



**Understanding,
Prediction, Integration,
Protection**



TRASSIR today



Experience in CCTV
surveillance

SINCE 2002

15 000 +

loyal customers
around the globe

3 R&D centers



50 countries with TRASSIR
installations

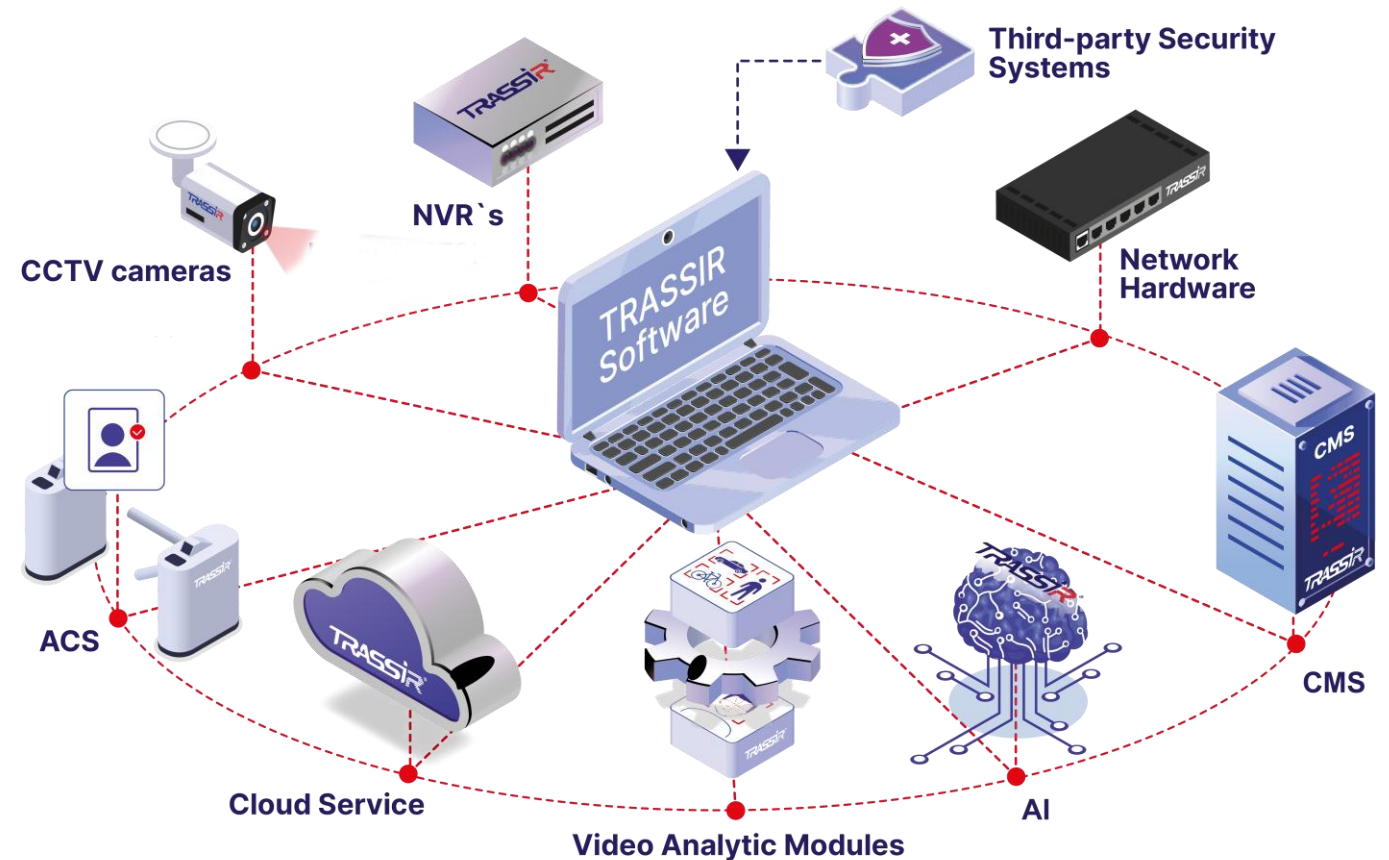
TRASSIR open digital platform includes

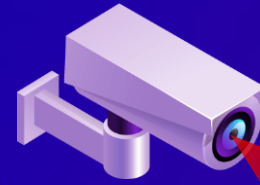


TRASSIR creates advance solutions in the field of security and automation

TRASSIR'S GOAL

to improve the security of society, sustainability and profitability of businesses using machine perception and event prediction technologies





