

black.ai

Automated Processing & Safety Monitoring

An AI powered solution for industrial environments

Understand Space and Movements

In industrial environments spacing, interactions, and processes matter. They have operational and safety impacts.

Understanding when and what is happening on site both historically and live can mean improvements are caught early and changes reinforced. Black.ai offers the ability to have this understanding down to 1 cm using sensors which don't constrain or add additional tasks for staff.

No helmet detected

3.2m
Person Distance

For All Staff, All the Time

Human on path

The Black.ai system can deliver highly detailed and actionable metrics for every person, anywhere on site, 24/7.

Our system understands not just one person's behaviour and movement but all interactions relative to others in the same room, floor or entire facility all in real-time.

Capturing: What, Where and When

This unique spatial mapping allows for the following monitoring:

Falls Potential Hazards Safety Compliance Incorrect Storage



Captured On Black.Ai Site:

Black.ai can help you measure if correct processes are being followed, as well as alert you in real-time when certain behaviours or events are exhibited on-site.

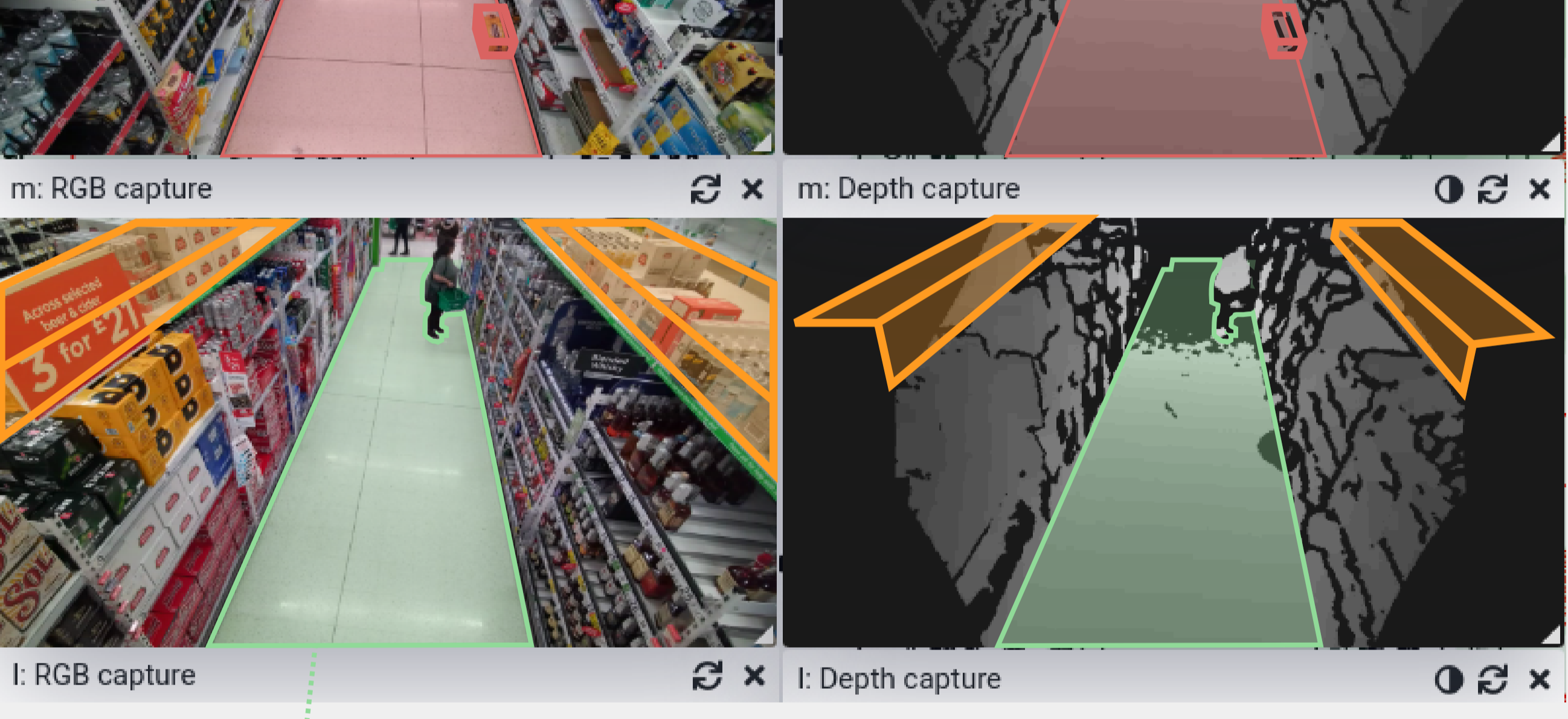
These events include:

- Clutter detection in walkable floor-space
- Correct or hazardous object storage
- Human fall events
- Human movement and collision
- Object and vehicle movement and collision
- Change in human vitals (ie. respiratory rate)
- Custom process events (ie. security paths, safety procedures and machine inspection)



Detected Hazard: Clutter Left On Floor

Detected Storage Hazard: Shelf Overstocked

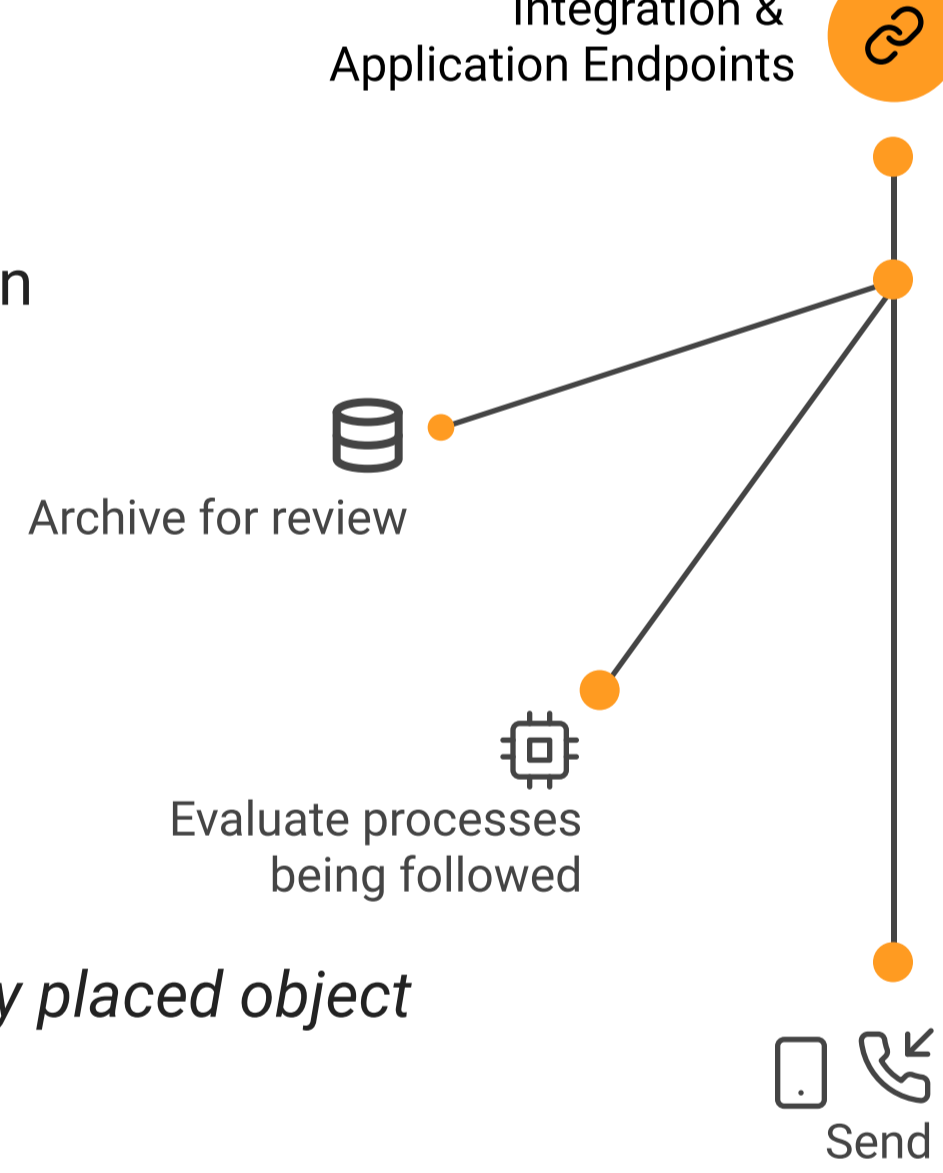


Detected: Clear Floorspace, No Hazards.

Built to connect

Our flexible API integrates easily with almost any digital system. Whether you want to view data in traditional analysis tools or modern BI suites, we can plug data in exactly where it is needed most.

Certain data points are best used immediately. Black.ai supports publishing actionable notifications through a variety of channels, enabling you to build smarter and actively safer environments.



Type of Trigger

Example

- | | |
|----------------------|---|
| Environment Changes | Hazard detected on floor or poorly placed object |
| Object to Object | Distance between two vehicles |
| Human Changes | Staff Fall detected, unsafe object pickup |
| Human to Human | Distance between humans, duration of interaction |
| Human to Environment | Single staff member journey or heatmap of staff dwell times |
| Human to Object | Which machines have been interacted with and for how long |

