The New Geography of Retail Risk

How Location Intelligence Is Redefining Loss Prevention

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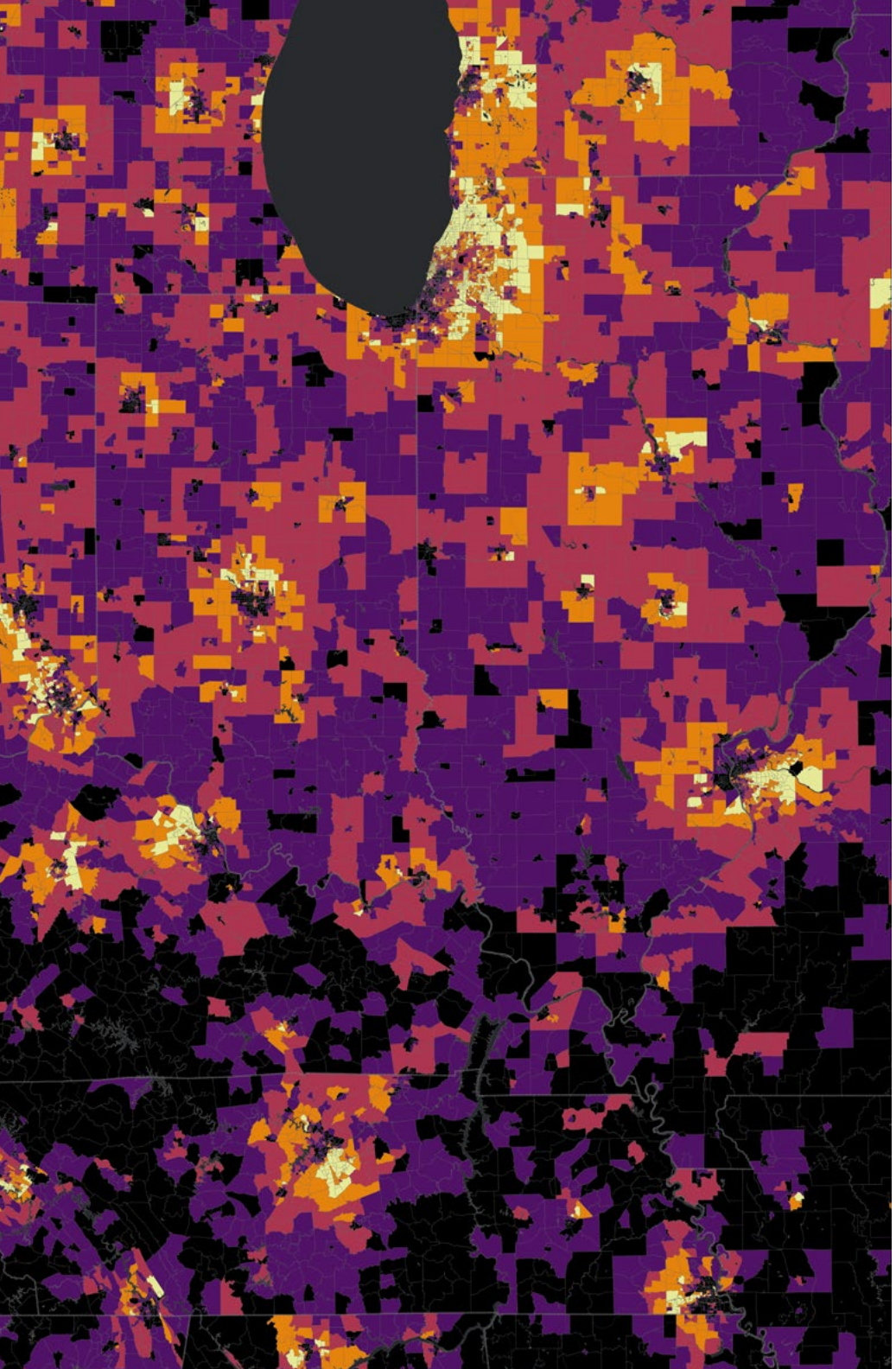