**Integrated complex solutions for
Logistics / Warehouses,
Manufacturing, FMCG**



A comprehensive complex solution for a warehouse / manufacturing / FMCG



ActiveStock INT



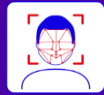
Neuro Fire & Smoke Detector INT



AutoTRASSIR solutions (LPR)



Perimeter defending solutions (Neuro Detector)



Face Recognition+ INT



WorkPlace Detector INT



TRASSIR ACS

Advantages of the Integrated Solution



Increases overall facility security and operational efficiency at all stages from goods receipt, storage to shipment formation and dispatch

PERSONNEL CONTROL

Track working hours, monitor safety compliance

- Rapid employee passage through turnstiles
- Working time tracking
- Real-time worker location tracking
- Safety procedure compliance monitoring

PERIMETER CONTROL

Respond faster to emergencies, reduce losses and damage

- Tracking movement of suspicious objects
- Creating restricted access zones without physical barriers
- Rapid response to emergency situations
- Prevention of unauthorized third-party access

TRANSPORT MANAGEMENT

Improve efficiency of loading/unloading operations

- Automatic vehicle access to the territory for loading/unloading
- Delivery schedule monitoring
- Loading/unloading time control
- Weighing operations automation

OPERATIONS MANAGEMENT

Control goods movement through the warehouse, reduce product losses

- Monitoring the loading/unloading process flow
- Cargo integrity and position monitoring
- Monitoring personnel movement in hazardous zones and safety compliance
- Monitoring presence and movement on the territory

Who the solution is suitable for



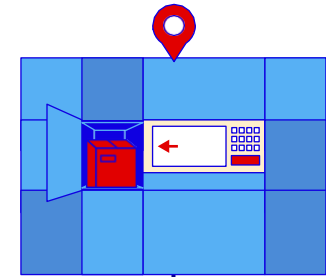
Marketplaces



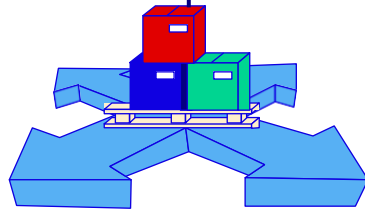
Dark stores



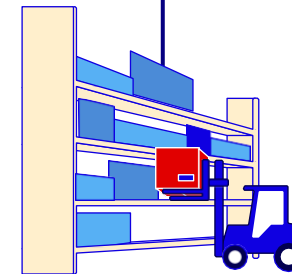
Order pickup points (OPP)



