TRASSIR
Hard Hat Detector

Smart Hard Hat Wear Control Module

Live video analytics to improve safety
monitoring at the enterprise

TRASSIR Hard Hat Detector

Smart video analytics module to monitor the use of hard hats by personnel, to alert on non-compliance with safety procedures, thereby significantly reducing the risk of accidents

It is designed to allow the organization managers to:

- monitor the wearing of hard hats;
- automate the monitoring of safety performance;
- reduce the risk of workplace injuries and prevent accidents from occurring;
- respond in a timely manner to violations of safety norms.

How does it work?

The nature of work in some industries, such as mining, construction, metallurgy, logging, energy, and the like is such that the most effective way to level out the risk of workplace injuries is to use personal protective equipment, the most important of which will always be a hard hat.

- Themoduleispoweredbyaneuralobjectdetector,whicheffectivelydetectsthepresenceofhardhatsonpersonnelandvisitorsinareasofinterest.
- The use of progressive algorithms makes it possible to avoid false positives and to detect hard hats only if they are worn on the head.

TRASSIR

TRASSIR Hard Hat Detector usage scenarios

Monitoring of safety regulations compliance

In the event of the appearance of a person without a hard hat, on-site operator is automatically sent an alarm notification and/or an audible alert

Eliminating accidents in hazardous industries

Timely control over the wearing of hard hats can reduce the likelihood of injuries in the workplace

Reducing supervisory staff

Automation of control functions allows to reduce the number of employees involved in the control of safety
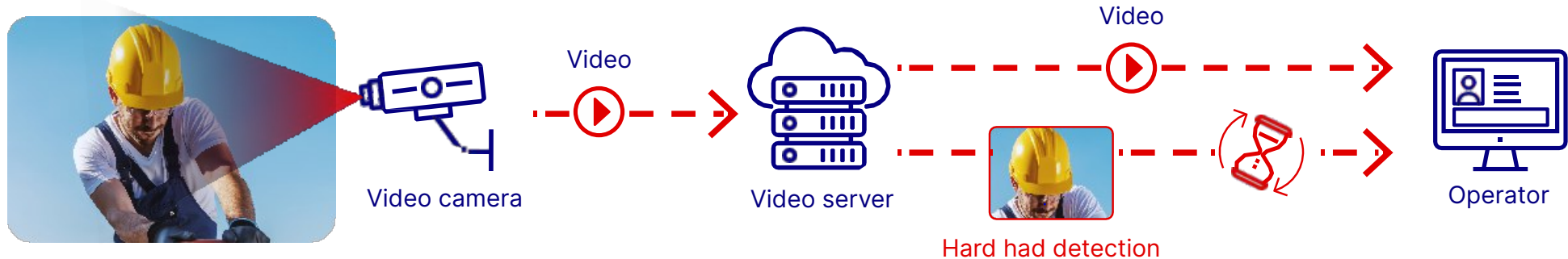
Accident investigation

Recording to the archive and subsequent quick search of incidents help provide an evidentiary basis in the part of occupational injuries investigation

Statistics generation

The use of reporting allows to analyze the statistics of violations in terms of employees and areas of interest. The data can be used to further optimize the business process

Solution architecture. How does it work?

Video camera

Video

Video server

Video

Hard had detection

Operator

Reaction scenarios:

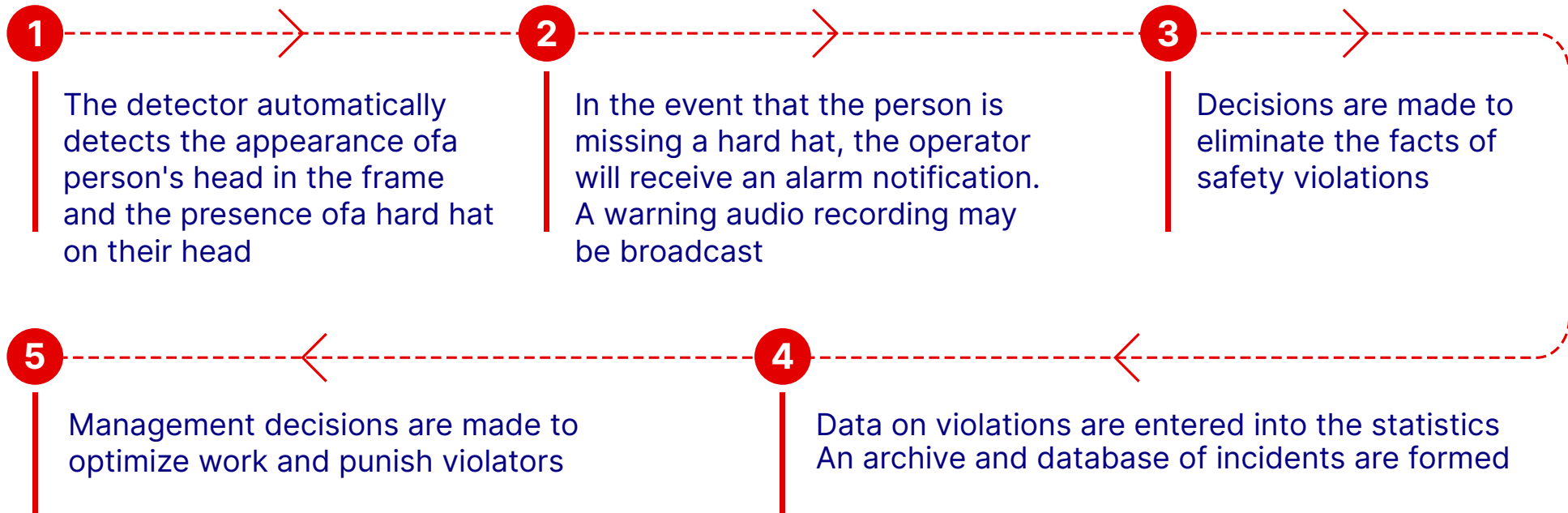**1** **Notifications in the Trassir interface**

2 **Generatingand exporting reports:**
- Number of incidents
- Areas with the highest rate of violations

3 **Notifications:**
- SMS-notifications
- Email-notifications
- Telegram
- data export to CSV and XLSX

Solution functionality. How does it work?

1 The detector automatically detects the appearance of a person's head in the frame and the presence of a hard hat on their head

2 In the event that the person is missing a hard hat, the operator will receive an alarm notification. A warning audio recording may be broadcast

3 Decisions are made to eliminate the facts of safety violations

5 Management decisions are made to optimize work and punish violators

4 Data on violations are entered into the statistics An archive and database of incidents are formed

Areas of application

Construction industries

Power industry

Hydroelectric power plants

Seaports

Mineral resource industry

Oil industry

Gas industry

Forest industry

Solution benefits

Cost effectiveness and efficiency

Option to automatically monitor safety compliance reduces the number of personnel required and provides a complete monitoring cycle

Prevention of accidents and fines

An effective automated system can prevent most accidents, which greatly reduces the pressure on the company from regulatory agencies

Safety control

Production safety for employees and visitors as an important reputational component

Trassir CMS management system

A corporate solution for managing tens of thousands of servers and hundreds of thousands of cameras within a single system. System health monitoring. Access restrictions. Consolidated video analytics data collection

Operator interface

Real-time monitoring, prompt notification of critical situations and informative reporting.

Integration

The necessary set of mechanisms for integration with hardware

Trassir VMS management system

A local system for easy management of cameras and servers. It allows monitoring the health of the servers, and ensures the reliability of the archive record

Modification

Option to expand functionality and create customized solutions

Independence

Option to use the module with most third-party equipment

You may also be interested in:

1 **Wear detector** – a neural network module for determining if a person is wearing workwear or a uniform (color analytics)

2 **Active Dome** – a module for tracking the movement of people with (and without) hard hats and uniform with a high degree of accuracy

3 **Neuro Left Object Detector** – neuroanalytic module for detecting abandoned objects

4 **Work Place Detector** – a module that allows you to monitor the presence of employees in the workplace

5 **Face Mask Detector** – a module for monitoring compliance with face mask requirements in public places

6 **Pose Detector** – human pose analysis module

7 **Face Recognition** – a TRASSIR software add-on for recognizing and searching people using a preconfigured face database, as well as for counting unique faces and demographic analysis

8 **Neuro Counter** – a module for monitoring compliance with face mask requirements in public places

TRASSIR®

Contacts

🌐 trassir.com

📞 +44 208 068 4004

✉️ welcome@trassir.com

Hardware catalog

VMS Catalogue

Success stories