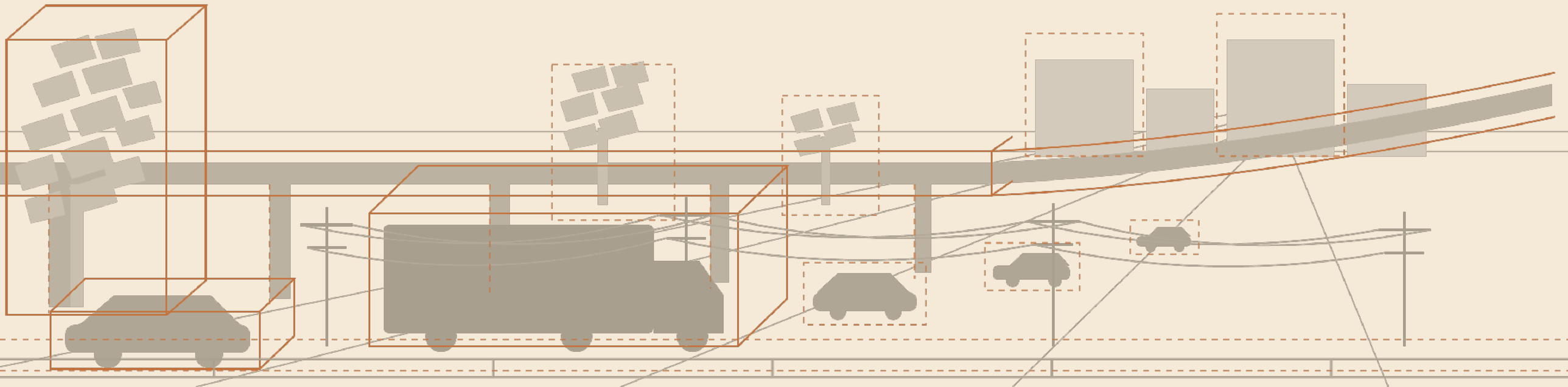
PROTOCOL INSTITUTE · 2026

# The Indelible Importance of Illegibility

**Patrick Atwater** Innovation Program Manager, Metropolitan Water District



# Cui bono

La Crescenta, in the San Gabriel foothills — snowpack above the house, garden below it.



**ABOVE · THE SNOWPACK**

Where the water starts, and where a group decides whether to go.



**BELOW · THE GARDEN**

Where the water lands, and where a family decides who tends it.

# What if… we collected ALL the data

**But suppose I got serious.**

There is no technical reason I could not track every drop from the snowpack above my house all the way into the root zone below it.

Snow pillows and airborne LiDAR on the ridge. Pressure transducers in the arroyo. Distributed fiber sensing along the recharge reach. Soil moisture at three depths per bed. Sap flow on the citrus.