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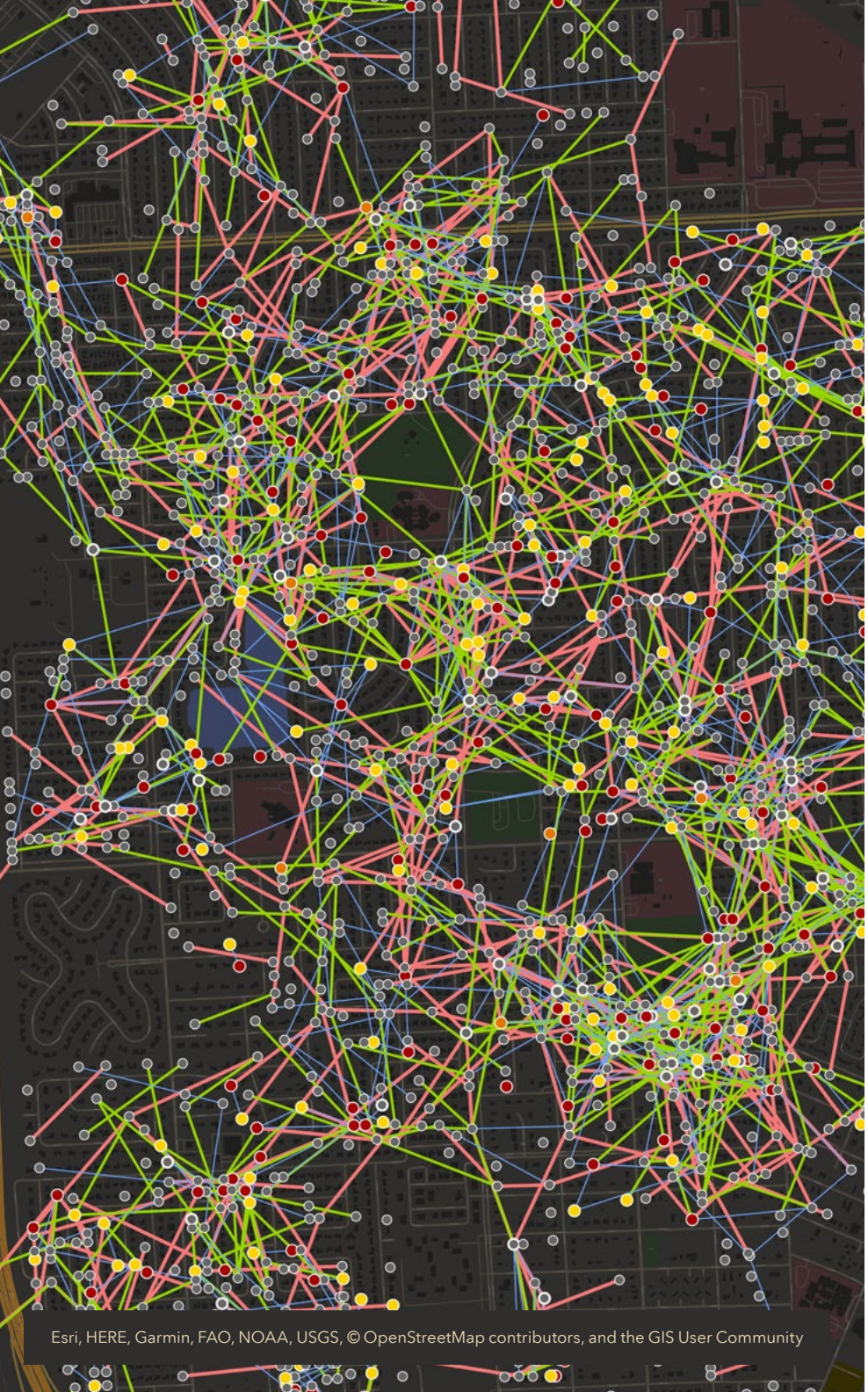


Executive Overview

The landscape of retail asset protection and loss prevention (LP) has shifted. The days of opportunistic shoplifters and internal theft that could be addressed with countermeasures like visible deterrents, audit controls, and exception reporting are over. When store LP teams were dealing with simple shoplifters motivated by personal gain, the traditional tool kit was often enough.

The bad actors attacking retailers today are a different breed: organized, sophisticated, nimble, and, sadly, more prone to violence. Loss prevention professionals must find tools to move from the reactive model to a higher profile and more proactive stance if they're going to successfully mitigate the red (bad) customers while encouraging and supporting the green (good) customers.

