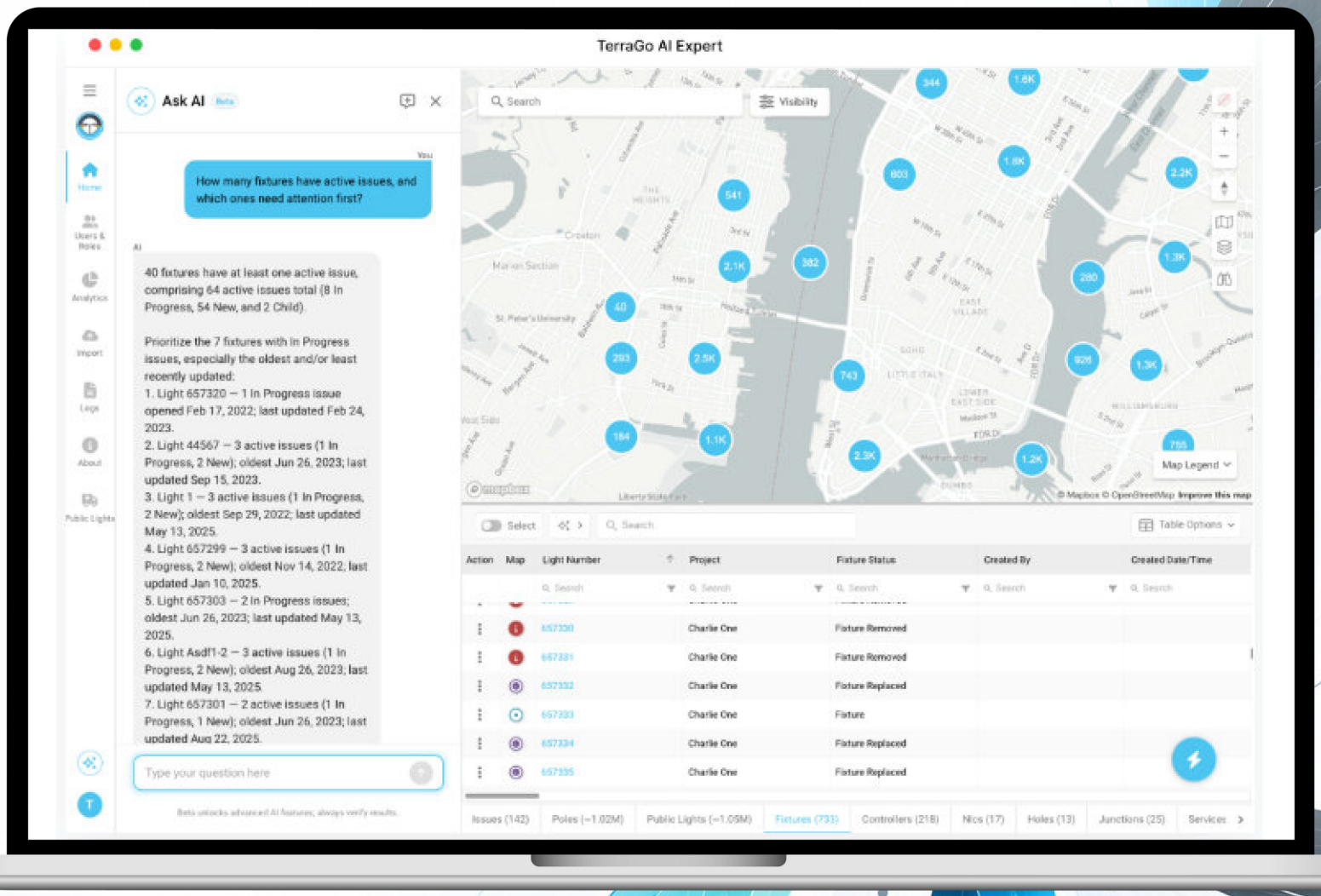
An organization may begin with one service focused on a specific workflow. Over time, the capabilities can reinforce one another: AI Vision can analyze imagery, AI Assist can turn field observations into structured data, AI Expert can answer questions in context, and AI Operator can recommend or initiate governed work.




**Together, they support a connected path from signal to decision to documented work.**

# 05 Service: AI Expert

Answers operational questions in everyday language using approved documentation, asset data, work history, policy, and field information across systems, bringing relevant context into one response.