**Telemetry every ninety seconds, forever.**

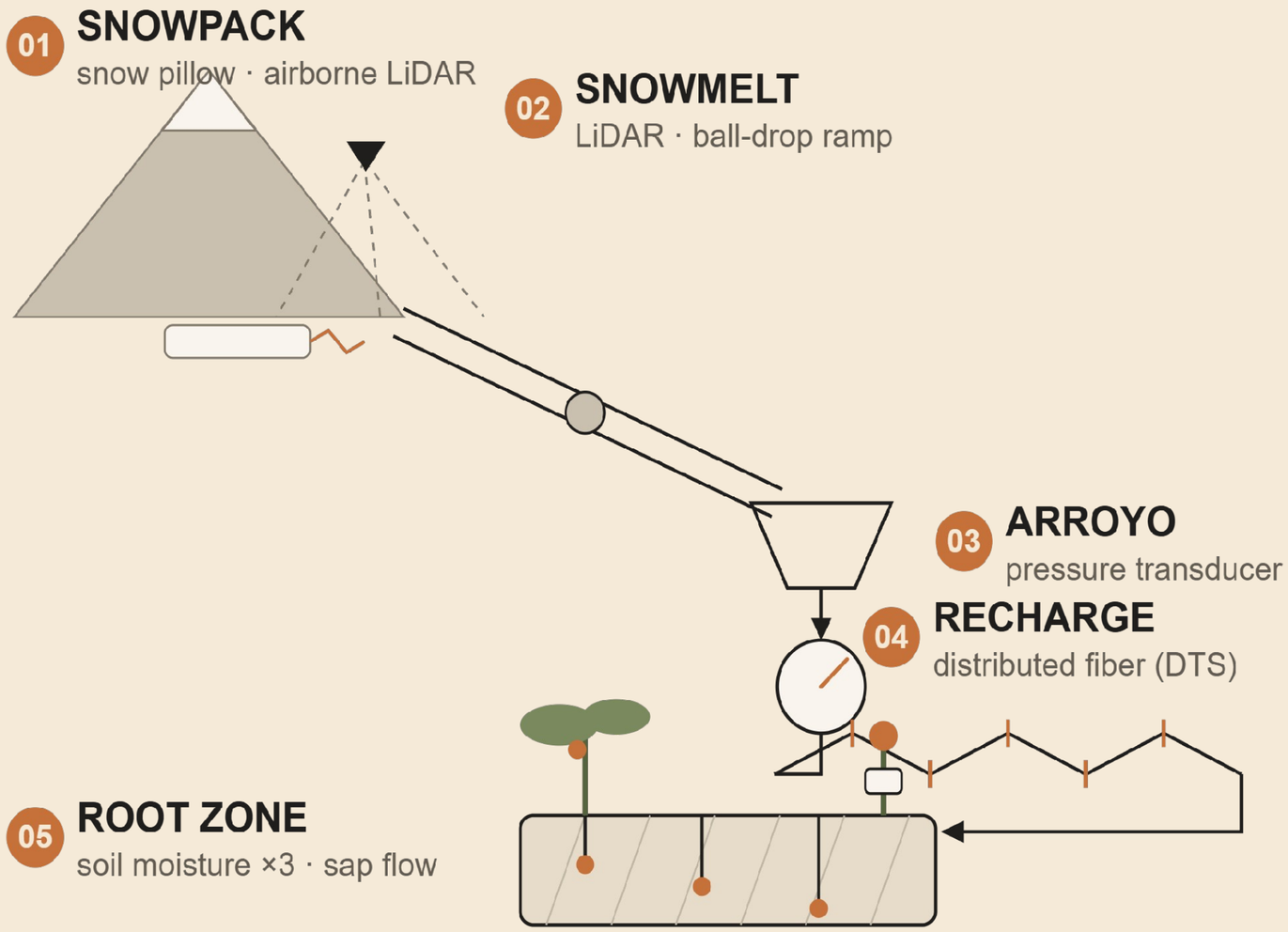



Fig. 2 — the state of the art, fully realized: one gravity-fed, fiber-wrapped, telemetered mechanism from ridge to raised bed.