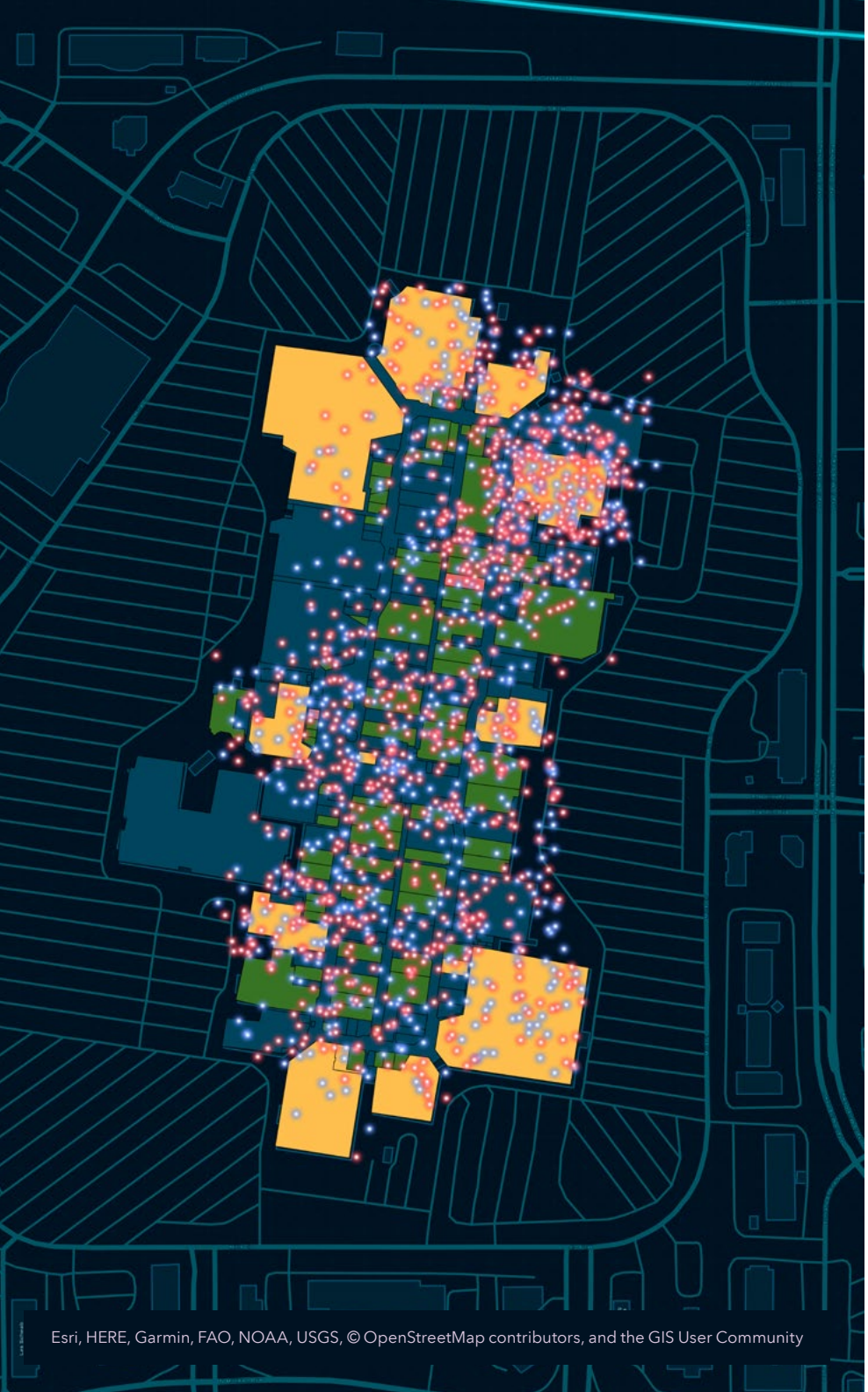
According to the National Retail Federation (NRF), in 2024 US retailers lost an estimated $45 billion to retail theft. That number captures the scale, but not the nature, of the problem. Today's organized retail crime (ORC) crews operate with the planning discipline of logistics companies. They target ▸

Executive Overview (continued)

specific merchandise, specific stores, and specific brands. Smash-and-grab attacks are coordinated across multiple locations in a single night. Criminals arrive equipped with signal jammers to defeat security systems, tools to overcome anti-theft devices, and preassigned roles for every member of the crew. Violence against store associates has become routine rather than exceptional. NRF reports that 91 percent of retail workers have observed shoplifters becoming more violent and aggressive. Tragically, 80 percent of frontline retail workers report feeling unsafe on the job.