## Example

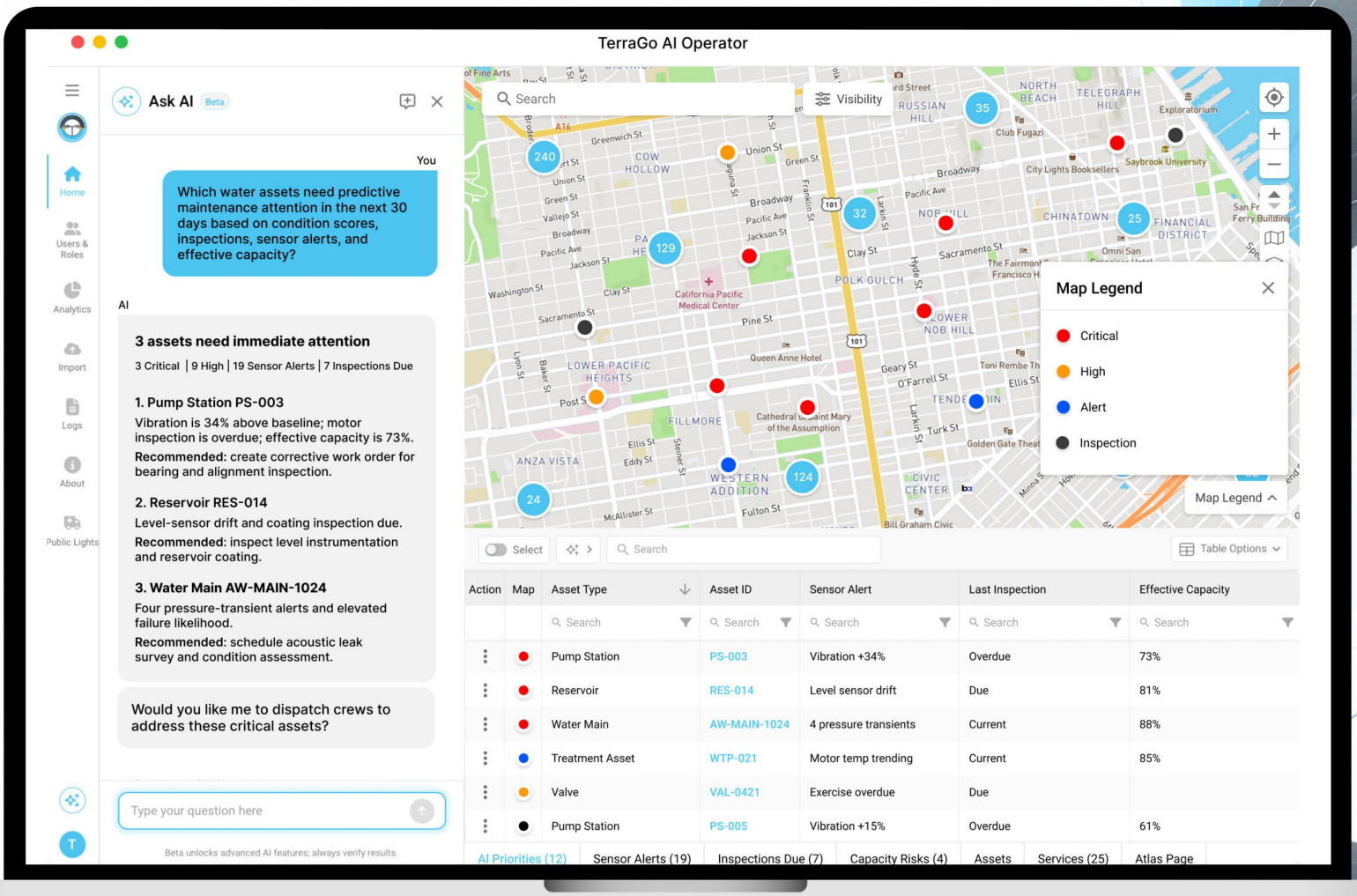
A user asks how many fixtures have active issues and which need attention first. AI Expert returns the issue count and a fixture list with statuses and recent updates to help the team decide what to review.

## Immediate Benefits

- Less time searching
- More consistent answers
- Faster preparation

# 05 Service: AI Operator

Coordinates signals, rules, and workflow steps to prioritize work, sequence jobs, support crew routing, and recommend or initiate governed action as conditions change.