# Contents


00 **Cui bono**

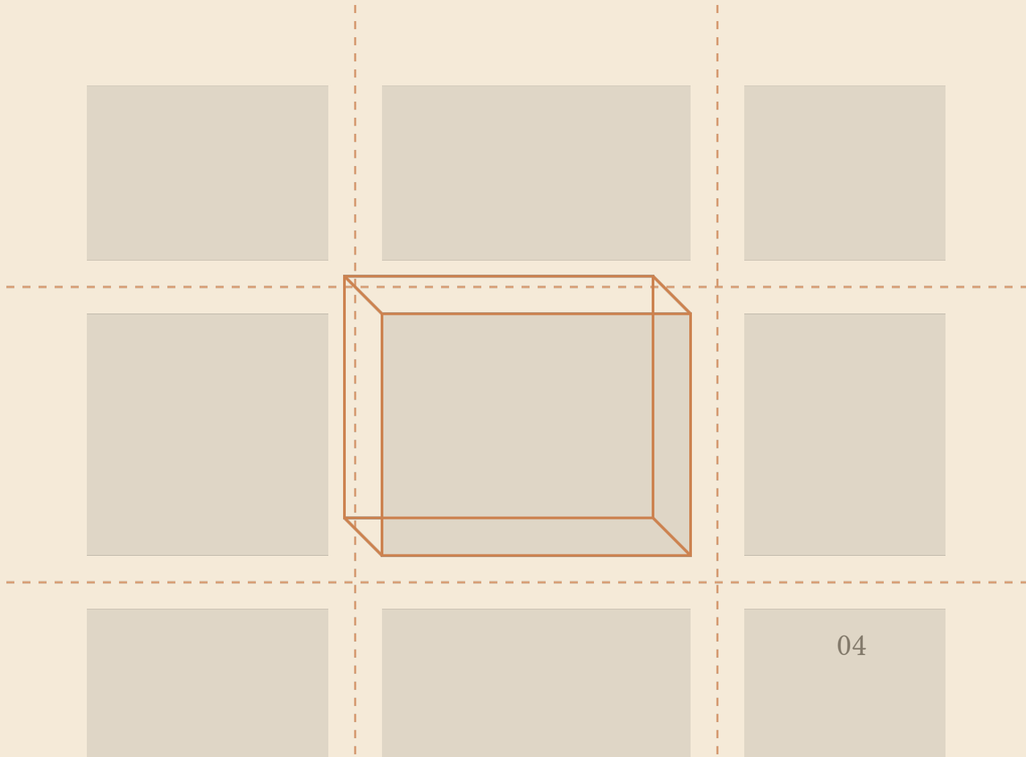
Two terrains, and a purchase order

01 **A couple case studies**

The park, the bridge, the back channel

02 **Future direction**

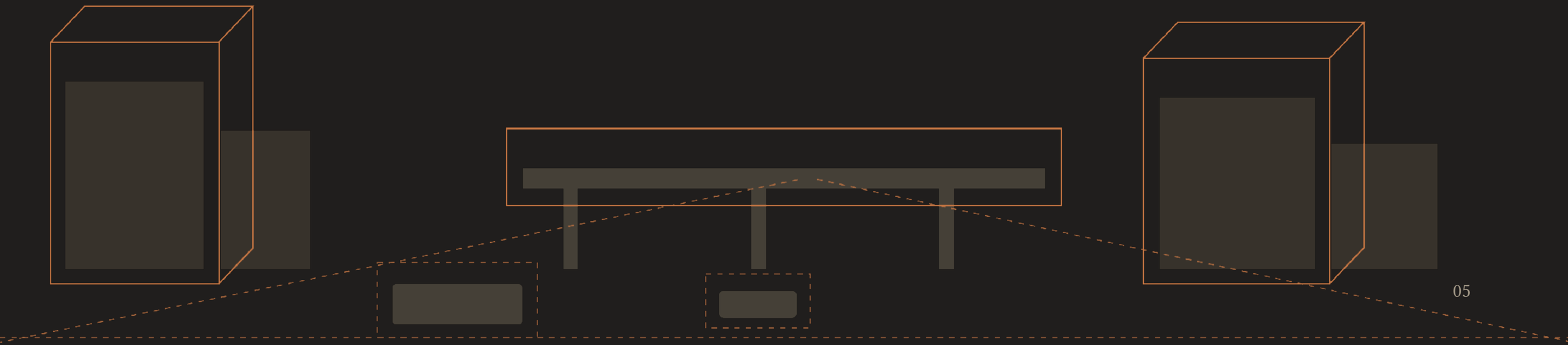
Permitting, and an applied agenda

01

# A couple case studies

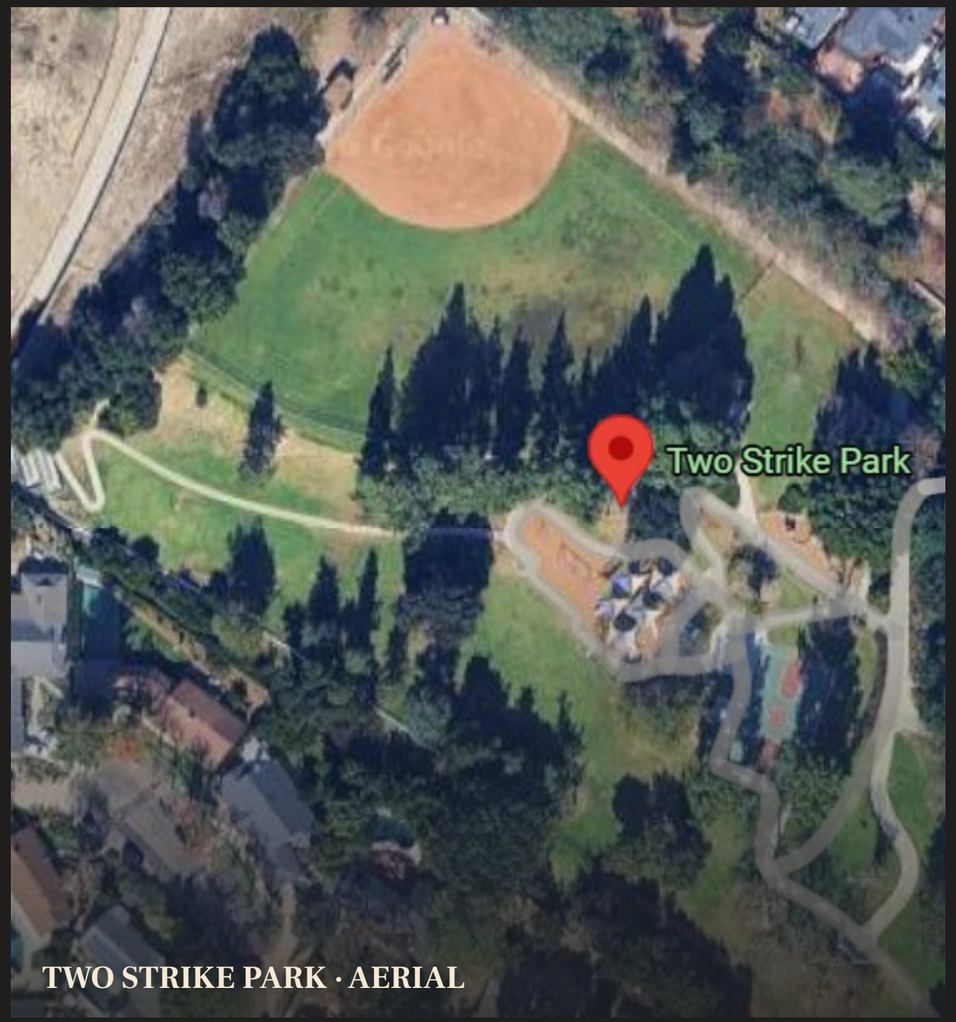