The impact of this activity radiates outward from the incident itself. Customers who don't feel safe in a store don't return. Stolen merchandise flooding secondary markets erodes brand equity. Persistent theft in high-shrink locations has driven 30 percent of retailers to close stores, including stores that often served as the only access to health products or fresh food in economically disadvantaged communities. This is not a shrinkage problem. It's an existential threat to retail's presence in the communities it serves.

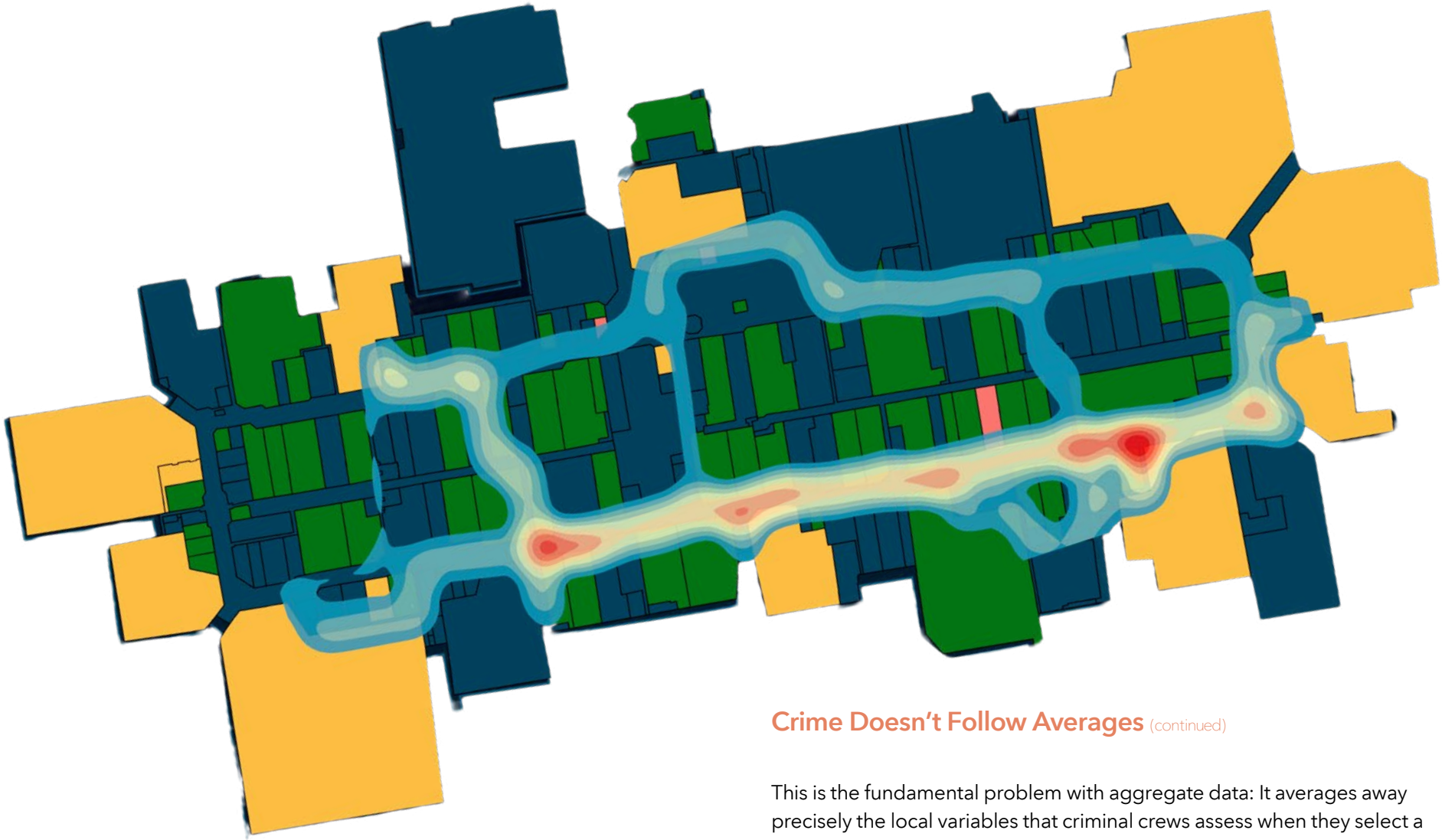
The data systems most retailers rely on—incident reports, shrink metrics, local crime data—are static, and reactive tools do not help retailers understand where the next attack might occur. The question is no longer whether LP needs better data. It's whether the industry can move fast enough to counter the shifting tactics of career criminals affecting our bottom lines and putting our customers and team members at risk. ■



Crime Doesn't Follow Averages

Aggregate crime data has its uses. FBI crime statistics, regional trend reports, and national benchmarks are real data, produced by credible sources. The problem is that they generalize criminal activity. Retail crime happens in a specific place, for a specific reason. The factors that make one location a target and the store a mile away invisible to the same crew are rarely captured in national datasets.