## Example

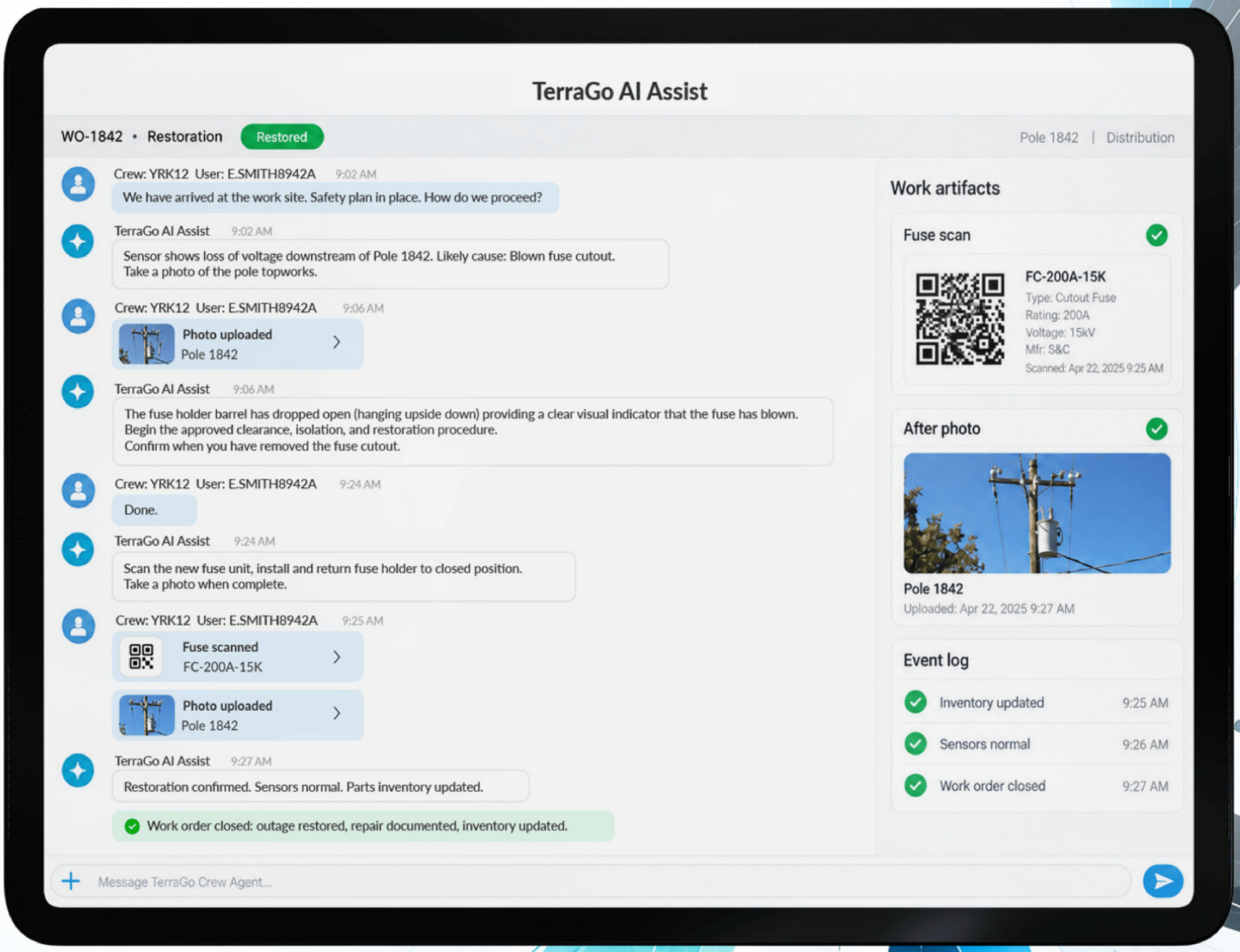
A user asks which water assets need predictive maintenance in the next 30 days. AI Operator identifies assets needing attention, explains the condition signals, recommends work, and offers to move toward dispatch.

## Immediate Benefits

- Faster triage
- Fewer handoffs
- Clearer actions

# 05 Service: AI Assist

Helps teams complete and close work by turning photos and natural-language field observations into structured records, using asset, location, history, and workflow context.




## Example

A crew arrives at a restoration site and uses AI Assist within the work order to discuss the fault, upload a photo, scan the replacement fuse, and document the completed repair.