A park, a bridge and a back channel — three places to watch what illegibility is actually doing.



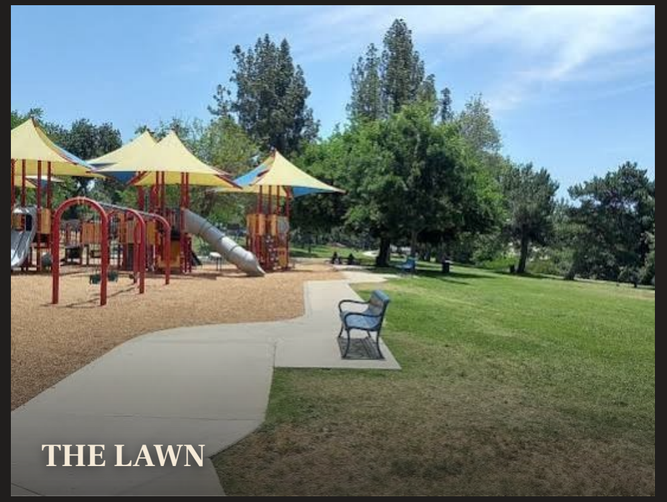
CASE STUDY ONE · THE PARK

# Two Strike Park, La Crescenta

Invisible from familiarity. Everyone here is already fluent in a place like this, and nobody has ever called any of it a protocol.



