

Does Flock's cloud-based proprietary architecture create a structural data dependency that effectively bypasses municipal oversight, and does this architectural lock-in weaken local governments' ability to enforce accountability because it restricts independent data verification and concentrates interpretive decision-making within Flock's proprietary ecosystem?

August 27, 2026 | SnugLab Research

Executive Summary

Flock's cloud-based proprietary architecture creates a structural data dependency and architectural lock-in that, based on available evidence, weakens local governments' ability to enforce accountability. This is primarily because the system restricts independent data verification and concentrates interpretive decision-making within Flock's proprietary ecosystem, despite contractual provisions for data ownership and audit tools. While municipalities retain legal ownership of their data and possess contractual rights to download it, the functional reliance on Flock's managed cloud interface and opaque AI algorithms limits their capacity for meaningful independent oversight and auditing. The key unresolved uncertainty lies in the practical effectiveness of these contractual rights against the technical barriers, as direct evidence of municipalities successfully conducting independent algorithmic audits using downloaded data, along with associated costs and hurdles, is limited.

Key Findings

Structural Data Dependency and Architectural Lock-in

Flock's ALPR network establishes a structural data dependency and architectural lock-in for municipalities, driven by its hardware leasing model and centralized cloud control [12, 13, 14]. Municipalities lease Flock cameras at approximately \$3,000 per year and never own the hardware, creating continuous financial and operational dependency that limits future flexibility [13, 15]. While Flock asserts that customers legally own their "Customer Data" and can download it [14], the data is stored in a centralized database managed by

Flock [4, 8]. This arrangement places the core technology and data infrastructure under Flock's ongoing control, ensuring municipalities remain reliant on Flock's cloud interface for basic retrieval and analysis [12, 13, 14].

Concentration of Interpretive Decision-Making

Interpretive decision-making is concentrated within Flock's proprietary ecosystem due to its opaque "Vehicle Fingerprint" AI technology. This system automatically reads images and categorizes vehicles by various attributes, such as license plate, make, model, color, and unique features [1, 3, 6]. Because this AI-driven interpretation is managed entirely by the vendor, municipalities must accept these proprietary algorithmic categorizations rather than independently verifying how vehicles are tagged, flagged, or searched [12]. The algorithms operate as a black box, meaning municipalities cannot independently verify algorithmic bias or the accuracy of search results without access to the underlying training data or the ability to perform independent statistical audits [6, 8].

Restrictions on Independent Verification and Accountability

Flock's architecture restricts independent data verification, weakening local governments' ability to enforce accountability. Flock has reportedly refused to allow independent security analysts to test its devices to verify company claims about the accuracy of its AI and data processing [1]. Furthermore, while Flock provides audit tools, they only report the contents of searches rather than their results, making it difficult for local agencies to determine the actual scope and impact of data access [1]. Proprietary API restrictions also function as a structural bottleneck, preventing bulk data extraction necessary for meaningful full-dataset statistical auditing of retention compliance and search patterns [1]. This forces agencies to rely on vendor-provided metrics rather than transparent, municipal-controlled audits [15]. The ACLU has noted there is "no evidence that Flock's audit assistance tool works consistently to address police misuse" and calls for independent evaluators [2].

Impact of Leasing Model and Contractual Terms on Oversight

Ongoing multi-year lease agreements systematically weaken oversight flexibility by binding agencies to fixed vendor terms and limiting renegotiation windows. The annual leasing model creates a financial lock-in, as municipalities never own the equipment, leading to continuous financial dependency [13, 15]. This is compounded by technical

lock-in, as the proprietary cloud database and interpretive AI algorithms remain under Flock's control [4, 8, 12]. This architectural dependency means that local governments cannot independently verify algorithmic accuracy or enforce strict retention policies without relying on vendor-managed tools [1, 3, 6]. Documented cases illustrate operational and oversight failures directly attributable to the inability to exit Flock's leasing model:

- **Evanston, Illinois**, deactivated cameras and issued a termination notice, but Flock reinstalled stationary cameras without authorization, which remained until March 2026 [18].
- **Verona, Wisconsin**, and **Oshkosh, Wisconsin**, both ended contracts, but Flock reportedly refused to uninstall equipment, with Oshkosh having to cover uncollected cameras with garbage bags [17, 20].
- **Syracuse, New York**, experienced a three-month delay in camera removal after officially dropping Flock [17].
- **Mountlake Terrace, Washington**, terminated an agreement before installation but remained financially liable for a \$27,000 payment [5].
- The **Los Angeles Police Department (LAPD)** allowed its contract to expire, but an audit revealed a clause allowing Flock to retain data for five years for "any purpose," including training machine learning algorithms, a period 60 times longer than Flock's standard policy [5, 7, 19]. The LAPD suspended camera use and drafted new language to prohibit AI data training [5, 7, 11, 12].

Documented Instances of Algorithmic Inaccuracy and Bias

Local governments have identified and remediated specific instances of algorithmic inaccuracy and bias in Flock's Vehicle Fingerprint technology.

- **Roseville, California**, documented a 71% failure rate in Flock alerts for stolen vehicles and felonies between 2023 and 2024, leading to a policy requiring officers to independently verify license plates before acting on alerts [7, 9, 11, 13].
- Other cases involved misreads leading to wrongful detentions and subsequent settlements, such as in **Morristown, Tennessee**, where an "O" was misread as a "0" [1]; **Toledo, Ohio**, which settled for \$35,000 after a "7" was misread as a "2" [1]; and **Atherton, California**, which paid \$45,000 following an "H" misread as an "M" [1].
- **Española, New Mexico**, settled a case in 2025 involving a "2" misread as a "7" [1].

- **Aurora, Colorado**, paid a \$1.9 million settlement after the system failed to verify the state of origin for a stolen vehicle alert, leading to a wrongful detention [3, 10, 21].
- **Richmond, Virginia**, identified racial and class bias in camera placement, remediating this by banning federal agency access to ALPR data [21].
- **Mountain View, South Pasadena, and Austin, Texas**, terminated or did not renew contracts due to concerns over Flock's opaque architecture allowing unauthorized federal data sharing [1, 2, 4, 5, 10, 11].

Limited Effectiveness of Accountability Mechanisms

While Flock has introduced new features to enhance accountability, their effectiveness in strengthening city-level oversight is limited. Flock changed its default data retention policy from 30 days to a recommended 7 days [4, 5, 8, 16], but existing customers can maintain longer periods, and an "Evidence Mode" allows specific license plate data tied to a case number to be preserved indefinitely [2, 5, 8]. Cloud storage is bundled into the annual lease, not priced separately based on retention duration, diminishing the default's role as a mandatory data purge mechanism [13]. Flock has also introduced configurable audit tools, including a mandatory Audit Assistance tool by the end of 2026 to flag abnormal search activity, required case codes for queries, and enhanced controls for shared data [4, 5, 8]. However, these tools primarily offload accountability verification onto understaffed local administrators, as Flock audits "only report the contents of searches, not their results," meaning local agencies must still perform the actual data review and verification [1].

Implications

The structural data dependency and architectural lock-in created by Flock's proprietary system have significant implications for municipal governance and public accountability. Local governments, despite legal ownership of data, become functionally reliant on a vendor-controlled ecosystem for critical law enforcement tools. This reliance limits their ability to independently verify algorithmic accuracy, audit for bias, or control data sharing, potentially leading to unchecked surveillance expansion and privacy infringements. The financial and technical lock-in from multi-year leases also restricts municipal flexibility, making it difficult to adapt to evolving privacy concerns or switch vendors without incurring substantial costs or operational disruptions. The documented instances of misreads and unauthorized data sharing underscore the risks of concentrating

interpretive decision-making within a proprietary black-box system, highlighting a systemic challenge to democratic oversight in the deployment of mass surveillance technologies.

Limitations and Caveats

Direct operational data and empirical studies on the specific system's impact on municipal oversight are limited. The research does not identify specific municipalities that have successfully exercised contractual download rights to perform independent algorithmic audits, nor does it detail the measurable costs or technical hurdles encountered in doing so. Furthermore, the provided research lacks competitor data on market share, pricing structures, and API openness for other ALPR providers, which would be necessary for a comprehensive comparative analysis of architectural lock-in. Conclusions should therefore be treated as provisional, based on the available evidence.

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