Distribution and logistics centers



Warehouses

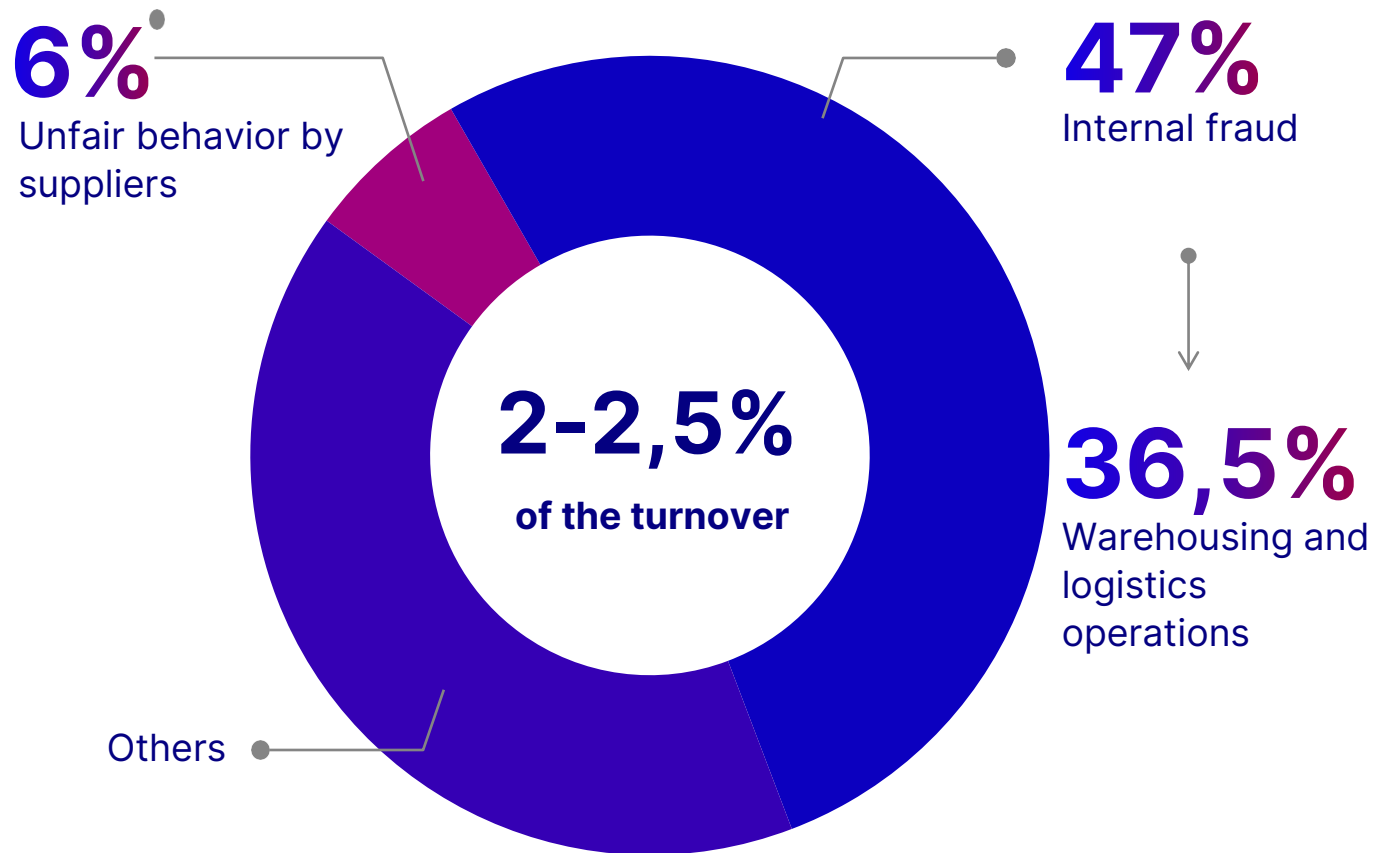




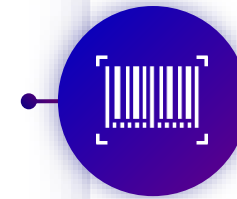
Warehouse operations control (ActiveStock)



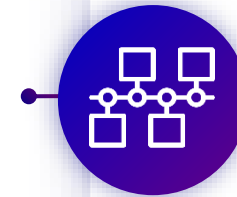
The losses in the supply chain



- **A complex and lengthy process** of investigating incidents
- **Manual search by an operator** using surveillance cameras



- **Negligence of personnel.**
- **Errors** in barcoding or **lack** of barcoding during the acceptance and loading of goods



- **Incidents are investigated** in order of decreasing loss amount. Minor losses are not investigated at all.



Classic video surveillance does not help solve the problem, as finding the moment of handling a specific item is difficult and time-consuming.

Problems in warehouses during goods search and incident investigation



- **Complex and lengthy** incident investigation process
- **Manual search by operator** using surveillance overview cameras



- **Presence of blind zones** in the warehouse
- **Errors in barcoding** or absence of barcoding during goods receipt and loading

3 TO 12 HOURS

Lengthy incident investigation process



- Significant number of **uninvestigated incidents**
- Investigating incidents in descending order of loss amount
- **Minor losses not investigated at all**

TRASSIR Active Stock - the "eyes" of your WMS system



Advantages of the solution:



Quick and convenient search by events, goods, or employees



Categorization of video by warehouse action scenarios



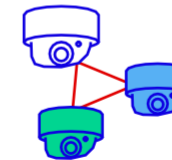
Online viewing and archive search



Unified interface for working with video and warehouse operations from WMS



Easy integration with WMS via API



One or more cameras can be used for an object or surveillance area



Reduction of losses in the warehouse/distribution center by quickly identifying the responsible party



