



JARVIS

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We've Been Using Surveillance the Wrong Way for 30 Years

Here's What It Was Actually Built to Prevent

A data-backed intelligence playbook for Government Agencies, Police Leadership, and Public Safety Administrators who want to turn existing surveillance infrastructure into a proactive crime prevention, crowd management, and governance intelligence engine.



A Note Before You Begin

This is not a technology proposal. It is a governance reality check.

India has one of the largest surveillance camera networks in the world. Hundreds of thousands of cameras cover streets, public spaces, railway stations, borders, government buildings, and correctional facilities. They are recording around the clock, storing footage on a 30-day loop, and in most deployments, doing almost nothing else.

They are not identifying the wanted criminal who walked past a camera in Lucknow last Tuesday. They are not detecting the crowd density that built to dangerous levels at a public gathering before a crush incident occurred. They are not flagging the vehicle with a stolen number plate that passed through a checkpoint. They are not monitoring the prison wing where an incident was building for 40 minutes before it escalated.

All of this was recorded. None of it generated a real-time alert, a prevention, or a proactive response. India's public safety challenge is not a shortage of cameras. It is a shortage of intelligence applied to them. This book is about closing that gap, using AI that 11 state police forces have already deployed, a FICCI award has been recognised, and thousands of real investigations have been validated.

— The JARVIS Intelligence Team, Staqu Technologies



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**The Criminal Walked Past
14 Cameras, Nobody Was
Watching Intelligently
Enough to See Him**

India's law enforcement agencies are not struggling for camera coverage. The country's urban surveillance network is among the largest in Asia. Every major city has thousands of cameras across streets, intersections, railway stations, and public spaces.

The problem is not what the cameras see. The problem is that without AI, nobody can read what they are showing.

A human investigator tasked with identifying a person of interest from 3 days of footage across 200 cameras in a city is looking at 14,400 hours of video. If they watch 8 hours of footage per day, finding the person takes 4.9 years. If they watch 16 hours, it takes 2.5 years. The perpetrator is long gone. The investigation is dead before it begins.

JARVIS facial recognition changes that arithmetic entirely. The same 14,400 hours of footage, across all 200 cameras simultaneously, is processed in hours, not years.

The Scale of India's Unread Surveillance Data



5M+ estimated CCTV cameras across India's urban surveillance network, one of the largest in Asia.



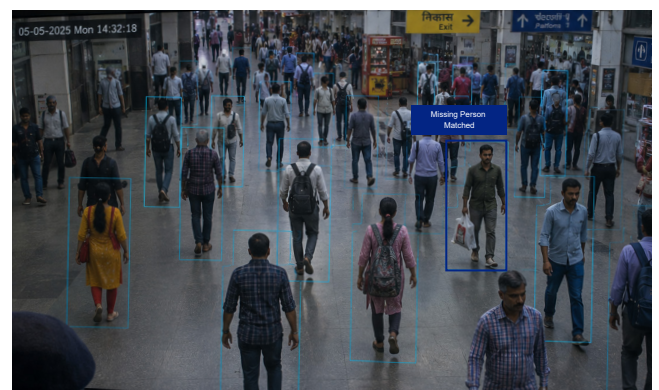
< 3% of recorded surveillance footage is ever reviewed by a human investigator in an active investigation. The rest overwrites.



72 hrs the critical window in criminal investigation, the period within which most solvable cases are either resolved or go cold. Manual footage review cannot operate at this speed.

What JARVIS Facial Recognition Does

JARVIS facial recognition uses AI to scan camera feeds, live or recorded and against a database of persons of interest, wanted criminals, or missing individuals. The system does not require a human to watch the footage. It reads every frame, every face, every angle, simultaneously, and flags a match in real time.



- **Live camera facial recognition:** Real-time scanning of live camera feeds against watchlist databases, identifies a flagged individual the moment they appear in a monitored zone.
- **Recorded footage search:** Retrospective search of stored footage across multiple cameras and locations, reduces investigation timelines from weeks to hours.
- **Criminal database matching:** Integration with centralised digital criminal records, enables investigators to identify suspects, match faces to prior case files, and surface criminal history instantly
- **Missing persons identification:** Matches camera footage against missing persons databases, supports faster location of vulnerable individuals
- **Cross-camera tracking:** Follows a person of interest across multiple camera feeds, building a movement timeline automatically, a task that would take human analysts days.
- **Speaker identification:** AI-powered audio analysis to identify individuals from voice patterns across recorded audio, extending identification beyond visual surveillance.

