



GUIDE · MOTHER NATURE

The Safety Monitoring Modernization Guide

How to evaluate AI video analytics for HSE — and where to start.

IIOT INFOTECH · RELATED SOLUTION: HSE VIDEO ANALYTICS — INDUSTRVALYTICS

How to think about this decision

Four questions to work through before evaluating any vendor — including us.

1. Start with the gap between supervisor rounds

The clearest way to size the opportunity is to ask: "how many minutes of unmonitored floor time exist between supervisor safety walks?" For most plants running rounds a few times per shift, that gap is measured in hours — and it's where most PPE non-compliance actually occurs.

2. Reuse existing CCTV before buying new hardware

One of the most common (and expensive) misconceptions is that AI video analytics requires new cameras. In most cases, existing CCTV infrastructure with reasonable resolution is sufficient — the AI model runs on the existing video feed, not a purpose-built camera network.

3. The payback math worth doing before you commit

A typical PPE compliance deployment reports a roughly 5-month payback period, driven by reduced incident-related costs, reduced insurance premiums (15-25%), and eliminated manual PPE rounds (saving roughly 2 hours per supervisor per shift). Run this math against your own incident and insurance data first.

4. Sequencing: PPE compliance first, environmental monitoring second

PPE compliance is typically the fastest, most measurable first deployment because the detection use case is well-proven and the ROI is easiest to demonstrate. Fire/smoke, spill detection, and restricted-zone monitoring are valuable expansions once the platform has proven itself.

WHERE IIIOT FITS

If you decide to move forward

HSE Video Analytics is built around the framework above, not around a generic feature list.

PPE Compliance Detection

Detects helmet, gloves, safety shoes, reflective vest and goggles compliance in real time, using existing CCTV — no new hardware required.

Fire & Smoke Detection

Multi-point real-time flame and smoke analysis across multiple zones simultaneously — faster than traditional point sensors.

Intrusion & Restricted-Zone Detection

Monitors blast zones, HV panels, chemical storage, and confined spaces for unauthorized entry.

95%+	<2 sec	24/7	50% less
PPE DETECTION ACCURACY	ALERT LATENCY	CONTINUOUS MONITORING	SAFETY INCIDENTS (PPE USE CASE)

support@iiiot-infotech.com | www.iiiot-infotech.com

+91 124 403 2289 | +91-8800183840 | +91 99714 48680

7th Floor, Space Boulevard, 710-712, Badshahpur Sohna Rd, Malibu Towne, Sector 47, Gurugram, Haryana 122018, India