Increasing the number of investigated incidents with fewer video surveillance operators



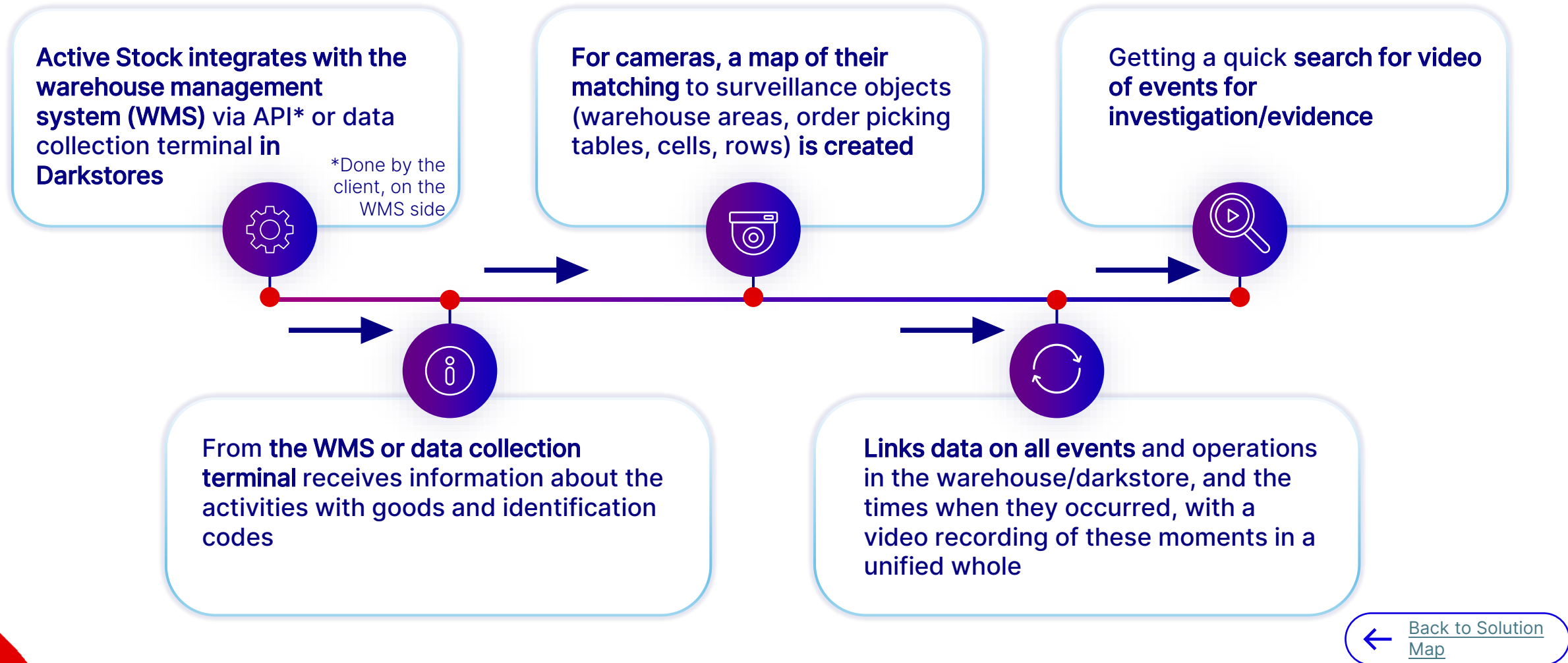
Significant acceleration of incident investigations by reviewing only the cameras that recorded actions involving the goods