TWO STRIKE PARK · AERIAL


THE LAWN


THE FIELD


THE MEMORIAL


THE COURT

CASE STUDY ONE · THE PARK

# The protocols of one small park

Half-written: formally covered, informally run

## LEGIBLE

- Signage.
- Permit-based reservation of tables for birthdays — nothing in the park signifies this; you simply have to know to go to the website.
- Noise and quiet-hour norms — sometimes ordinance-backed, mostly community-enforced.

## ILLEGIBLE

- What qualifies as “next” in a pickup basketball game.
- Mowing and irrigation schedules — invisible, but they structure when an area is usable.
- Adjudicating who gets the field when two groups want it.
- Dogs off leash — implicit adjustment, constant negotiation.
- Impromptu shared kid-watching.
- Striking up a conversation.
- A blanket placed to hold a picnic spot.
- Where to park bikes when there are no racks.
- Playground etiquette.
- Restroom lock/unlock tied to ranger rounds — times never posted.
- Change protocols for new tree plantings, play equipment, a community garden.
- Field mowing SOPs.
- Meeting minutes and the institutional “stack” of bodies running the park.
- Stormwater recharge permitting.
- Flag raising and lowering; community events.
- Pop-up signage — the lemonade stand that quietly breaks a county code.
- Pop-up no-parking sign deployment — how do companies get access to those signs? Do they just do it?

**Illegible to whom.** The mowing SOP is perfectly legible to the crew that runs it. The axis is perspectival, not boolean. Every line above is somebody's obvious.

**And the play is the point.** Protocols here are constantly created, refactored and shifted in the open, all afternoon, by people who would never use that word.

OBLIQUE STRATEGIES

# Three ways to work in illegible terrain

01

### Black-box the known unknowns

Unlock protocol hardness for what actually needs specification — and refuse to specify the rest, on purpose, behind a checkable interface.

02

### Cultivate practitioners as guides

Domain expertise is the entry point to protocol-native inquiry. Referees, dispatchers, permit engineers — fluent long before anyone wrote it down.

03

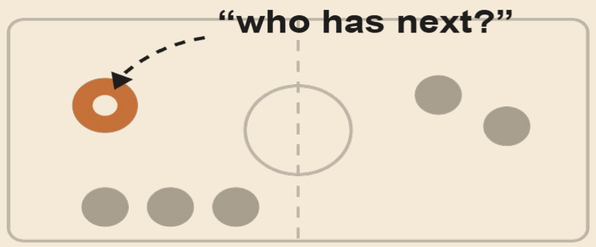
### Build lightweight instruments

Fieldwork tools that capture ambient observation cheaply. You can hand someone a reading; you cannot hand them a taxonomy.

**None of the three tries to close the gap. Each one works the terrain as it is.**

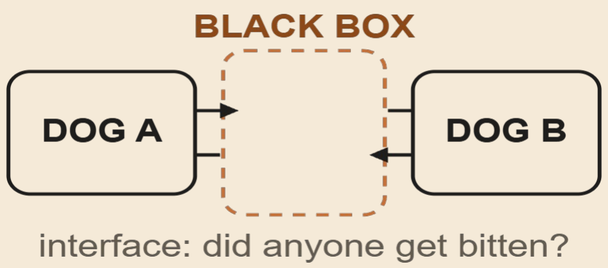
THE SAME THREE, RUN AGAINST THE PARK

# What that looks like on a Tuesday afternoon



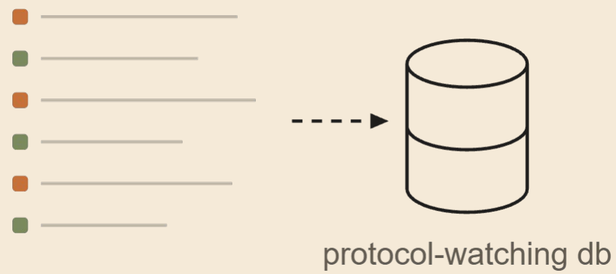

### 01 · OBSERVE, THEN ASK

Find out who holds the queue and ask that person. The lead player answers in three words what no sign in the park will tell you.




