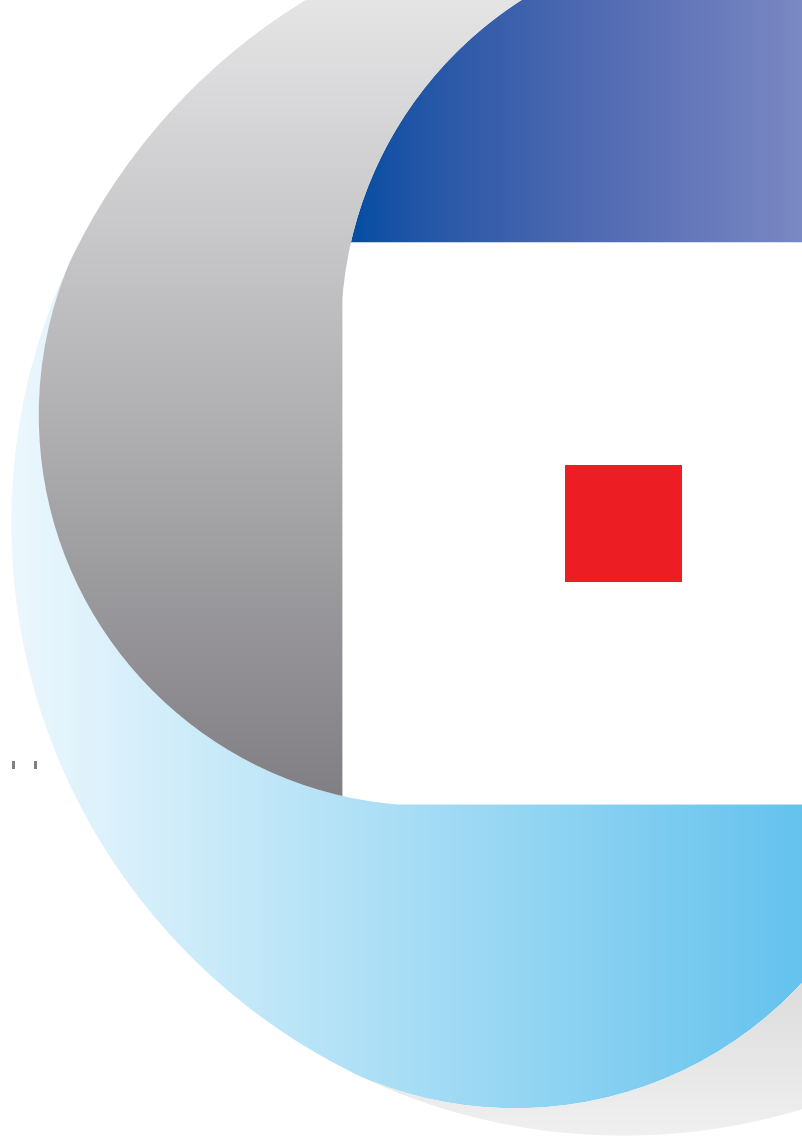


OPTRONICS
360

Kill the blind spots...



..before the blind spots can kill.

When the worst happens - and someone is killed or seriously injured by heavy machinery or a commercial vehicle - it's too late to discover that it was caused by a blind spot. Too late to realise that it could have been easily rectified with the right safety aids, properly installed. Too late to make sure that the driver could see all around the vehicle, and at a distance to be able to stop in time.