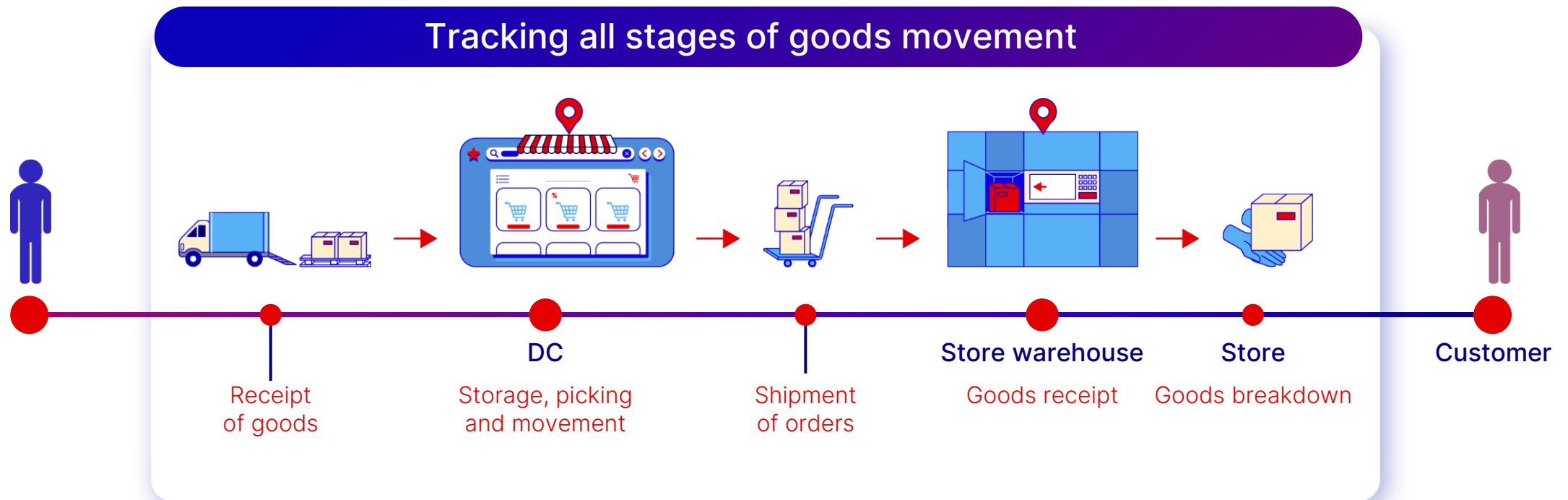
Monitoring employee presence and work quality

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How Active Stock module works



The module allows tracking the entire path of goods movement



Multiple times faster incident investigations



Increase in the number of investigated incidents

How valuable it was for our client and can be for your business



- elimination of “dead zones”
- implementation of Active Stock video analytics module
- finalization of regulations

up to
97% increase in the number of incidents investigated

Increased % of successful investigations

60%

before implementation

90%

after implementation

Reducing the average time to investigate incidents

4 hours

before implementation

30 min

after implementation

Increased number of investigations per operator

5-10

before implementation

20+

after implementation



Warehouse and office safety

Safety in warehouses

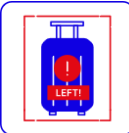
Tasks

- It is necessary to ensure **effective control** and management of shipment, receipt, and product movement processes in the warehouse, as well as **investigate cases of loss**, theft, damage, or product discrepancies
- **Preventing intrusion** and unauthorized movement
- Ensuring physical and **fire safety**

How we do it



Perimeter
defending solutions
(Neuro Detector)



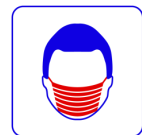
Neuro Left Object
Detector INT



Pose detector INT



Neuro Fire and
Smoke Detector INT



PPE detectors



Perimeter Security Solution



Instant notification to security personnel when a person breaches the facility's perimeter