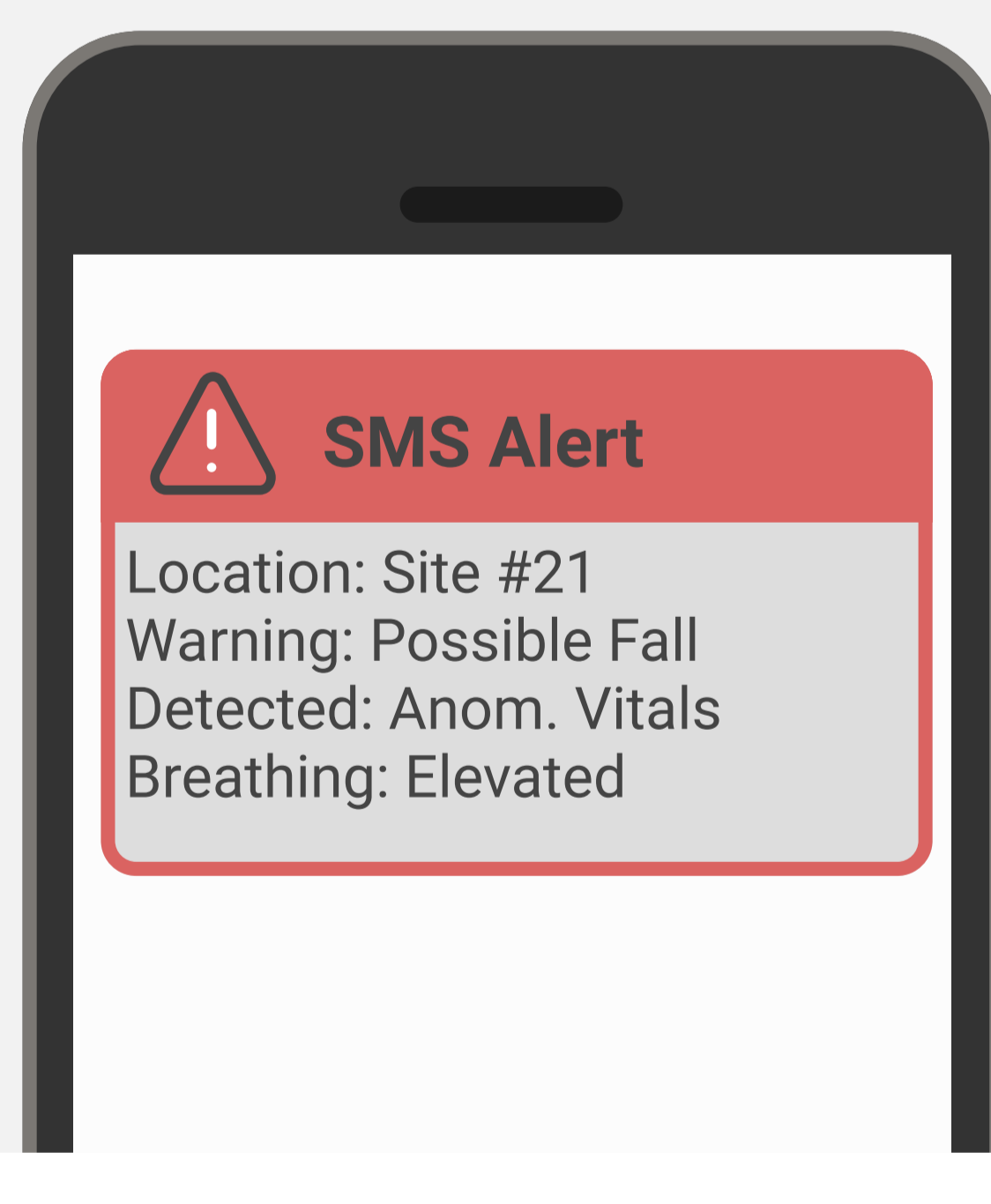
Send alert

Intergrated or Stand Alone Alerts

Real-time alerts can be triggered in existing alert systems or using Black.ai's standalone interfaces, giving time sensitive information where it's needed most. These can be triggered based on any of the above information including the environment, staff or objects that have potential hazards.



Hazard Detected: Site #3



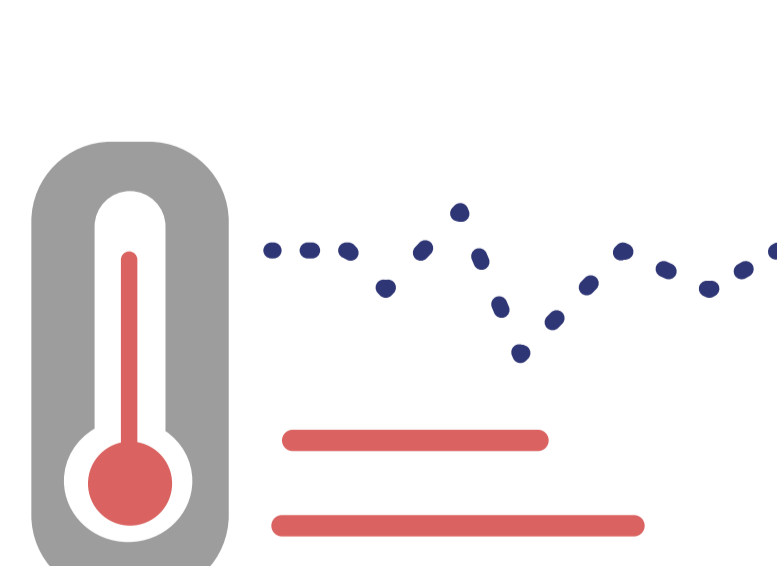
Health and Safety Monitoring



Early detection and intervention not only save money, but lives. Black.ai has several features which directly help with health indicators. These features leverage depth and thermal technology to provide the following:

- Respiratory Rate (up to 4m distance)
- Bodily Temperature (up to 4m distance)
- Movement Detection (up to 12m distance)

These data points can be used to flag abnormal reactions, including a lack of movement an indication that staff are fatigued or in need of assistance.



Review on-site or remote

Data is stored securely on Microsoft Azure according to company data retention policies, and can be accessed for either on-premises or remote view, with spatial playback capabilities on the Microsoft HoloLens 2. This 3D reconstruction application will serve the location history and labels requested for review anywhere in the world.

Incident reported

Time: last tuesday, 11:42am



3D reconstruction: Viewing historical data

Project Timeline and Requirements

Black.ai is open to discussions on how we can help you to solve difficult problems within your industry.

For more information, please contact us at industry@black.ai

Prepared by

black.ai