Crime statistics, for example, may show a downward trend in property crime in a given area. A retailer operating in that area might read that trend as reassurance. But ORC crews read the same data differently. A low-crime neighborhood means lighter police presence, longer response times, and stores that may have relaxed their hardening. In November 2021, a crew of 90 individuals in 25 vehicles descended on an upscale department store in the quiet, affluent Bay Area suburb of Walnut Creek, California. They entered at closing time, fanned out to preassigned departments, defeated anti-theft features on specifically targeted merchandise, and were gone in minutes. That attack resulted in an estimated $100,000 in stolen property and several injured associates. The location was chosen deliberately. Its low crime profile was an asset to the crew, not a deterrent. ▶



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Crime Doesn't Follow Averages (continued)

This is the fundamental problem with aggregate data: It averages away precisely the local variables that criminal crews assess when they select a target. These include proximity to highway on-ramps and off-ramps, transit density that provides cover and escape options, the mix of surrounding businesses, whether a nearby parking structure allows vehicles to stage out of sight, and whether a store in another chain on the same block has already been hit. For LP teams, the crew has a pattern.

An LP strategy built on market-level averages will always be behind. The crews aren't working from averages. ■

Closing the Data Gap

Understanding that risk is local is the first problem. The second is that most retailers' data infrastructure isn't built to see it.

Consider what a typical LP analyst is actually working with: incident reports that vary in format and classification standards across the store network; shrink data that surfaces weeks after the fact at inventory count; local crime feeds that don't integrate with internal systems; and ORC activity that frequently gets logged as ordinary shoplifting because the recognition criteria aren't standardized. The result is a picture that is simultaneously data-rich and analytically blind. There is no shortage of data. The issue is consuming that disparate data and being able to expose those patterns.

Inconsistent definitions of theft prevent proper escalation. Improperly classified ORC activity hampers cooperation across the store network and impedes law enforcement investigation and prosecution. But using technology to perform entity resolution to connect attacks and events that on the surface look isolated enables investigations and prosecutors to attribute losses and elevate charges appropriate for the impact of the crime—a fact that's not lost on the ORC crews.

Spatial analysis changes the equation. Imagine a spreadsheet with 200 theft incidents. You can sort it by loss amount, by date, by store. The patterns are not obvious. You could spend hours in that spreadsheet and miss the signal entirely. Now plot those same 200 incidents on a map. The picture changes immediately. You see related clusters of activity. You see crime corridors, thefts concentrated along specific highway routes or public transportation. These corridors provide rapid egress and are well known to the criminals. You see that some stores are targeted repeatedly while comparable stores ▸

Closing Gap (continued)

nearby are untouched. You see temporal patterns that suggest coordination rather than coincidence. Spatial analysis allows you to see what others can't.

Two stores in the same city, even the same zip code, can face fundamentally different risk environments based on their physical surroundings. These factors don't appear in shrink reports. But they are exactly what ORC crews assess when they choose a target. Visualizing data, modeling behaviors, and evaluating patterns enables LP teams to quickly understand the modus operandi of a crew.

An LP strategy that is incapable of isolating the location-specific variables driving criminal activity will always be behind. Today's crews are sophisticated, intelligent, and constantly changing their tactics. A modern LP team must have the tools and data to do the same. ■

Enterprise-Level Tools for Store-Level Data

Recognizing the need for location intelligence is one thing. Building the infrastructure to deliver it at enterprise scale is another. The good news is that the industry has begun to do exactly that and the frameworks now exist for retailers to benchmark, analyze, and act on location-specific risk data without building from scratch.

At the University of Florida, the Loss Prevention Research Council (LPRC) is building a geospatial toolthat will expose geographic variances in criminal activity and risk. By aggregating retailer incident data at the zip-code level and aligning it with validated location-specific risk scores, the tool will create a standardized benchmark framework" that enables LP leaders to evaluate site-level risk against a consistent, industry-wide baseline—rather than comparing a store's data only against itself. The result is a common language for risk. And a common language is where coordinated response begins.