How we do it

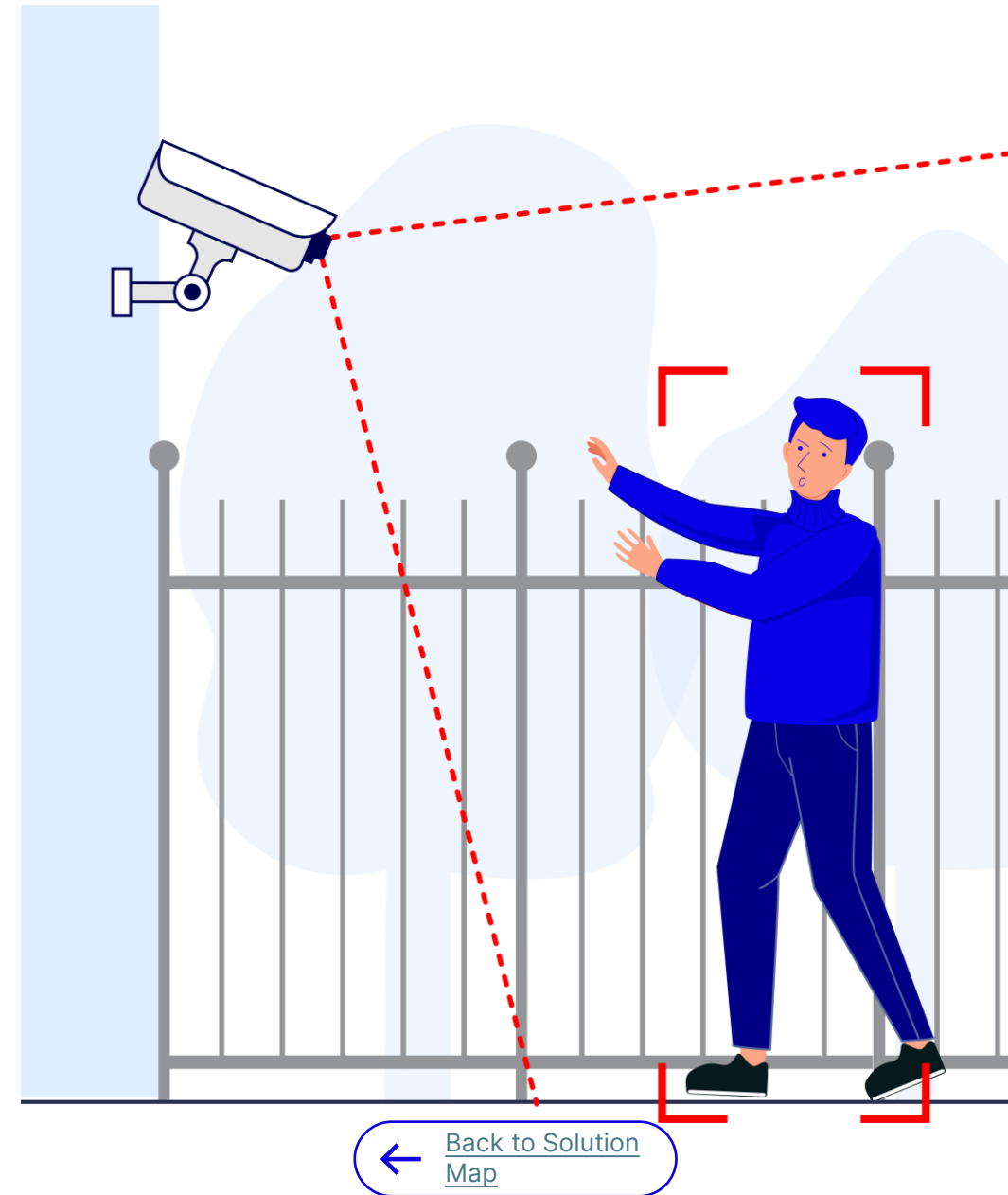


The solution includes the module for detecting object intrusion into a protected zone

Neuro Detector INT

The module allows configuring permitted time and number of people in a designated zone

- When the perimeter is breached, the security monitor displays the camera feed where the incident was detected in the observation area. An alert is also sent to Telegram and email
- The response time to the incident is recorded and logged, along with the action taken by the dispatcher for subsequent analysis of personnel effectiveness



TRASSIR Pose Detector



AI-Powered Detector that classifies human poses based on movement and behavior algorithms

How we do it



The module identifies and classifies various human poses to track atypical behavior and detect dangers: injury, fall, and other emergencies

Pose Detector INT

- Detects a person and determines the position of their body parts
- Using tracking of detected objects, **identifies potentially dangerous individuals**, classifies poses as normal or potentially hazardous
- Allows configuration of detectable object size, zones for pose detection, sensitivity, quality, and recognition speed