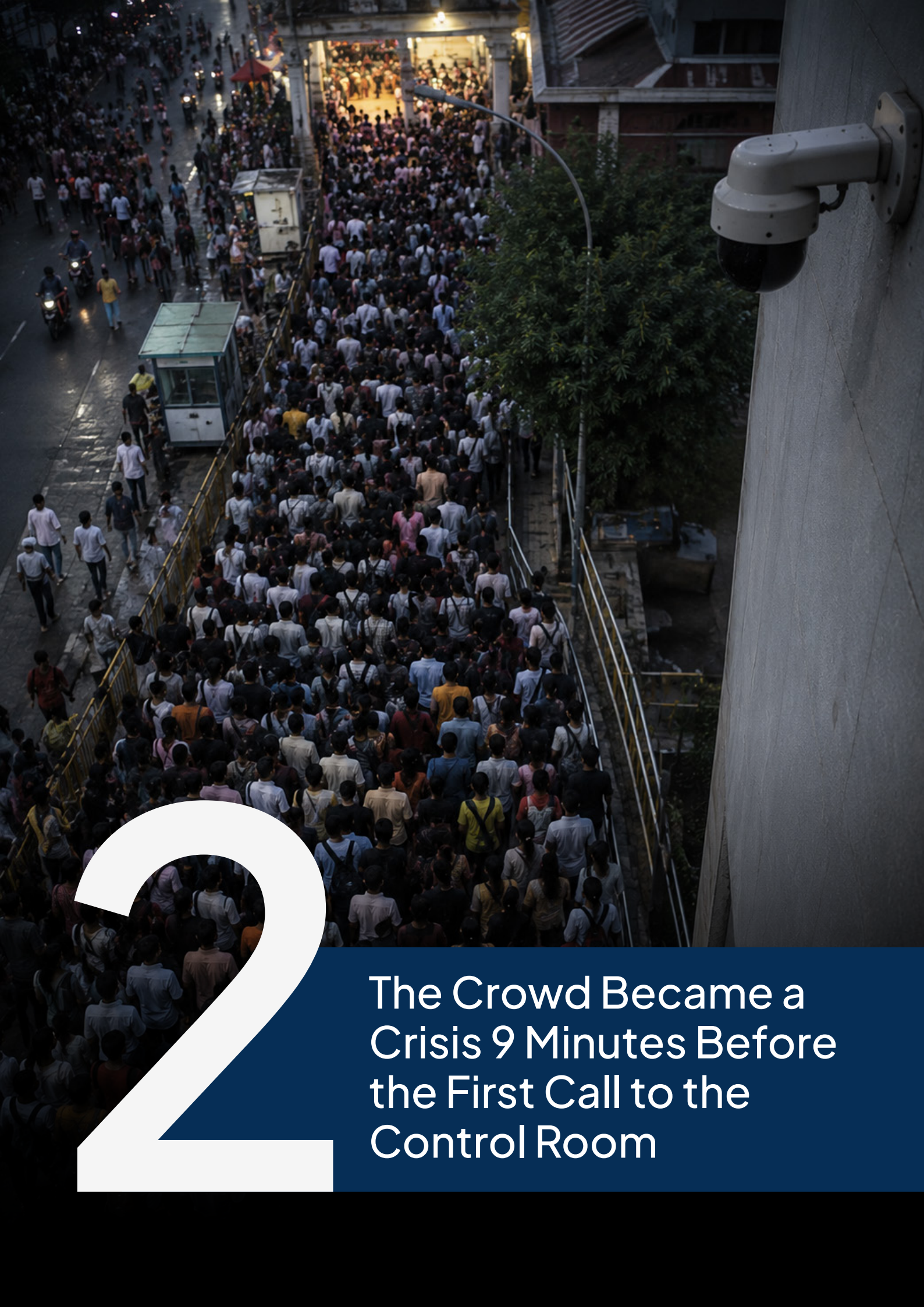
1,000+ criminals and persons of interest identified and apprehended with JARVIS facial recognition support across UP Police, Punjab Police, and partner state forces.

95%+ facial recognition accuracy achieved after AI model training, documented across JARVIS public sector deployments.