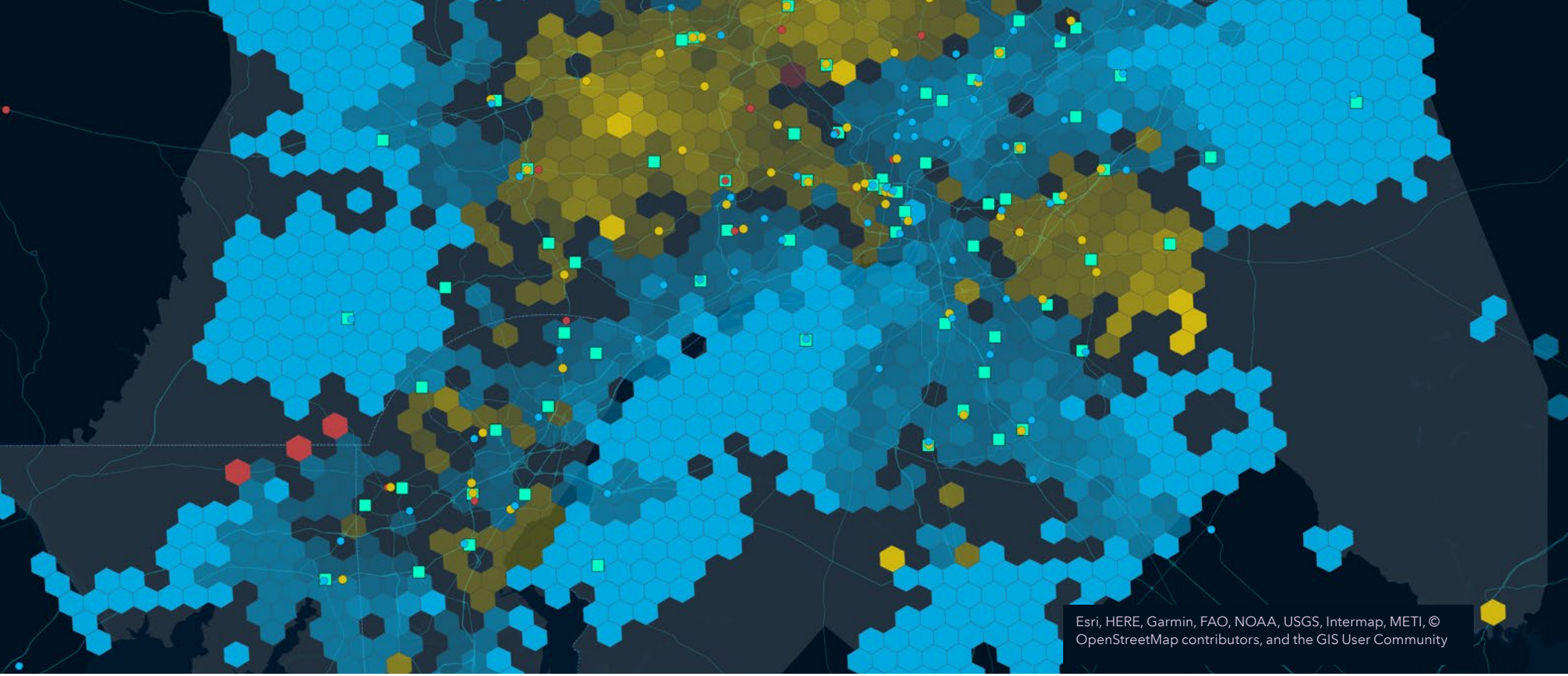
Risk scoring is the practical output of this framework. Each store location receives a numerical assessment, typically on a scale of 0 to 100, based on factors that predict the likelihood and severity of losses. Those factors include historical incident performance, location characteristics including proximity to highways and transit, demographic context, store design, security measures in place, and staffing stability. A store scoring in the 80s ▸

Store-Level Data (continued)

is not just having a bad year—it is operating in an environment where multiple converging factors are creating elevated exposure that a single countermeasure won't fix.

The value of that score is not the number itself. It's what the number enables. Security resource allocation decisions were previously driven by intuition or by putting too much emphasis on historical data, with only location intelligence informing those decisions. The 12 stores that account for 38 percent of enterprise losses but represent only 24 percent of locations are suddenly visible. Deploying additional resources to those locations, rather than spreading investment evenly across the footprint, changes the return on every dollar spent on LP.

