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# iQ-Sound

Sound analytics for safety
and equipment monitoring



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# Table Of Contents





1 Sound Analytics

2 Detection Workflow

3 Public Safety

4 Predictive Maintenance

5 Sound and CCTV

6 Multi-Sensory Analytics

7 About iOmniscient


*Click a number and go to the page*

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# Sound Analytics

Hear what cameras cannot see



## Critical sound detection

iQ Sound detects critical sounds, helps locate their source and triggers alerts in real time.
CCTV can provide visual verification when needed.

## 100+ sound categories

Classify a wide range of critical sounds and identify events as they happen.

## Existing infrastructure

Use existing microphones and CCTV where suitable.
Multiple sensors help locate the sound source.

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# Sound Detection Workflow

Acoustic events become actionable intelligence in real time



01

## Listen

Microphones capture sound.



02

## Detect

AI classifies the acoustic event.



03

## Locate

Multiple sensors help find the source.



04

## Alert

Notify the relevant team.



05

## Verify

Check CCTV to understand the event.

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# Public Safety

Early awareness of critical acoustic events

### Suspected gunshots

Detect suspected gunshots in real time and alert the relevant team.

### Fights and distress

Recognize fight and distress sounds to support faster response.

### Visual verification

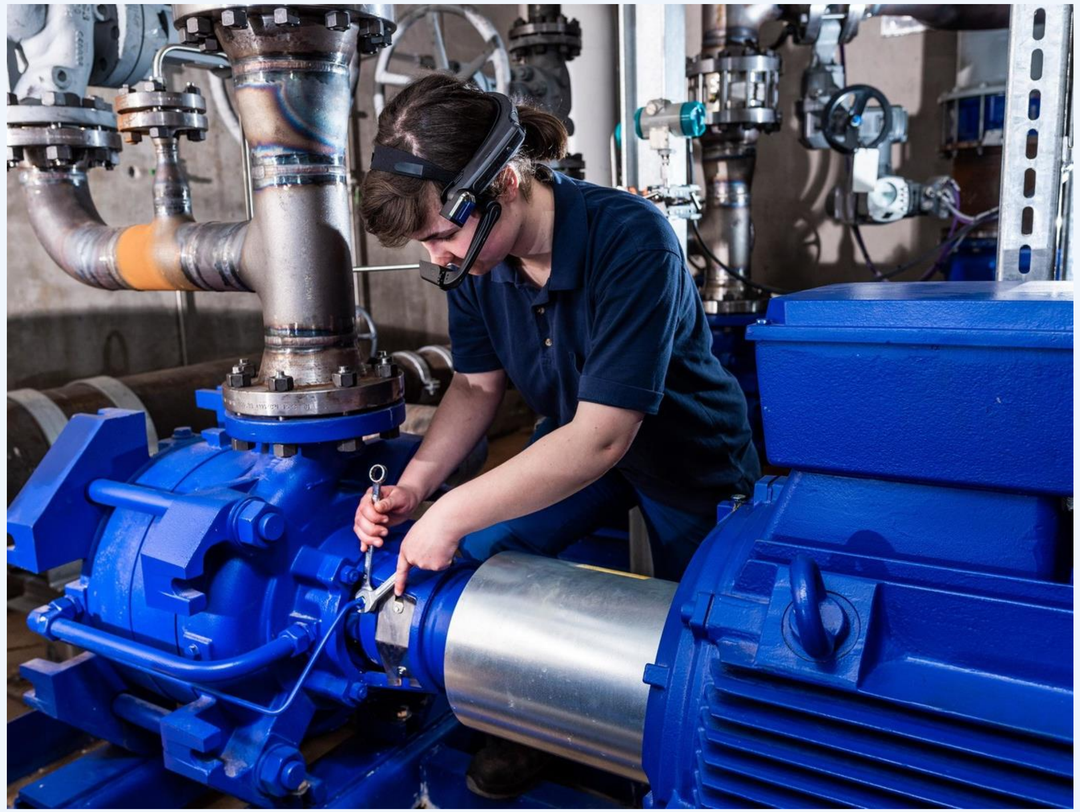
Use CCTV to check what happened after an acoustic alert.



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# Predictive Maintenance

Listen before machines fail



## Early acoustic changes

Abnormal acoustic patterns can appear before visible failure.

## Equipment condition

Support earlier detection of wear and abnormal operation.

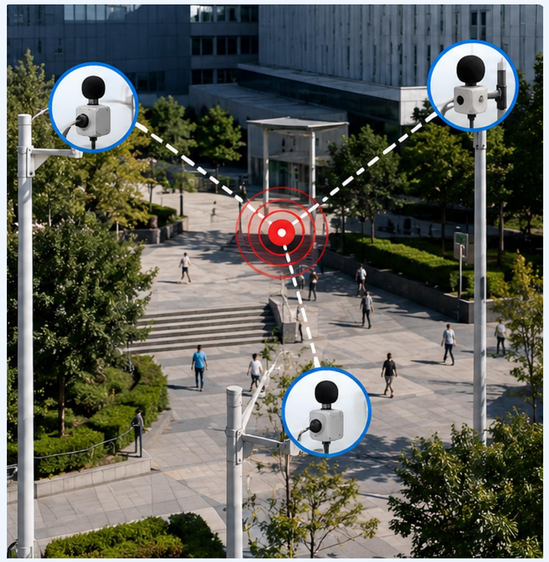
## Applications

Pumps, conveyors, shafts and lifts.

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# Sound Location and CCTV Verification

Locate the sound first, then visually verify the event



## 1. Locate the sound

For example, multiple microphones hear a suspected gunshot at slightly different times.

iQ Sound compares the arrival times of the acoustic event across multiple microphones and uses triangulation to estimate its source.

## 2. Verify with CCTV

Direct a PTZ camera to the detected location to see who is there and verify what happened.

Face recognition can support identification.



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# Multi-Sensory Analytics

Video, sound and smell support a fuller understanding of events




## Video

See events and provide visual verification with CCTV.

## iQ Sound

Hear critical events and locate the acoustic source.

## e-Nose

Add smell analytics to the multi-sensory platform.

**80+ international patents / 70+ countries**

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# 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.

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# 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.







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