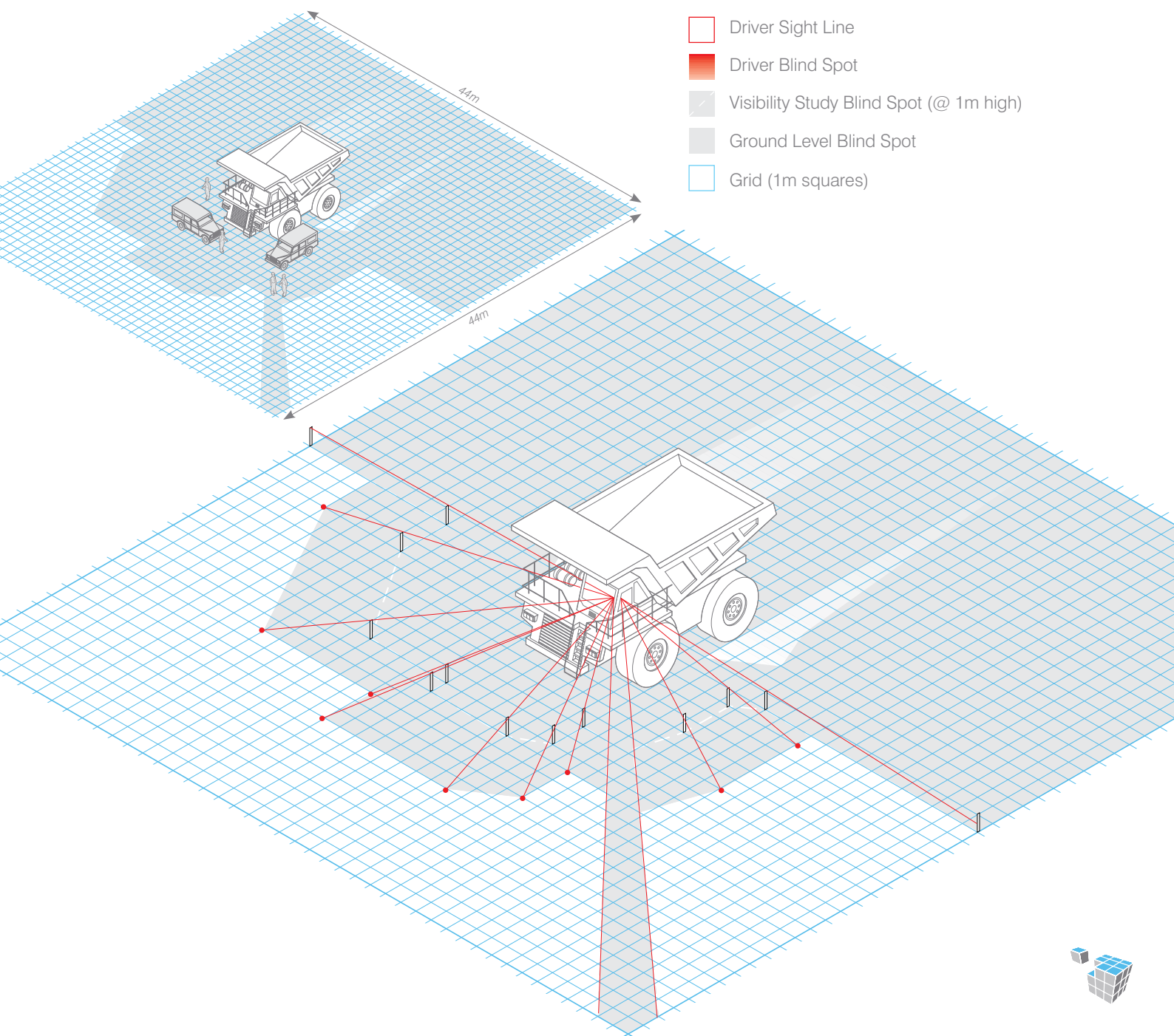
Serious accident rates and fatalities in construction, mining and quarrying are still too high. Even one is too many. And every one brings in its wake a tragic trail of human loss, compromised duty of care, possible prosecution, compensation claims, and irrecoverable reputational damage.

It simply isn't safe to assume that machines and vehicles have no blind spots. They do. Visibility studies prove it, time and time again. Even the operators may not realise it. Even when mirrors and cameras are fitted, poor installation can still leave blind spots. And blind spots kill.



Typical visibility study

-  Driver Sight Line
-  Driver Blind Spot
-  Visibility Study Blind Spot (@ 1m high)
-  Ground Level Blind Spot
-  Grid (1m squares)



Optronics 360 – no limitations.



Optronics 360 is the world's first 360 degree surround view camera system for industrial and commercial vehicles. It takes visibility up to the next level – literally.

Already proven in the high end passenger car market on the BMW 5 series and some Land Rover models, all the advantages of this highly sophisticated system are now available for use on mining, quarrying and construction machines and commercial vehicles.

For the first time, operators can now have a real-time bird's eye view of their entire vehicle and its surroundings.

No compromise. No cutting corners. And no limitations on all round visibility when people's lives and safety are at stake.

Programmable from horizon to horizon

Some less advanced alternative systems limit the available view to a short fixed distance from the machine or vehicle. This "one size fits all" approach can leave large areas that the operator still can't see.

A key advantage of Optronics 360 is that it can be programmed from horizon to horizon as well as forward and rear. By covering a much wider area this makes it the most effective system on the market for reducing blind spots and improving all round visibility

Digital Stitching for vehicle and environment

The 360° surround view system uses multiple ultra-wide angled cameras mounted in strategic locations around the vehicle to synthesise a quadraspherical bird's eye image of the vehicle.

It then displays a composite real time view (30 frames per second) on the operator's screen that looks just as if it's been taken from above the vehicle, using a single camera with no jump between viewed frames.

This method of digitally stitching images allows us to place the stitching in a less critical areas to ensure maximum 360° vision is achieved at all heights all the time - another critical aid to optimising visibility and avoiding accidents.