As an analytics platform, ArcGIS software enables retailers to build a shared data infrastructure, ArcGIS software enables retailers to build a shared data infrastructure. Crews share intelligence. Crews share intelligence. They know which targets are soft, which have been hardened, which jurisdictions have slow police response. Retailers sharing anonymized location data through a common framework is the industry's answer—aggregate intelligence that makes the entire network smarter, not just individual stores. ■



From Insights to Action: SaferPlaces Gainesville

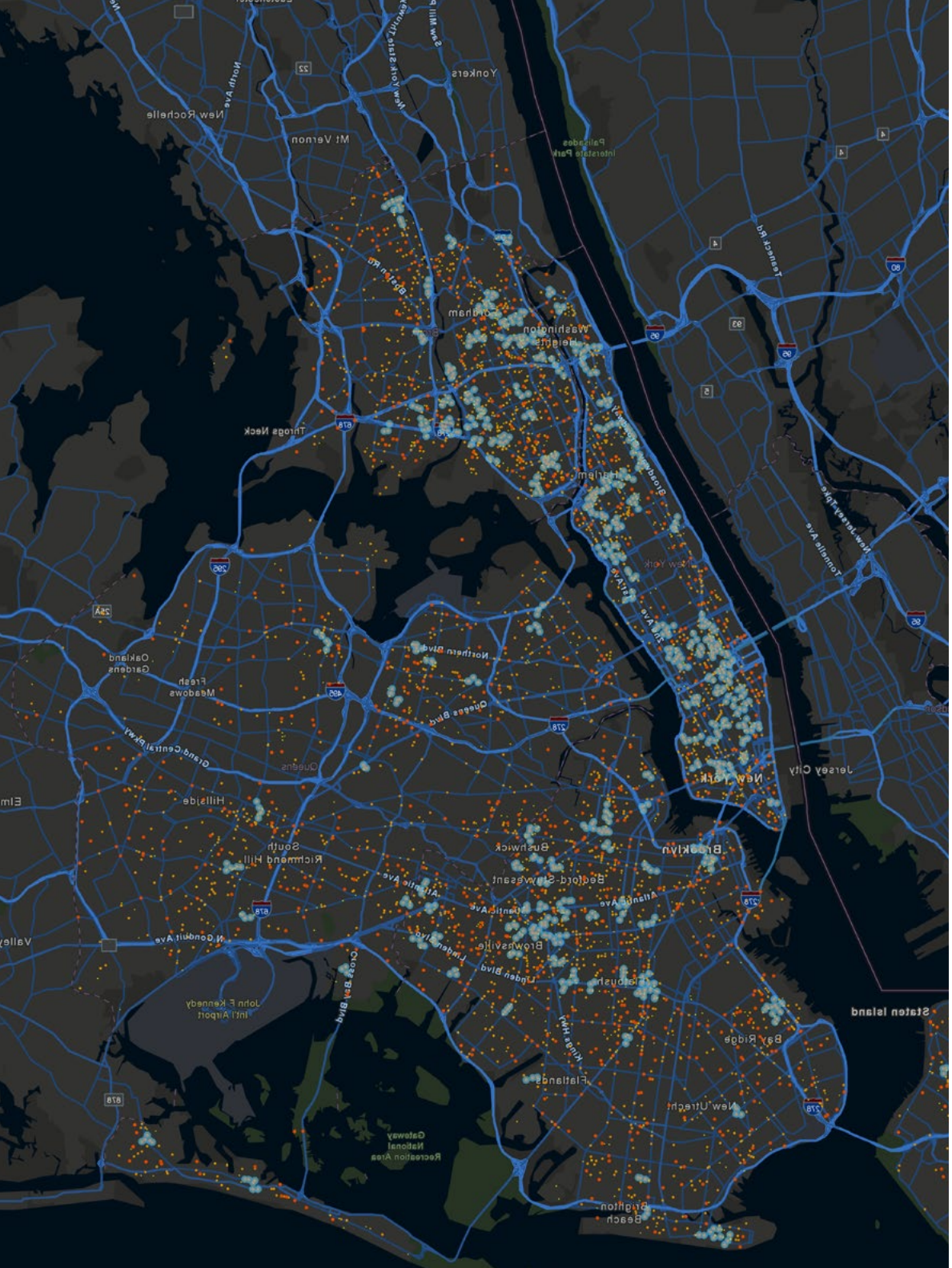
The LPRC's SaferPlaces Gainesville Dashboard is a working demonstration of what operationalized location intelligence looks like. The LPRC, which is affiliated with the University of Florida and recognized as one of the world's leading research organizations focused on retail crime, built the dashboard on the ArcGIS platform. It layers incident data, crime generators in the community, and risk forecasts into a single visual surface. The result is a common operating picture that can be shared across the enterprise: with law enforcement, shopping center management, and other retailers operating in the same area.