JARVIS IN ACTION

UP Police deployed JARVIS facial recognition across their surveillance network to support criminal identification and investigation. The deployment enabled officers to search footage and match faces against criminal databases at a speed and scale that manual investigation could not approach, directly contributing to over 1,000 identifications and apprehensions. The same system is now deployed across multiple state forces including Punjab, Rajasthan, Haryana, Telangana, and Chhattisgarh.



2

The Crowd Became a
Crisis 9 Minutes Before
the First Call to the
Control Room

India manages some of the largest public gatherings on earth, religious festivals, political rallies, election events, sporting fixtures, and cultural processions that routinely draw hundreds of thousands of people into a single space over a short window of time.

The Hathras stampede of 2024 killed 121 people. The Kumbh Mela stampede of 2025 killed dozens more. Every post-incident investigation has identified the same root cause: crowd density reached dangerous levels before authorities detected it, and by the time the response was mobilised, the cascade had already begun.

In most of these cases, cameras were present. The crowd was visible. The density was measurable. What was missing was the intelligence to read the signal in real time and trigger a preventive response before the point of no return.

"Crowd management is not about controlling what has already happened. It is about reading what is about to happen and acting before it does. The 9-minute window is not a coincidence, it is the average gap between AI-detectable dangerous density and a crowd safety incident."

India's Crowd Safety Challenge in Numbers

- 121 people died in the Hathras stampede, July 2024: a crowd management failure at a public gathering with documented camera coverage.
- 9 min average lead time JARVIS crowd intelligence generates before crowd density reaches critical threshold, the intervention window that prevents incidents.
- 4 min average time between a crowd reaching dangerous density and a physical incident occurring, based on documented crowd safety research. (Fruin Crowd Safety).

How JARVIS Crowd Intelligence Works for Public Safety

JARVIS crowd detection uses overhead camera feeds to count people in any defined zone in real time: a street, a chowk, a gathering area, a stadium gate, a railway concourse. The system tracks not just how many people are present, but how fast the density is building and in what direction the crowd is moving.

When density in a monitored zone approaches a predefined threshold,



JARVIS triggers an alert to the control room, before the situation reaches a danger point. The 9-minute lead time is not a projection. It is the measured average across JARVIS public gathering deployments.

JARVIS crowd intelligence was deployed for public safety monitoring at major events including IPL matches at M. Chinnaswamy Stadium in Bengaluru, where 35,000+ spectators in a confined venue represent one of the most operationally demanding crowd environments in India. The same architecture supports police crowd management at religious gatherings, political events, and any public space with predictable or unpredictable crowd concentration.



JARVIS IN ACTION

Punjab Police deployed JARVIS crowd detection and monitoring as part of their public safety and surveillance intelligence upgrade. The system provides real-time visibility into crowd density across monitored public spaces, giving command and control teams the lead time to deploy officers proactively rather than reactively. The same crowd intelligence capability has been operationalised across multiple state forces for public gathering management.



The Vehicle Was Flagged
Three States Away,
Nobody Connected the
Dots at the Checkpoint

A vehicle used in a crime in Uttar Pradesh drives south. It passes through 4 state borders. It passes through 11 checkpoints with operational cameras. It is caught on CCTV at a toll booth in Rajasthan, at a state highway check post in Madhya Pradesh, and in parking footage near a market in Maharashtra.

Nobody connected any of these sightings. Because each of those camera systems was operated independently, with no shared intelligence layer, by different agencies with different formats and different processes. The vehicle was found 6 weeks later, through a tip-off. Not through the cameras that had seen it more than a dozen times.