### 02 · BLACK-BOX IT

Two dogs meeting is an API-to-API interaction with hard, implicit rules and no published spec. Nobody needs the internals — only the interface.




### 03 · CAPTURE THE AMBIENT

The list on the last slide is not a thought experiment. It is a query against a protocol-watching db I keep — noticed, logged, unsorted.

**Ask the person who holds the queue, specify only the interface, and write down what you noticed anyway.**

CASE STUDY TWO · THE BRIDGE

# The same span, three eras

A formal register that expands enormously — and never once closes.

ANTIQUITY

### The master builder

Knowledge held in a guild, transmitted by apprenticeship, deliberately not written down. Proportion rules travel as heuristics. The bridge stands or it does not, and that is the test.

19TH CENTURY

### The codified profession

Materials science, load tables, published standards, the engineering society. Failure becomes something you can investigate and generalise from. The formal register explodes in size.

TODAY

### The stamped drawing

Finite element analysis, building codes, peer review, permit conditions. Nearly everything is computed, checked and filed — and it still ends with a licensed human signing their name.

# Every era black-boxes differently

ROMAN ERA

## One locus

Whoever designed the arch built it and stood under it. Role and accountability collapse into a single person — no one has to see inside.

19TH CENTURY

## Impersonalised by theory

Trust moves from the man to the method: Manning's equation, the linear method, a technical body of knowledge that anyone competent can check.

20TH CENTURY

## Impersonalised by spec

Generalised specifications and standard drawings. The box is now an institution's document set, and the tacit part retreats into choosing among them.

TODAY

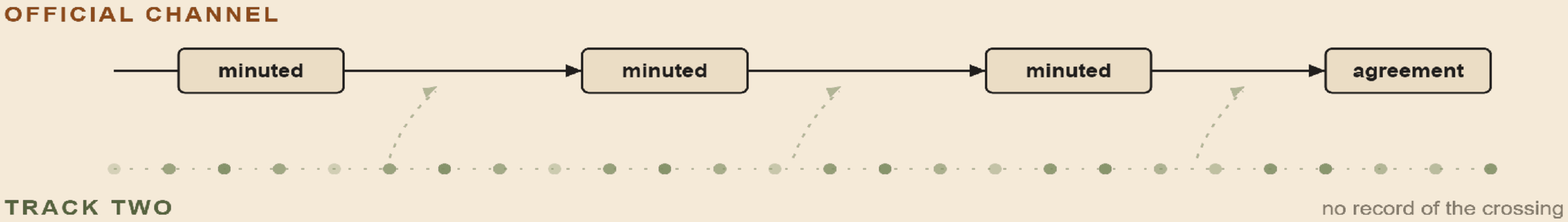
## Archival instruments

The corpus is far larger than anyone can hold. The opening is tooling — the protocol bicorder among others — that lets you navigate the archive rather than memorise it.

**The seam between what is written and what is judged keeps moving — so the guides you need for the tacit half move with it.**

CASE STUDY THREE · TRACK TWO DIPLOMACY

# Where illegibility stops being a gap and starts being the mechanism




## HOW IT WORKS

- Unofficial dialogue between people who are not, officially, negotiating.
- Academics, retired officials, scientists, clergy — deniable by construction.
- Positions float and withdraw without anyone having conceded.
- Nothing is minuted; minuting it would destroy the instrument.