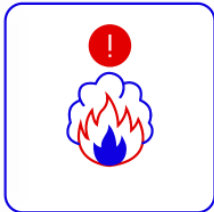


TRASSIR Fire and Smoke Detector



Intelligent Smoke and Fire detection module

How it works

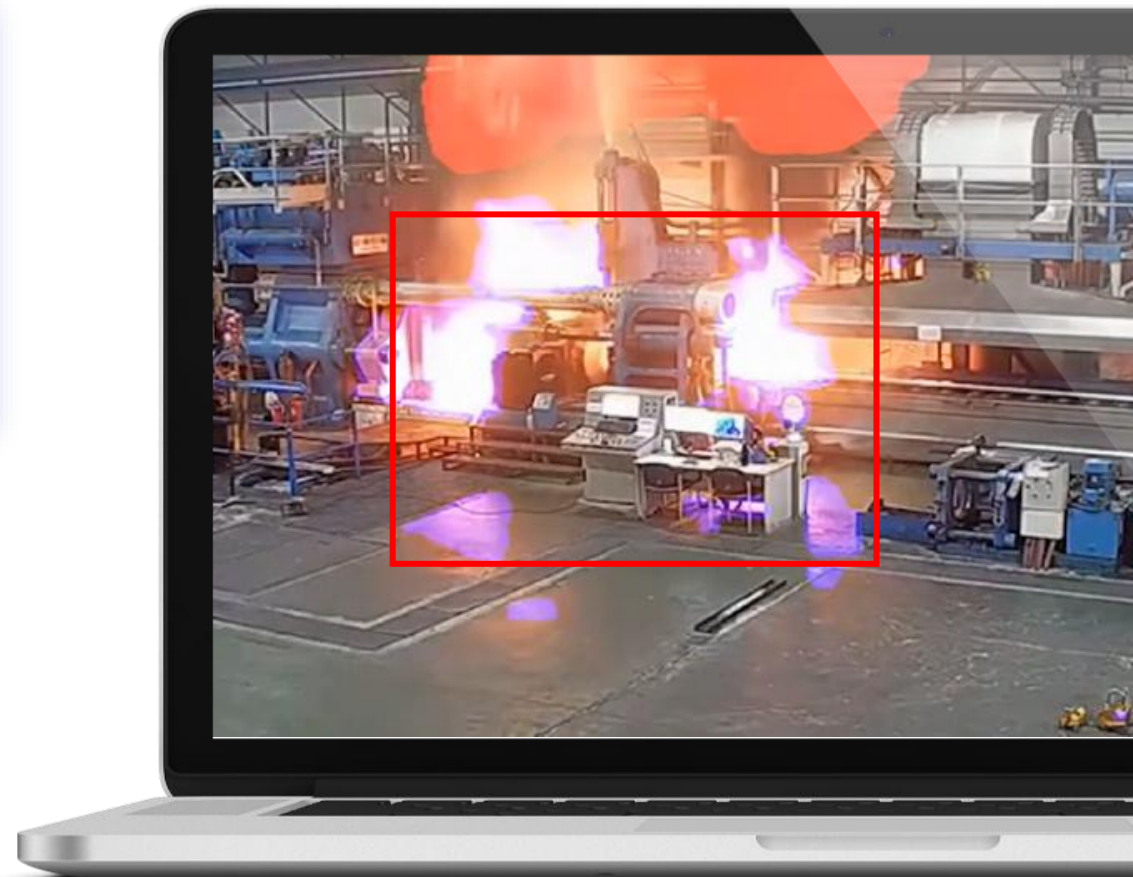


Advanced solution for fire detection faster than fire sensors

Neuro Fire and Smoke Detector INT

Provides reliable fire protection in open spaces where fire sensor installation is impossible, as well as in high fire-risk zones

- Using unique mathematical calculations, **detects open flames** within the camera's field of view, even outdoors
- Alerts the operator with an **audio signal** and/or message
- Activates sirens
- Controls contacts, etc.





Face Mask Detector

AI-Powered Face Mask Detector designed to monitor mask-wearing in public areas.

How it works:

- ✓ The surveillance camera monitors the control area and transmits data to the server.
- ✓ The detector analyzes the stream, detects faces, and determines whether they are masked.
- ✓ An additional script triggers dry contacts, initiating a PA announcement and sending a violation alert.



Hard Hat Detector

AI-Powered Hard Hat Detector characterized by reduced false alarms

How it works:

- ✓ When an employee without a safety helmet appears in the work zone, the intelligent module sends a real-time notification and saves a frame for the evidence base.



Wear Detector

AI-Powered Detector identifying the presence of workwear

How it works:

- ✓ When an employee without uniform appears in the work zone, it sends real-time notifications.