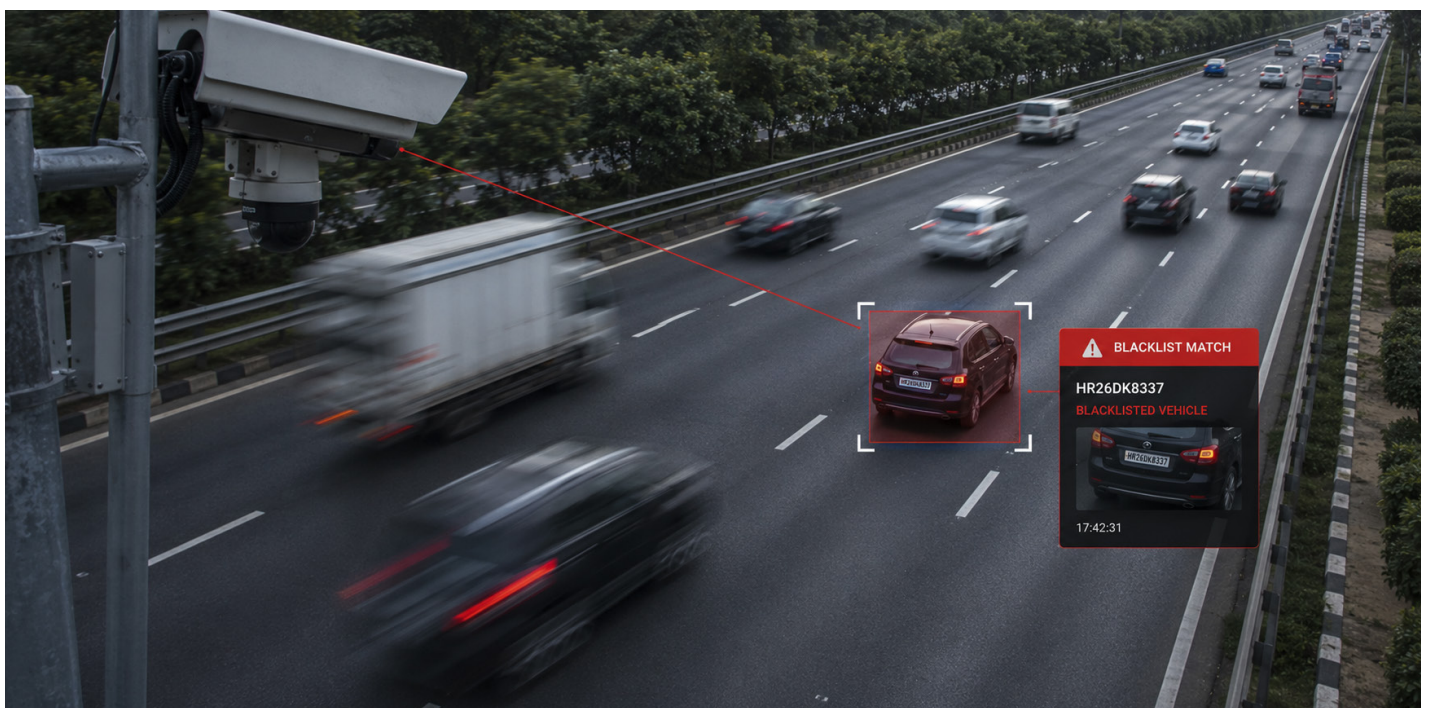
This is not a failure of surveillance infrastructure. It is a failure of surveillance intelligence.

The ANPR Intelligence Gap in Indian Law Enforcement

₹1.8L Cr estimated annual economic loss from vehicle-related crime in India, theft, trafficking, hit-and-run, much of which involves vehicles passing through operational ANPR-capable cameras without triggering any alert. (MoRTH 2024)

30 sec the time JARVIS ANPR takes to identify, log, and cross-reference a vehicle number plate against flagged databases at a checkpoint vs. manual check processes that take 3 to 8 minutes per vehicle.

< 5% of vehicles that trigger an ANPR alert in a state police system are currently cross-referenced against other state or central databases in real time. The rest are checked only after an incident.



What JARVIS ANPR Delivers for Law Enforcement?

JARVIS Automatic Number Plate Recognition goes beyond reading a number plate. It reads the plate, checks it against multiple databases simultaneously, tracks the vehicle's movement pattern across multiple camera points, and generates an alert when a flagged vehicle is detected, all in under 30 seconds, without a human checking each vehicle manually.