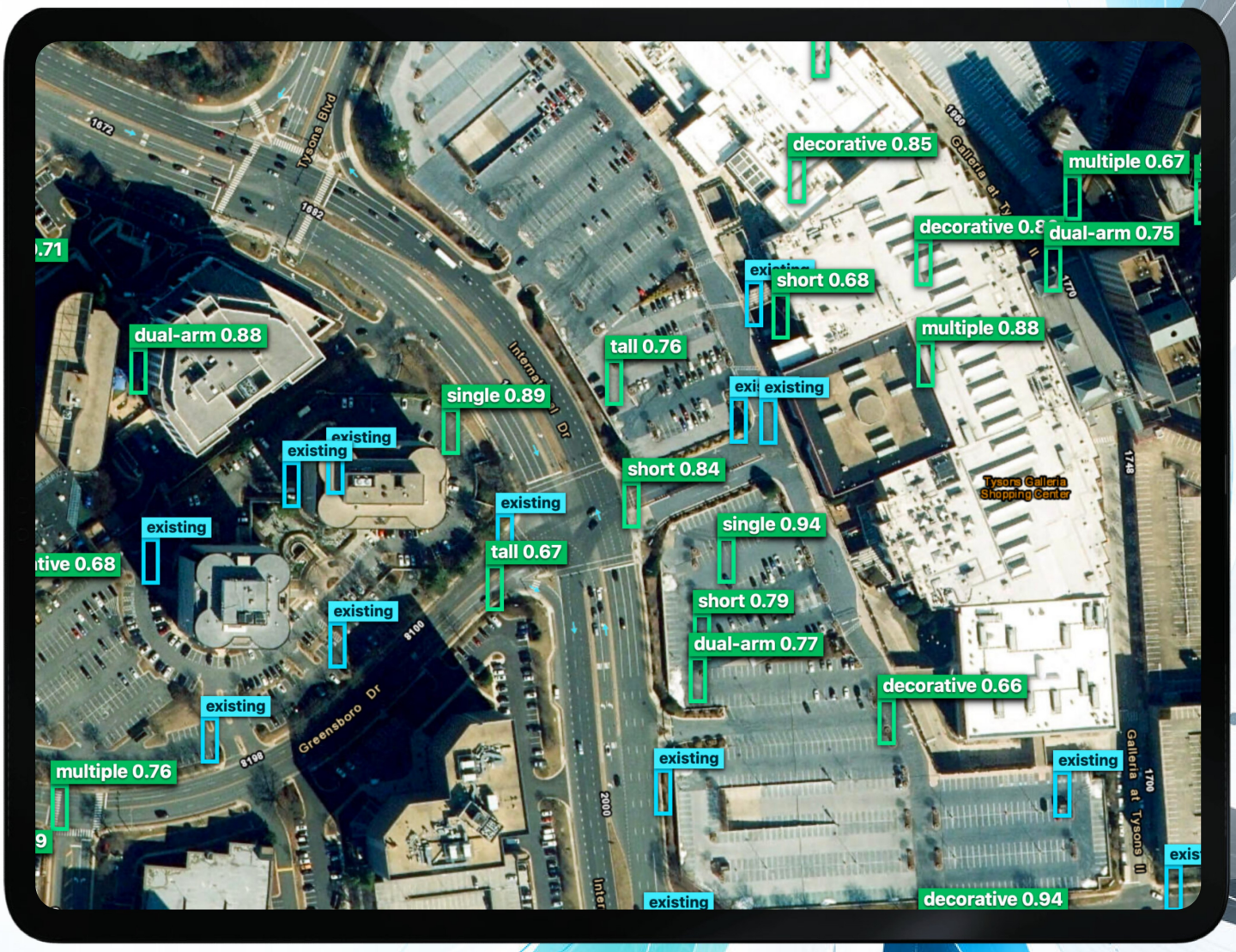
## Immediate Benefits

- Timely guidance
- Complete closeout packages
- Less rework

05

# Service: AI Vision

Analyzes imagery, photos, and video to identify assets and conditions, connecting visual findings with GIS and asset data to support inspections and surveys.




## Example

AI Vision marks candidate streetlight assets in aerial imagery and displays classifications and confidence scores for review, then performs data matching and reconciliation algorithms to improve GIS data and automate field surveys without boots on the ground.

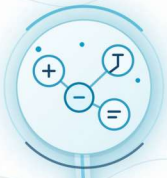
## Immediate Benefits

- Broader inspection coverage
- More consistent defect capture
- Eliminates costly field audits

06

# From Device Alarms to Focused Restoration Work

After a storm, smart meter last-gasp messages, lighting alarms, customer calls, and field reports arrive together. The team must identify the likely boundary, assess risk, and prioritize restoration.



