

KenVision for Manufacturing Units

AI Video Analytics Use Cases

Smarter Manufacturing. Safer Operations. Higher Productivity.

KenVision is an AI-powered video analytics platform designed for manufacturing plants and industrial facilities. It transforms existing CCTV infrastructure into a real-time operational intelligence system that improves safety, productivity, compliance, quality control, and warehouse operations.

KenVision enables manufacturing units to monitor production activity, detect operational inefficiencies, strengthen worker safety, improve quality compliance, and protect inventory — all through intelligent video analytics using existing camera infrastructure without requiring additional hardware investments.

1. Production Line Monitoring

Monitors activity across every production line in real time to detect stoppages, idle machinery, and production slowdowns.

- Detects unexpected downtime instantly
- Alerts supervisors to operational slowdowns
- Supports faster root-cause analysis and recovery

Outcome: Reduced downtime and improved production output.

2. Worker Productivity & Presence Tracking

Tracks worker presence, movement, and activity across production zones.

- Identifies extended idle periods
- Detects understaffed workstations
- Flags unauthorized zone movement during production hours

3. PPE Compliance Detection

Automatically verifies whether workers in hazardous zones are wearing required safety equipment.

- Detects missing helmets, gloves, goggles, and safety gear
- Sends real-time safety alerts
- Supports workplace safety compliance

Outcome: Accidents prevented and compliance maintained.

4. Restricted Zone Access Control

Monitors access to restricted areas such as machinery zones, electrical rooms, chemical storage, and tool stores.

- Detects unauthorized access attempts
- Generates immediate alerts
- Maintains compliance-ready access logs

Outcome: Risk reduced and sensitive areas protected.

5. Unsafe Behaviour Detection

Detects unsafe actions and hazardous worker behavior across the factory floor.

- Identifies workers near moving machinery
- Detects unsafe running or movement patterns
- Flags improper equipment handling

6. Shift Coverage Analytics

Tracks staffing levels across shifts and production zones.

- Detects staffing gaps during handovers
- Identifies understaffed production lines
- Supports workforce optimization and planning

7. Process Deviation Detection

Monitors production checkpoints and identifies deviations from standard operating procedures.

- Detects irregular production activities
- Alerts supervisors for immediate review
- Helps maintain process consistency

Outcome: Quality issues identified before product release.

8. Inspection Station Monitoring

Tracks quality inspection activity and identifies skipped or rushed inspection processes.

- Monitors inspection station dwell time
- Detects incomplete quality checks
- Protects product quality standards

Outcome: Improved quality assurance and compliance.

9. Defect Zone Heatmapping

Identifies which lines, stations, or shifts generate the highest concentration of quality issues.

- Visualizes quality hotspots
- Supports targeted process improvement
- Enables data-driven operational decisions

10. Compliance Audit Trail

Maintains timestamped video logs of production, inspections, and operator actions for compliance and audits.

- Provides evidence for regulatory inspections
- Supports customer quality reviews
- Simplifies audit preparation

Outcome: Faster audits and stronger compliance visibility.

11. Warehouse Footfall & Zone Monitoring

Tracks activity across warehouse zones including raw material stores, dispatch areas, and finished goods sections.

- Detects congestion and inefficiencies
- Monitors unauthorized access
- Improves warehouse visibility

12. Loading Bay Management

Monitors loading and unloading operations to reduce delays and improve dispatch efficiency.

- Tracks vehicle dwell time
- Detects goods handling irregularities
- Monitors unauthorized vehicle movements

Outcome: Pilferage prevented and dispatch efficiency improved.

13. Inventory Zone Surveillance

Monitors high-value inventory and storage zones for unauthorized handling or tampering.

- Detects suspicious inventory movement
- Monitors after-hours activity
- Provides timestamped evidence for investigations

Outcome: Theft identified quickly and losses prevented.

14. Forklift & Heavy Equipment Safety

Detects unsafe forklift and heavy equipment movement near pedestrian zones.

- Monitors unsafe speed and driving behavior
- Generates real-time safety alerts
- Prevents collisions and operational accidents

Outcome: Safer warehouse and factory operations.

15. Goods Movement Tracking

Monitors material and finished goods movement throughout the manufacturing facility.

- Detects unauthorized movement outside approved routes
- Monitors activity outside operational windows
- Improves inventory accountability and traceability

Key Benefits for Manufacturing Units

Operational Area	Business Impact
Production Efficiency	Reduce downtime and improve output
Worker Safety	Strengthen PPE compliance and hazard detection
Quality Assurance	Improve inspection compliance and defect reduction
Compliance Management	Simplify audits with timestamped evidence
Warehouse Operations	Improve inventory visibility and dispatch control
Security Monitoring	Prevent unauthorized access and pilferage

Operational Visibility	Real-time analytics across the entire facility
Process Optimization	Identify bottlenecks and improve workflows

KenVision enables manufacturing facilities to transform existing CCTV infrastructure into an intelligent operational and safety platform. By combining AI-powered analytics with real-time monitoring, manufacturing units become safer, more efficient, and better equipped to improve productivity, quality, and operational control.