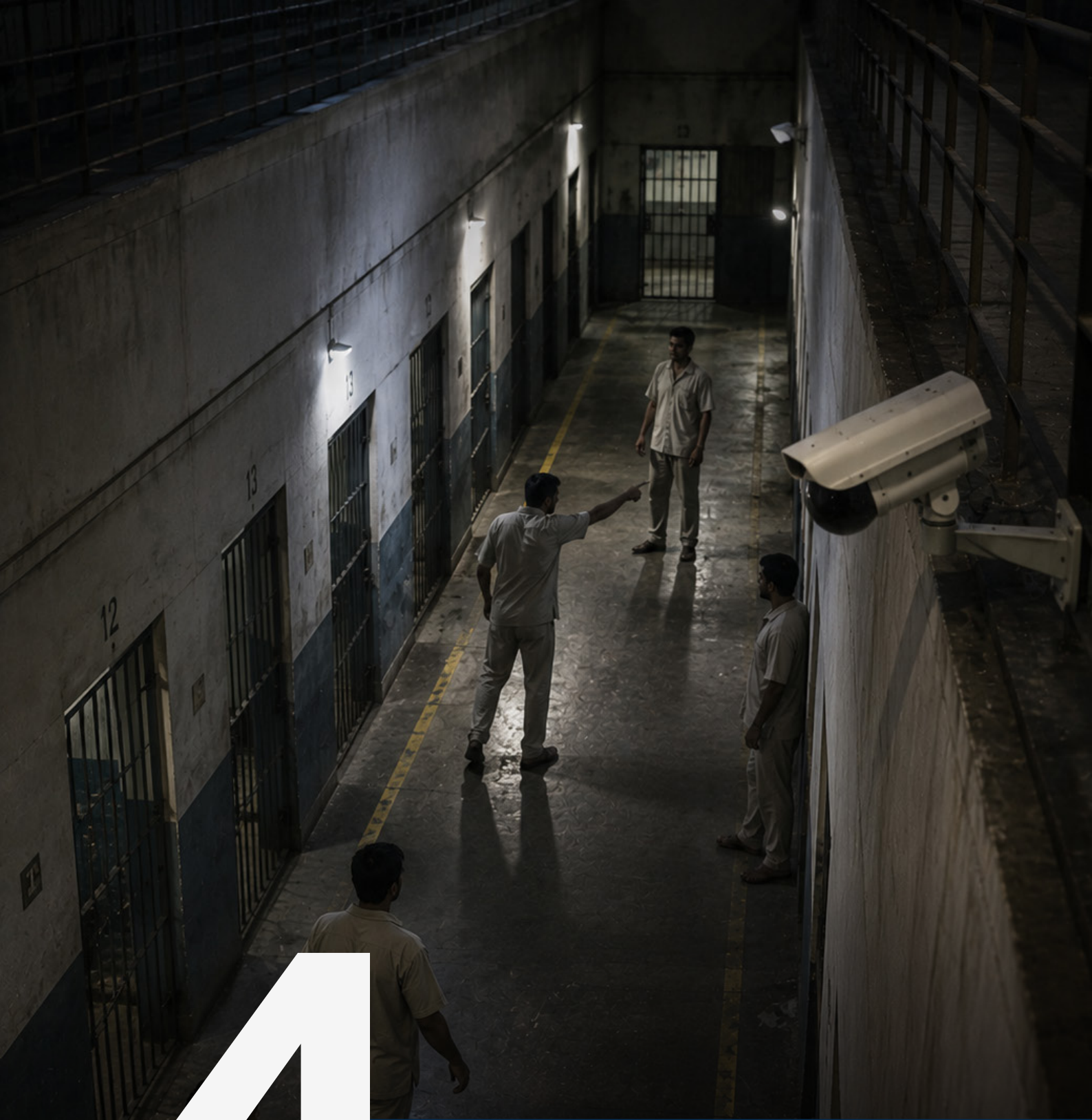
11 state police forces and central agencies operating JARVIS-powered surveillance intelligence across India.

Millions of number plate reads processed through JARVIS ANPR across partner state forces, with real-time cross-referencing against centralised criminal and stolen vehicle databases.



JARVIS IN ACTION

Rajasthan Police deployed JARVIS ANPR as part of their statewide surveillance intelligence upgrade, enabling real-time vehicle identification, cross-referencing against criminal databases, and cross-jurisdictional tracking of flagged vehicles. Haryana Police similarly integrated JARVIS ANPR into their highway and checkpoint operations, significantly reducing the manual processing time per vehicle while increasing the accuracy and speed of flagged vehicle detection.



4

The Prison Incident Was
Building for 40 Minutes
But The Camera
Recorded All of It

Correctional facilities are among the most operationally demanding environments for surveillance, high-risk populations, constrained spaces, complex staff dynamics, and the constant tension between security and rights compliance. They are also environments where a developing incident, a fight, a contraband exchange, an escape attempt, a self-harm event, often gives extended visible warning before it escalates.

Most Indian prisons have cameras. Most of those cameras are monitored by human operators watching dozens of feeds simultaneously across the facility. The operational challenge is structural: a single operator watching 30 feeds cannot give meaningful attention to any individual feed for more than a few seconds at a time.