## WHY IT INVERTS THE STORY

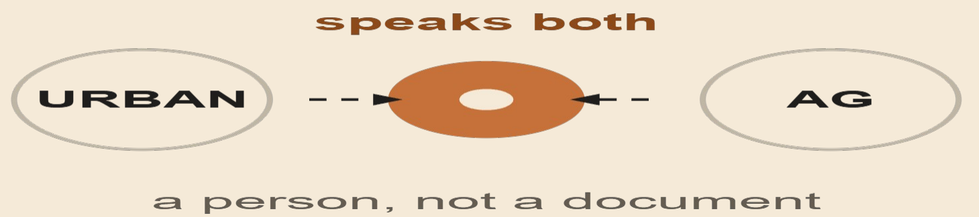
In the park, the tacit register is undocumented because nobody bothered. On the bridge, it is what codification has not yet reached.

Here it is undocumented **on purpose** , and the protocol draws its power from that. Write it down and it stops working.

WORKING THE BACK CHANNEL

# Two moves when the opacity is the point




### 01 · BLACK-BOX THE LOCAL CONTEXT

Each side holds local knowledge the other cannot parse. Not exposing it is part of the value — the box buys room to build shared context instead of litigating whose context is right.

### 02 · FIND THE TRANSLATORS

The people who speak both proverbial languages — urban and ag in the water world — are the mechanism. There are never many of them, and everything routes through them.

---

### ALREADY LIGHTWEIGHT

Simple protocols already do this work: the K2i knowledge network we are part of, or the State Capacity Network for comparing peer notes.

**OPEN QUESTION**

**What would a protocolized approach to dialogue between practitioners and applied researchers on thorny problems look like?**

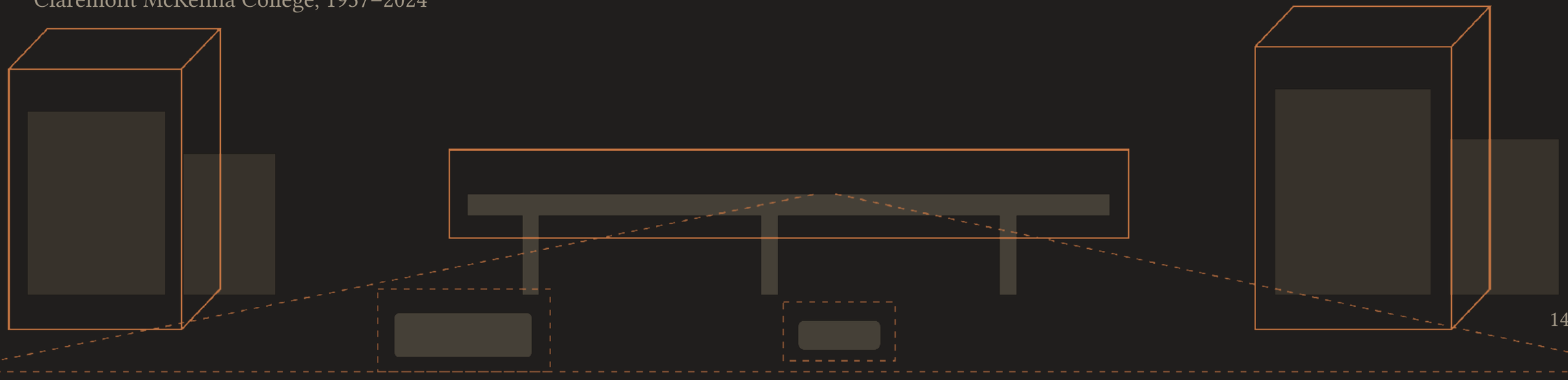
02

# Future work: applied research

*“Better crimson examples and gray words than crimson words and gray examples.”*

**Professor Ward Elliott**

Claremont McKenna College, 1937–2024



PERMITTING CASE STUDY

# One valve, two cities, and a state highway

A transmission valve sits under a street that is itself the city line — the only thing between City A and City B — and the state owns the pavement. The engineering is not the hard part.



The hard part is not the lift.

**CITY A**

**One side of the street**

Encroachment permit, traffic control plan, notification radius.