## Group the Signals

**AI Operator** groups approved events by time, location, and available circuit relationships. Meter and cabinet alarms suggest a corridor; online meters help define its boundary.



## Apply Operating Priorities

Approved rules elevate safety hazards, critical facilities, and access routes. Crew availability and qualifications shape a priority recommendation for review.



## Review and Dispatch

A supervisor reviews the affected premises, map, source signals, and rationale. They can verify or change the priority and assign a qualified crew. The decision is recorded in the existing workflow.



## Prepare the Crew

**AI Assist** assembles relevant assets, access and safety notes, history, and documentation needs. Crews follow established procedures when field conditions differ.



## Confirm the Result

The crew confirms the cause and records evidence. **AI Vision** may flag visible damage or missing documentation for a qualified person to review. The record helps evaluate the initial priority and strengthens asset history and future triage.

*Illustrative workflow. Sources, rules, authority, and safety procedures are configured for each organization.*

07

# Governed Actions & Humans in the Loop

Operational AI must follow the policies, authority levels, and evidence requirements that govern real work. Recommendations can speed decisions; authorized people remain responsible.

**The recommendation supports the decision; it does not replace the person responsible for it.**



### Operational rules are explicit

Encode safety, asset priority, qualifications, customer commitments, approvals, and escalation. If data cannot support a rule, send the case for human review.

### Trusted data is visible

Show each recommendation's sources and freshness. Flag gaps or conflicts, and distinguish observed facts from inference.

### Workflow creates accountability

Put recommendations in existing queues so staff can approve, change, reject, or escalate them. Record the inputs, decision, and field result.

### Human judgment remains central

Crews, dispatchers, and supervisors bring field conditions, resource constraints, and local priorities the system cannot fully see.

## Before Deployment, ask:

**Scope:**
What decision is in scope and what is out?

**Data:**
Which sources and access are approved, and how are gaps or conflicts handled?

**Authority:**
Which policies apply, and who reviews, approves, or overrides?

**Evidence:**
What is recorded from recommendation through field result?

**Results:**
Which baseline shows safe, reliable improvement?

# 08 Where to Begin

Choose a recurring problem that matters, with a responsible team, an existing workflow, and a result you can measure.

## Look for these starting points

- **Information across systems:** Data must be gathered before action.
- **Workflow friction:** Delays, repeat visits, or missed service levels.
- **Buried expertise:** Answers hide in manuals or work history.
- **Alarm overload:** Routine signals obscure actionable exceptions.
- **Missing field evidence:** Condition or completed work is hard to verify.

## A focused first deployment

1. **Choose one outcome.** Name the result.
2. **Map the current workflow.** Trace decisions, handoffs, systems.
3. **Define the minimum data.** Use approved sources.
4. **Encode rules and review.** Specify safety limits and approvals.
5. **Set a baseline.** Measure before the pilot.
6. **Run and learn.** Review results and refine.

A pilot succeeds when it proves repeatable improvement. If benefit or safe governance cannot be shown, apply the learning to another focused opportunity.

# Better Operations Start With Connected Intelligence.

Utilities and cities face aging assets, rising service demands, and limited skilled capacity. More dashboards cannot resolve scattered operational work. Operational AI connects approved information and rules to existing workflows so teams can act with better context and measure results.

Start with one priority workflow and the TerraGo AI service that supports it: **AI Expert**, **AI Operator**, **AI Assist**, or **AI Vision**. Prove the result—faster assessment, stronger evidence, fewer repeat visits—then expand while people, governance, and systems of record remain central.

## CONVERSATION STARTER

**Choose one workflow and ask:**

- What decision takes too long?
- What information is hard to bring together?
- What rules govern the action?
- How will you measure improvement?

Those answers provide a practical starting point for Operational AI.



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INTELLIGENCE BUILT FOR THE REAL WORLD

# Ready to put Operational AI to work?

See how TerraGo AI connects to the assets, workflows, field conditions, and operational rules that shape the work—so your teams can move from insight to action with greater confidence.

Schedule a Demo

Visit terragotech.com

## Operational AI Webinar

October 22, 2026
1:00 PM Eastern Time

Scan the QR code or
Click the link to register today.

Register for the Webinar

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