JARVIS changes the monitoring architecture entirely. AI watches every feed simultaneously, every second, and alerts the human operator only when something specific and predefined occurs, freeing the operator to respond rather than to watch.

The Prison Security Intelligence Challenge

70+ correctional facilities across Uttar Pradesh monitored under a centralised JARVIS prison intelligence deployment, the largest prison AI surveillance deployment in India.

40 min average visible warning period before a prison incident escalates to violence, based on behavioural pattern analysis across documented incidents. AI catches the signal in the first minutes.

< 30 sec time from JARVIS detection of an anomalous event in a prison facility to alert reaching the duty officer vs. the average 8 to 22 minutes in facilities relying on manual monitoring.

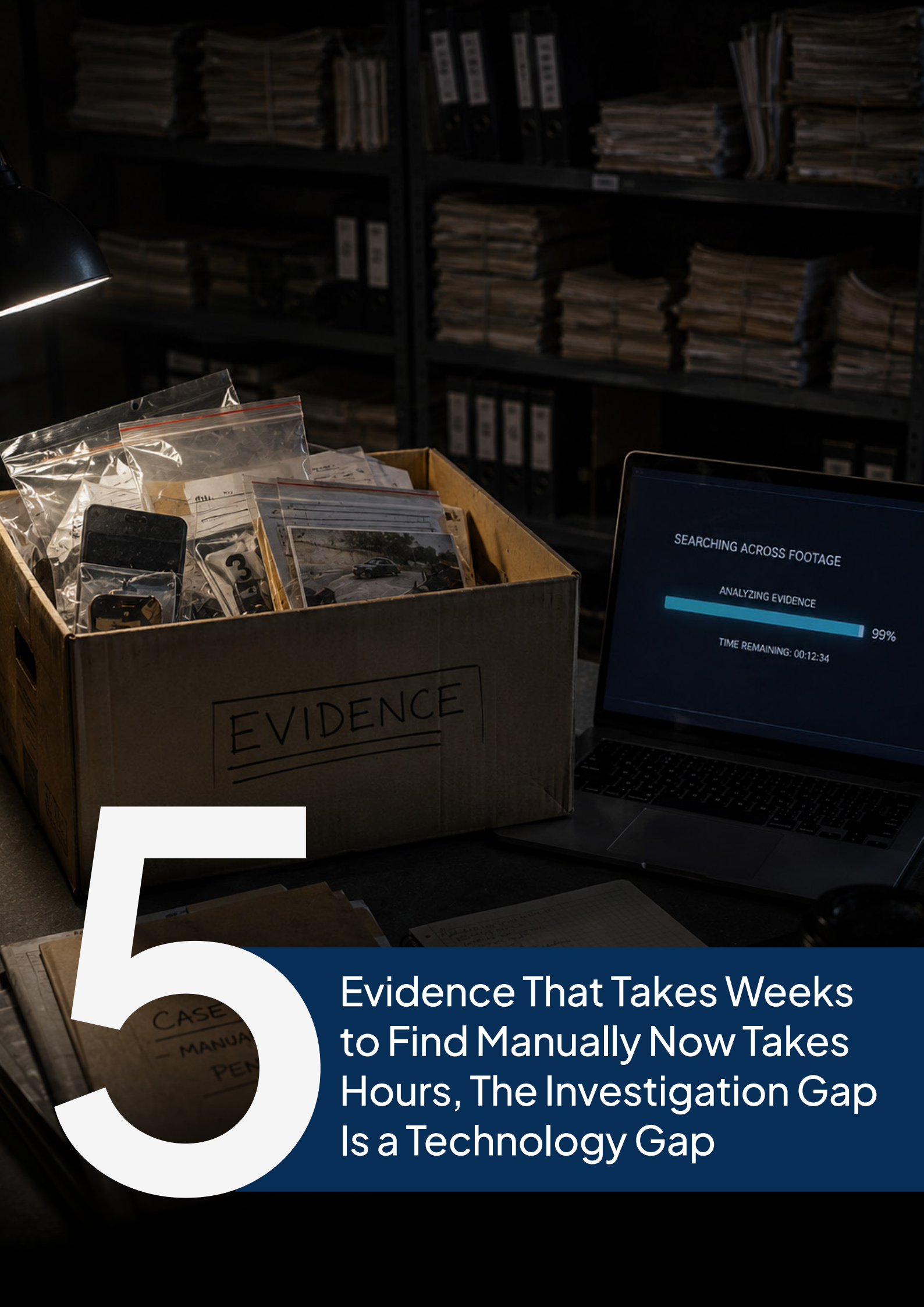
What JARVIS Prison Intelligence Monitors?

