



GUIDE · MEASUREMENT

The Inline Inspection Business Case

How to evaluate 100% AI vision inspection against your current statistical sampling program.

IIOT INFOTECH · RELATED SOLUTION: QUALITY INSPECTION VIDEO ANALYTICS — INDUSTRVALYTICS

How to think about this decision

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

1. Do the sampling math first

Before evaluating any vision AI platform, calculate what percentage of units your current sampling program actually inspects, and what that implies about undetected defects in the unsampled majority. This number, more than any vendor claim, is usually the strongest internal argument for 100% inspection.

2. The three numbers that build the ROI case

Rework and scrap cost avoidance (often 25-40 lakh rupees per year for a mid-size line), QC headcount reduction (60-70% of manual inspection roles), and throughput increase (15-20%, since 100% automated inspection removes the sampling bottleneck from the line rate).

3. Reuse existing CCTV before budgeting new camera hardware

As with safety video analytics, most quality inspection deployments can run against existing camera infrastructure with adequate resolution — evaluate the software and AI model first, and only budget for new industrial cameras if a specific inspection point genuinely requires higher resolution.

4. Sequencing across a multi-line facility

Pilot on the line with the highest current defect escape rate or rework cost — that's where the ROI is fastest and most visible, and where the case for expanding to additional lines builds itself.

WHERE IIIOT FITS

If you decide to move forward

Quality Inspection AI is built around the framework above, not around a generic feature list.

100% Inline AI Inspection

Replaces statistical sampling entirely — every unit is inspected, not just a sampled fraction, with 97%+ defect detection accuracy.

Multi-Domain Coverage

Quality control, worker safety (PPE), process analytics, and security & access — a single vision platform covering multiple use cases from the same camera infrastructure.

Real-Time Alerting

Under 2-second alert latency means a defect is flagged before the unit advances to the next production stage, not discovered downstream.

97%+

DEFECT DETECTION ACCURACY

<2 sec

ALERT LATENCY

100%

COVERAGE VS. STATISTICAL SAMPLING

15-20%

THROUGHPUT INCREASE

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