

BSC monitoring. Cognitive vision automation.

AI-Powered Assurance: Enhancing Compliance, Safety, and Efficiency with Edge Intelligence

AI-powered edge devices ensure **safe, compliant, and efficient** operations within Biological Safety Cabinets (BSCs) by continuously monitoring SOP adherence. They detect procedural deviations, minimize human error, and prevent contamination risks in real time. Seamlessly integrating into existing workflows, these smart systems enhance safety, compliance, and operational reliability.

Key challenges

Human Errors

SOP Adherence

Compliance

Lack of Alerts

Solution

- **Edge AI System** – Monitors operator actions, material handling, and workspace cleanliness.
- **Real-Time Alerts & Logs** – Automated event detection with time stamped reports.
- **Edge Processing (IP67 Rated)** – Low-latency inference without cloud dependency.
- **Seamless Integration** – Connects with lab management systems.
- **Privacy-Preserving AI** – Processes data locally, ensuring security and compliance.



How it works



Edge camera captures operator behaviour & workspace conditions.



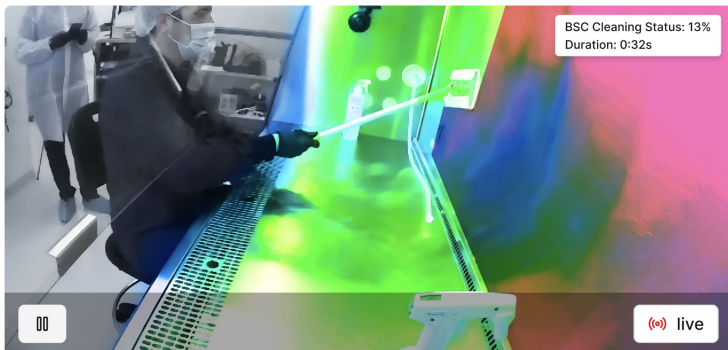
AI model detects SOP violations, contamination risks, and safety breaches.



System triggers real-time alerts & stores compliance logs.



Reports & insights available for regulatory audits and process optimization.



Key benefits

- **99% accuracy** in SOP adherence detection.
- **Real-time** contamination risk alerts prevent lab shutdowns.
- **Administrative interface** available in your network with easy integrations to current systems.
- **No internet** dependency for on-premise AI inference.
- **Seamless scalability** for multiple BSC units.

Risk-Free integration into your business process

1

Isolated data collection for risk-free testing

- Our plug-and-play edge device is installed **without connecting to your network**.
- It starts collecting video data, ensuring **zero risk to existing operations**.

2

AI model calibration & accuracy validation

- We analyze your specific lab environment and train our AI for precise SOP control.
- You receive a **real-world accuracy** report.

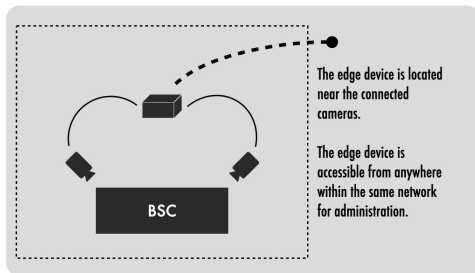
3

Full deployment & value delivery

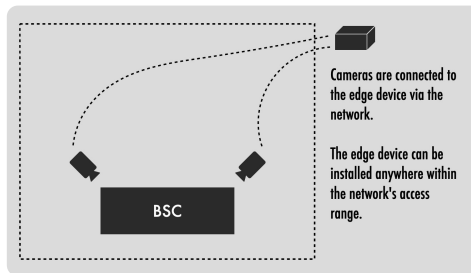
- **Once validated**, we connect the device to your network and lab systems.
- The system starts delivering real-time alerts and operational insights.

FAQ

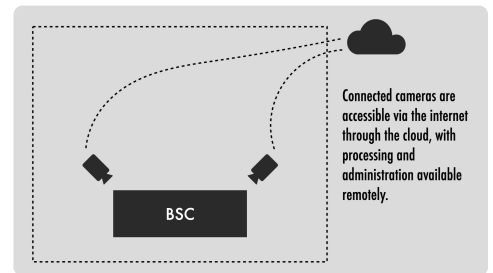
Deployments option



"In-room" edge processing with remote administration



"In-facility" edge/server processing with remote administration



Cloud processing with remote administration

User interface and monitoring capabilities

Real-Time Monitoring and Live Data

Alerts Management

Historical Data and Related Operations Video

Integration management

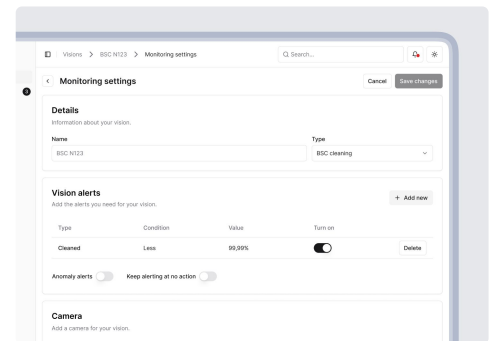
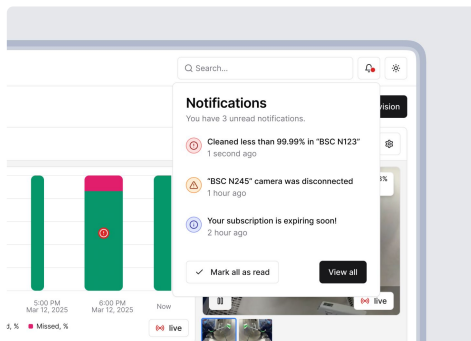
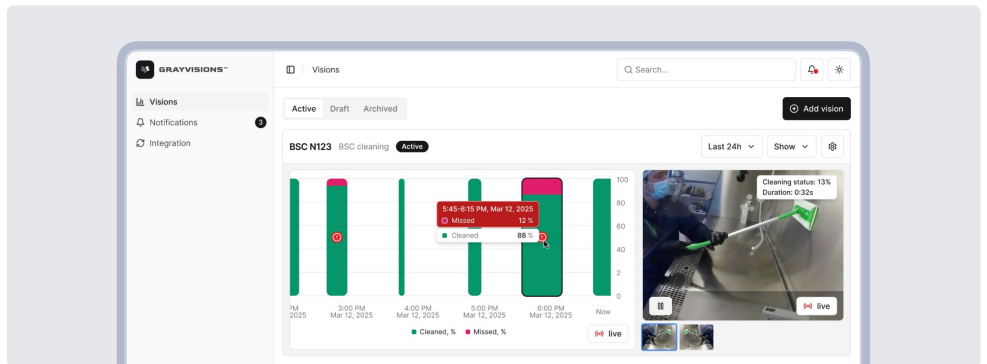
Cameras and Multi BSCs Management

User and Access Control

AI Configurations

System Health Dashboards

Updates Management and Support Tools



Available plans

Pro

- Multi-BSC Edge Device Support
- IP67 Cameras
- Optional IP67 Shell for Edge Device
- Low CapEx Cost
- Subscription Model: ongoing support, software updates, security patches

Omni

- Dedicated On-Premise Servers
- Custom Infrastructure
- Scalability
- Enterprise-Level Support
- Comprehensive Integration

What else Cognitive Vision could be valuable for?

Problems

- Bioprocessing Monitoring
- Sterile Zones Controls
- Supply Chains
- Defects QA
- Personnel Behavior

Expanded Coverage

- Broader Monitoring Scope
- Multi-Process Automation
- Smarter Decisions
- Greater Automation
- Unified Infrastructure