The mechanics matter here. A geographic information system (GIS) isn't just about producing a map. A GIS integrates disparate data sources into a spatially coherent picture. Geospatial analysis reveals relationships that are obscured in any single dataset. The dashboard brings together internal incident reports, external crime data, environmental risk factors, and real-time sensor feeds, and presents them in a format that allows a regional LP director to see not just where incidents are occurring, but what the surrounding environment looks like—the transit access, the crime generators, and how environmental factors influence criminal activity. ▸

SaferPlaces Gainesville (continued)

The practical effect is significant. Patterns that would otherwise stay invisible, like a cluster of incidents linking seemingly unrelated store events to a single ORC crew operating across multiple locations, become visible when the data is mapped rather than tabulated. The geographic story of an ORC operation visualized on a map is often far more compelling than a list of incident reports. Prosecution cases get stronger because the map demonstrates deliberate, coordinated targeting in a way that a spreadsheet cannot. Charges that would otherwise be filed as isolated misdemeanors can be elevated to organized retail crime felonies when the geographic and temporal evidence is assembled and presented clearly.

SaferPlaces also demonstrates the value of shared infrastructure. When retailers, law enforcement, and shopping center management are looking at the same map, barriers drop and coordinated response time improves. A crew that has been hitting three retailers in the same shopping center is visible to all of all retailers simultaneously—and the response can be coordinated rather than siloed. This is what it looks like to move from reactive to proactive: not faster response to what already happened, but earlier recognition of what's about to. ■



The Unified Sensor Platform: Turning Intelligence into Action

None of this works without infrastructure that can hold it together.

The common thread across analysis and platforms like SaferPlaces, or any effective location-based LP program, is a geographic information system (GIS). A GIS platform capable of integrating environmental risk data, internal shrink and incident data, real-time sensor feeds, and external law enforcement data creates a single, spatially coherent picture. This is what a unified sensor platform does: It serves as the connective tissue between data sources that currently live in silos, translating the signals from disparate systems into a common operating picture that the enterprise can act on.

The sensor inputs feeding that platform are already deployed in most retail loss prevention technology stacks. These systems manage transaction data and access control logs, camera networks, parking lot LPR readers, and EAS gates. The problem is not a shortage of signals. It's that the data from these sensors is isolated and disparate. It comes in different formats and requires different hosting platforms, all of which ▸

Intelligence into Action (continued)

complicate the ability to see a complete operational picture. A unified sensor platform changes that. When a known ORC offender's vehicle is flagged by a license plate reader in your parking lot, and that signal is contextualized against prior incident data at that location, the risk score for that store, and intelligence about that crew's known operating patterns, the response is no longer reactive. It's anticipatory.

Best-in-class retailers are providing their LP teams with exactly these tools: platforms that expose the patterns in criminal activity and enable a shift from reactive to proactive intervention. When a regional LP director can see not just where incidents are occurring but what the surrounding environment looks like—the transit access, the crime generators, the proximity to previous ORC activity—the decisions about where to deploy resources, where to harden, and where to coordinate with law enforcement become faster and more data-driven.

The implementation path doesn't require a wholesale transformation. Retailers who have successfully built this capability typically follow a crawl-walk-run progression: Start with a focused pilot that maps existing incident data and reveals patterns invisible in spreadsheets; expand to operational dashboards that guide daily decisions; then embed location intelligence into standard LP workflow as the enterprise standard. Each phase builds on the prior, delivering measurable outcomes that justify the next investment.

The threat has gotten more sophisticated. The tools are keeping pace. The retailers moving fastest to adopt them aren't waiting for the next incident to tell them where to look. ■

Discover what ArcGIS can do for loss prevention.

About Esri

Esri, the global market leader in geographic information system (GIS) software, location intelligence, and mapping, helps customers unlock the full potential of data to improve operational and business results. Founded in 1969 in Redlands, California, USA, Esri software is deployed in hundreds of thousands of organizations globally, including Fortune 500 companies, government agencies, nonprofit institutions, and universities. Esri has regional offices, international distributors, and partners providing local support in over 100 countries on six continents. With its pioneering commitment to geospatial technology and analytics, Esri engineers the most innovative solutions that leverage a geographic approach to solving some of the world's most complex problems by placing them in the crucial context of location.

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