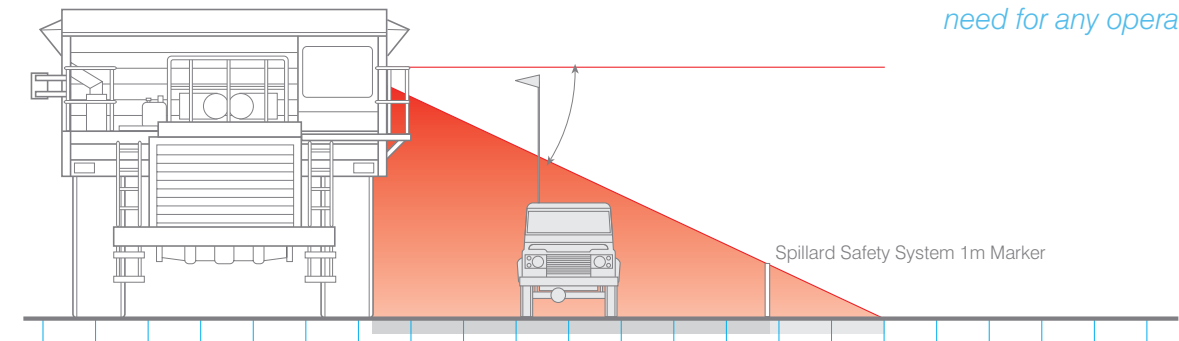
Integration with other systems

Optronics 360 consists of a combination of a camera system, a monitor (available in different sizes) and a high performance programmable electronic control unit (ECU) that uses heavy duty signal processing to overcome distortion.

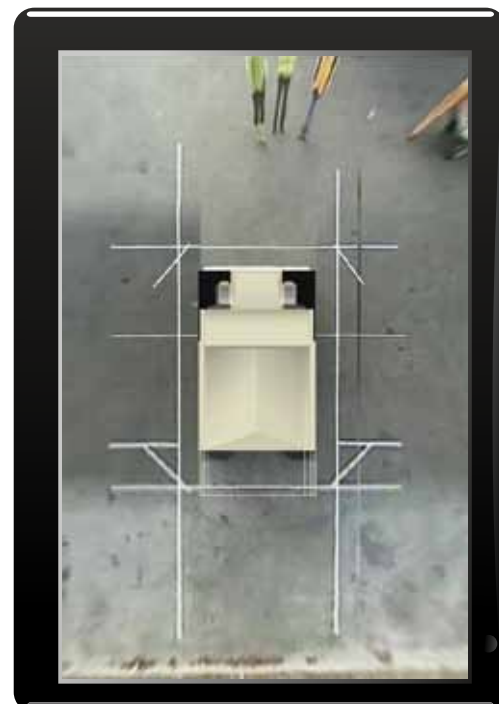
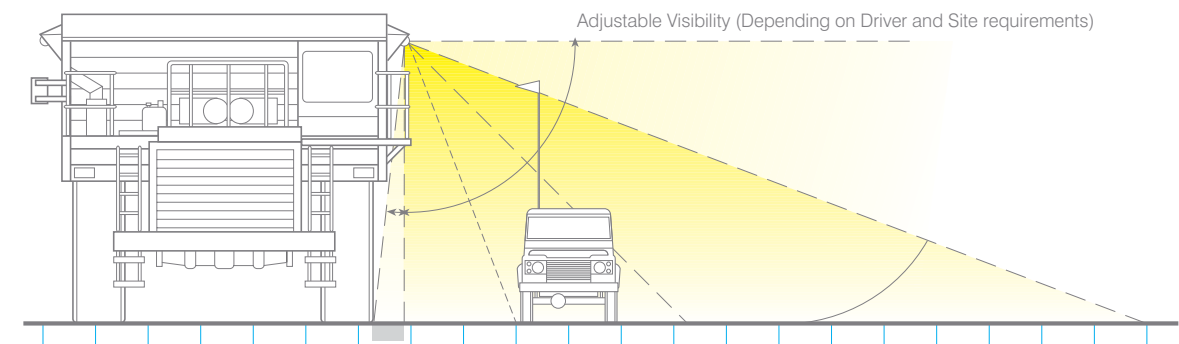
Traditional rear view images can be incorporated and the addition of a digital recorder can provide critical data, both of which can be integrated easily into its user interface, a combination of convex mirrors naturally enhancing visibility is also recommended.

The System has been developed with Scottish Resources Group, Coalpro and Terex to deliver a driver friendly system that provides, clear information in real time - without the need for any operator intervention.