**CITY B**

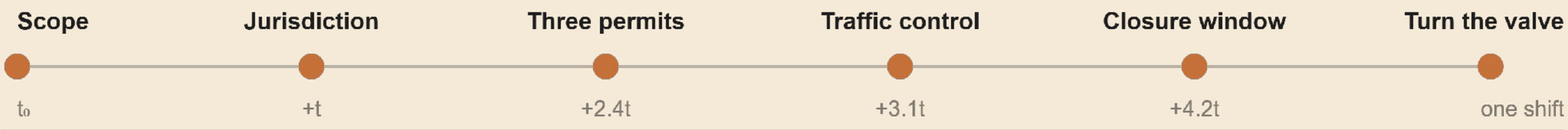
**The other side**

Its own encroachment permit, its own notification rules, its own calendar.

**STATE DOT**

**The pavement between**

Highway encroachment review, lane closure windows, its own standards.




OPEN CHALLENGE 13 · PROTOCOL INSTITUTE

Permitting bundles incommensurable purposes — safety, environmental review, notification, revenue — often genuinely in tension. Orthogonal to that: the burden of coordination itself. Every added touchpoint, form and handoff loads applicants and administrators alike.

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PLACEHOLDER

# More problems, towards an integrated applied research agen

https://bit.ly/applied_research_gov_ops

DRAFT Applied research questions on government operations

All open challenges · protocol-institute.org/research

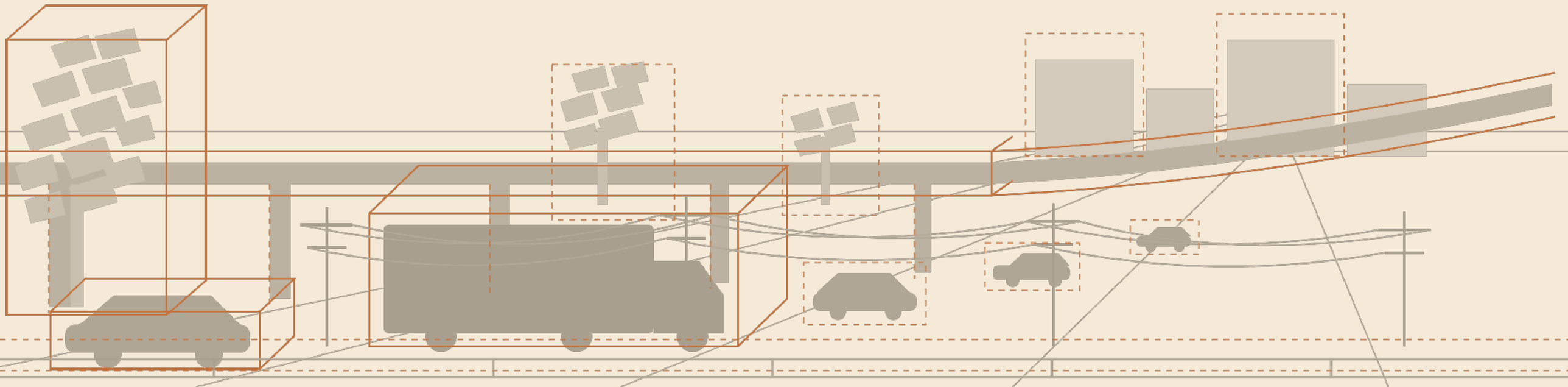
# A call for crimson <protocol> examples



**@patwater · bit.ly/patwater**

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# EXTRA SLIDES



SYNTHESIS

# Three unrelated domains, one shape

### The park

The tacit register dominates. Attempts to write it down produce a laminated sheet on the fence describing a court nobody is playing on.

### The bridge

Codification dominates, and it genuinely works. The tacit register thins into a crescent — and stays there permanently.

### Track two

Tacit by design. The official record is large and doing legitimate work of its own — as a public artifact, not a description.

**THE CLAIM**

The same shape appears at every scale and every level of formality, in domains with nothing else in common. That is what makes it a structural feature rather than an artifact of one field — and a proper object of study.

And the codified-but-inert register is where institutional pathology lives: meeting minutes, standard operating procedures and planning codes that have quietly stopped describing anything.