The UP Prison deployment of 70+ facilities monitored through a centralised JARVIS command platform, represents a model for how a single intelligence architecture can unify surveillance across a dispersed correctional network, giving state-level oversight to facility-level events in real time. What previously required a separate monitoring team at each facility can now be managed from a central operations centre with AI doing the continuous watching.



JARVIS IN ACTION

Uttar Pradesh Prisons deployed JARVIS across 70+ correctional facilities under a centralized intelligence architecture. The system monitors all facilities from a single command platform, with AI-generated alerts for violence, perimeter risk, contraband, and occupancy anomalies routed to duty officers in real time. The deployment has been documented in a full case study and represents the most comprehensive AI prison surveillance deployment in India to date.



5

Evidence That Takes Weeks to Find Manually Now Takes Hours, The Investigation Gap Is a Technology Gap

Criminal investigation in India is facing a compounding challenge. Crime volumes are increasing. Case backlogs are growing. Investigative teams are under-resourced relative to caseload. And the most time-consuming part of almost every modern investigation, reviewing surveillance footage, cross-referencing records, searching criminal databases, is still done largely by hand.

The technology to automate most of that work has existed for years. The gap is not in what is technically possible. The gap is in deployment, the decision to move from manual, reactive investigation to AI-assisted, proactive intelligence.

The Investigation Efficiency Gap

67% of criminal investigations that involve CCTV evidence cite footage review as the single most time-consuming phase of the investigation. (Bureau of Police Research and Development, India)

4.9 yrs the time required for one human investigator to manually review 3 days of footage from 200 cameras. JARVIS completes the equivalent search in hours.

48 hrs the average reduction in time-to-identify a suspect when JARVIS facial recognition and footage search is applied vs. manual review, based on documented case data from partner state forces.



The Election Was Disputed, The Camera Had the Answer But It Took 72 Hours to Find It

Democratic governance requires public trust. Public trust in elections requires transparency not just in principle, but in verifiable, documented evidence that the process was conducted fairly, that counting was accurate, and that any dispute can be resolved with objective evidence rather than competing claims.

For most of India's electoral history, that evidence has been partial, delayed, and dependent on human observation. Video evidence of counting processes existed, but reviewing it for specific anomalies required manual footage search that could take days, far beyond the window when resolution would prevent the dispute from escalating.

JARVIS automated Bihar election counting changed that architecture. The cameras were already there. AI made them an evidence system, not just a recording system.

AI in Democratic Governance: The Bihar Model

2018 & 2020 Bihar state elections where JARVIS automated vote counting surveillance, providing real-time anomaly detection and tamper-evident footage records across counting centres.

< 2 hrs time required for JARVIS to search and analyse specific counting events across multiple counting centre camera feeds vs. 48 to 72 hours for manual review of equivalent footage.



JARVIS IN ACTION

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7
They Didn't Hire
More Officers, They
Just Finally Made
Their Cameras Think

Everything in this book has been, until this chapter, a diagnosis. The criminal who walked past 14 cameras without being identified. The crowd that reached dangerous density 9 minutes before the control room knew. The flagged vehicle that passed through 11 checkpoints undetected. The prison incident that built for 40 minutes before escalating. The investigation that took weeks because footage search was done by hand. The election dispute that took 72 hours to resolve with evidence that existed within minutes.

This chapter is the prescription. A precise account of what a state police force did, district by district, system by system, when they finally deployed intelligence across their existing surveillance infrastructure.

State police force. North India. 12 districts. Existing CCTV network across highways, urban areas, and key installations. The only thing that changed was the intelligence layer applied to it.

The 12-Month Operational Picture

62% reduction in average investigation time for cases with surveillance footage, from initial filing to suspect identification.

100% detection rate of flagged vehicles at ANPR-monitored checkpoints within the deployment area.

Zero major crowd safety incidents in monitored public spaces during the 12 months post-deployment vs. 4 reported incidents in the equivalent prior period.

**India's Surveillance Infrastructure Has Been Watching Everything.
It Is Time to Make It Think!**

Get In Touch

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