Typical Existing Blind Spot



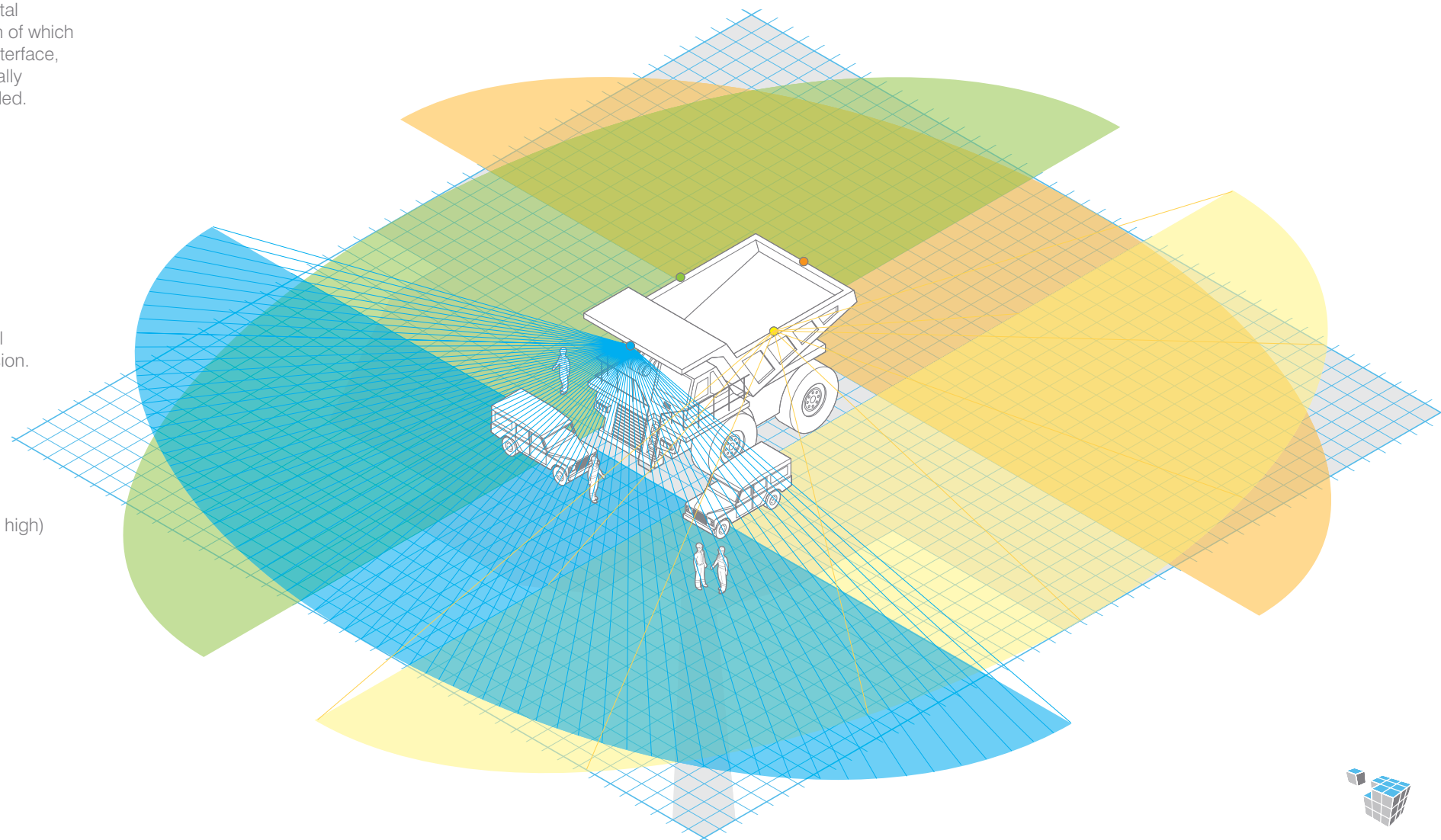
Typical Impact of Optronics 360



Eliminating the blind spot

Four cameras combine to provide total 360 coverage with quadraspherical vision.

- Driver Sight Line
- Driver Blind Spot
- Visibility Study Blind Spot (@ 1m high)
- Ground Level Blind Spot
- Quadraspherical Camera 1
- Quadraspherical Camera 2
- Quadraspherical Camera 3
- Quadraspherical Camera 4
- Grid (1m squares)





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*Optronics 360 is an ASL Electronics
& Vision Ltd Product*

Installed by experts.

We've been carrying out free visibility studies since 1995 to map the blind spots on individual vehicles and machines. (Over two hundred assessments are available to download from our website.) This is a natural starting point for helping to make sure that the safety aids we specify and install are right in every case, and fully effective.

Our in-house team of fully trained and experienced engineers, dedicated to installation, then pay meticulous attention to detail when they carry out the fitting of Optronics 360 and any other systems - making sure for example that the cameras are in the correct key positions, and that the monitor is in an optimal position in line with the mirrors.

They also program the ECU so that the bird's eye view that the operator sees meets the exact needs of the individual vehicle and its environment – getting rid of all those blind spots, and keeping people safe.