iOmniscient

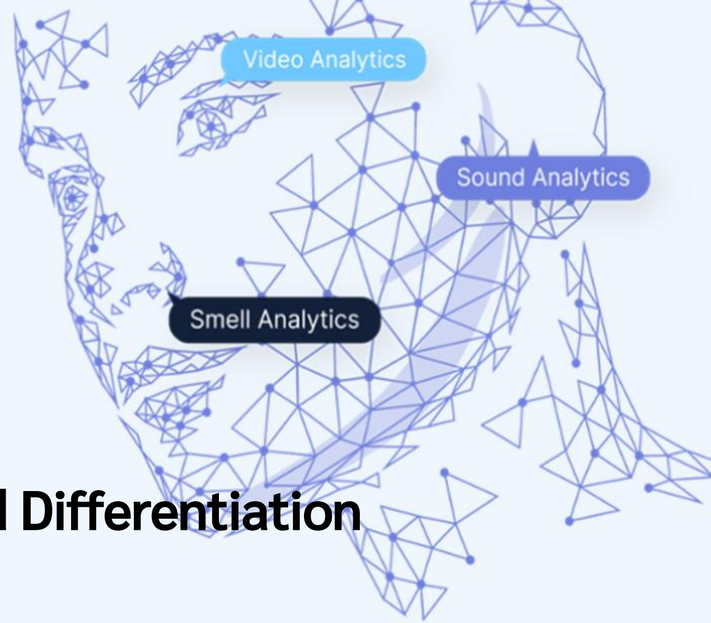
iQ-Preventive Maintenance
: Escalator Maintenance

Cameras detect damaging objects and
stop escalators before damage



iOmniscient

Table Of Contents



1 Escalator Uptime

2 The Repair Burden

3 Camera-Guided Prevention

4 Response and Payback

5 Training and Differentiation

6 Sustainable Systems

7 About iOmniscient

Click a number and go to the page

iOmniscient



Escalator Uptime

UP TO 20% OUT OF SERVICE

Small objects cause major stops

Nuts, bolts, screws and coins can fall into the mechanism and cause breakdowns.

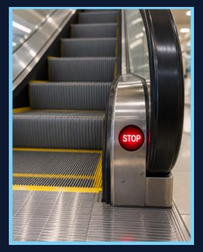
Large railway or mall fleets may have up to 20% of escalators out of operation at a time.

iOmniscient

The Repair Burden

Avoidable failures can disrupt the public for several days

MAINTENANCE COST



BREAKDOWN

Days of disruption

Crews must open escalators and replace damaged parts, often taking several days.

High repair cost

Small objects can damage the mechanism and trigger expensive repairs.

Public inconvenience

Several days out of service can cause significant disruption.

Cost visibility

CIO and IT teams often do not see maintenance expense, though they can help reduce it.

iOmniscient

Camera-Guided Prevention

The camera-to-response sequence protects the mechanism

1

Watch

A couple of cameras monitor escalator steps for damaging objects.

2

Classify

Distinguish nuts, screws and coins from wrappers; ignore feet and brief obstruction.

3

Stop

Automatically stop the escalator when a damaging item is detected.

4

Clear

Notify the nearest person in charge to brush the item off the step.

DANGEROUS OBJECT

QUICK REMOVAL

iOmniscient

Response and Payback

Stopping early avoids damage and reduces maintenance expense

HIGH ROI

Payback in months

Payback is usually
within a couple of months.

PREVENTIVE ACATION

AUTONOMOUS RESPONSE

The system automatically stops
the escalator and alerts
the nearest responsible person.

COST CONTROL

Quick action can prevent significant
equipment damage
and lower maintenance costs.

PUBLIC ACCESS

Avoiding repair can spare passengers
or shoppers several days of inconvenience.

iOmniscient

Training and Differentiation

Small datasets support rapid deployment across diverse equipment

PATENT



Internationally patented

The core technology is internationally patented.

AI

Very small image datasets teach dangerous versus benign objects.

FAST LEARNING

Shorter implementation supports diverse equipment; multi-sensory analytics respond much as a human would.

Fewer False alarms

Ignores feet and harmless wrappers while tracking dangerous items through brief obstruction.

iOmniscient

Sustainable Systems

Intel-based AI with lower power demand



All iOmniscient products run exclusively on Intel-based computing hardware. Advanced AI goes beyond Deep Learning.

INTEL-BASED COMPUTING

NO 3RD-PARTY GPUs

16× LOWER POWER

16× LOWER CARBON FOOTPRINT

Power use falls by a factor of 16,
resulting in a 16-fold reduction in carbon footprint.
The program helps customers implement Sustainable Systems.

©2026 iOmniscient Corporation

About iOmniscient

Partnership

All iOmniscient Products run exclusively on Intel based computing hardware using OpenVINO™

- The use of Advanced AI technology that goes beyond Deep Learning enables iOmniscient to run its systems without the need for 3rd party GPUs.
- This reduces the power required by a factor of 16 – resulting in a 16-fold reduction in the carbon footprint.
- This is just one part of a multi-faceted program to help customers to implement Sustainable Systems.

www.iomni.ai

enquiries@iomni.ai

©2026 iOmniscient Corporation

About iOmniscient

- iOmniscient is an **Ethical AI** company.
- It offers **multi-sensory (video-sound-smell) Artificial Intelligence based analytics for Autonomous Systems.**
- It focuses on ensuring **Outcomes** for its customers.
- With **over 2 decades of experience,** iOmniscient systems have been demonstrated to be **robust,** operating with high accuracy and few false alarms specially in **complex and crowded** environments.
- By design, its systems **reduce the cost of infrastructure** required:
  - they can use existing cameras
  - they require fewer cameras with lower resolution
  - they require 90% less storage and network bandwidth
  - they are computing light and require no GPUs
  - they allow autonomous operations requiring fewer personnel to operate
- iOmniscient has implemented projects in **70 countries.**
- With over **70 international patents** many of its capabilities are unique and unavailable from any other source.





iOmniscient