Delivery & Shipment monitoring for retail stores

TRASSIR®

- ✓ **Business objective:**
Prevent revenue loss due to delayed deliveries and unloading bottlenecks in retail stores
- ✓ **Scenario:**
Planned shipment schedules from warehouses to stores are established
- ✓ **Problem:**
Delays disrupt operations, leading to lost sales

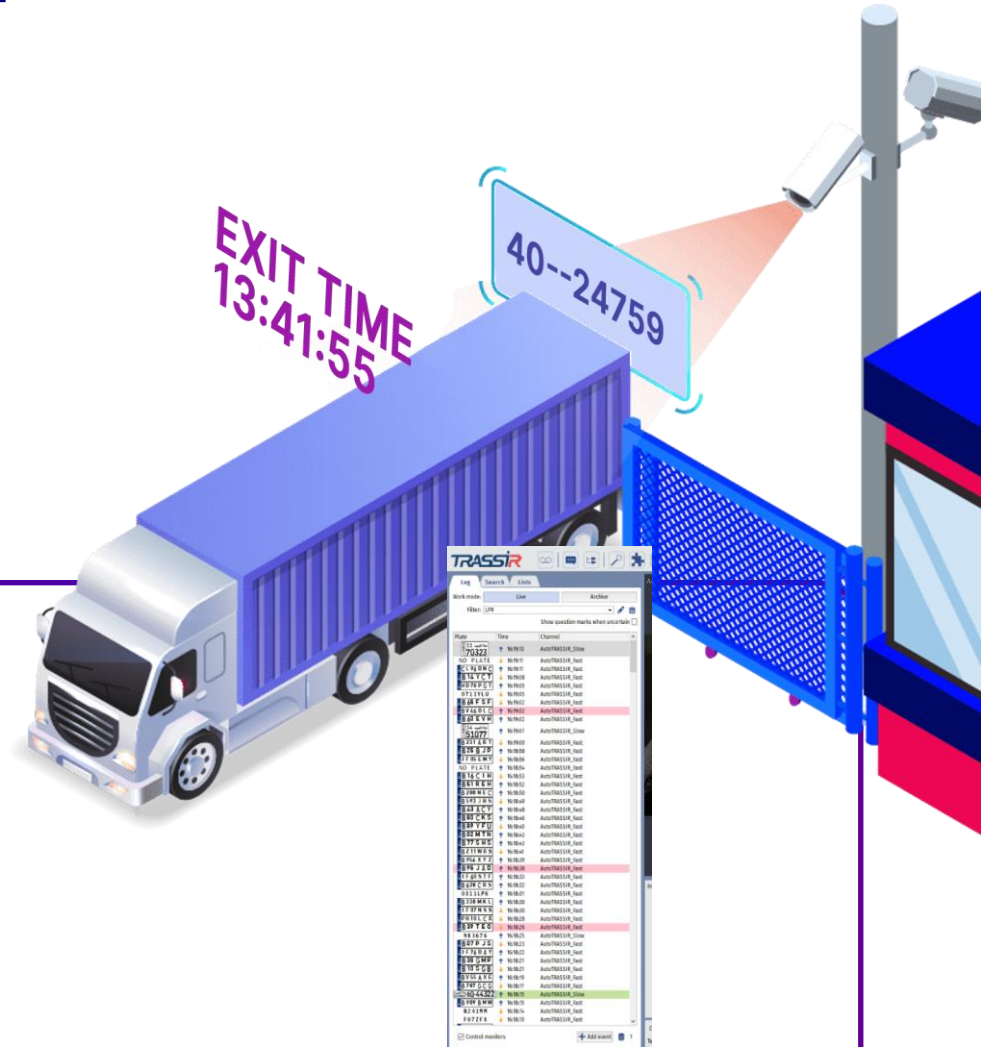


Solution

Entry/exit time logging for investigating delivery timeframe incidents from distribution centers to stores

How it works

- AutoTRASSIR module records vehicle departure time from the warehouse and arrival time at the store.
- A report on discrepancies between planned and actual time is generated (exported in Excel format).
- An evidence package is exported.



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Warehouse Theft Prevention

TRASSIR®

✓ Business Objective:

Prevent theft and unauthorized removal of goods from the warehouse

✓ Scenario:

Access to the warehouse territory is permitted only to vehicles with a pass registered in the database.

✓ Problem:

Theft collusion with security guards.



Solution «Smart Checkpoint»

The 'Smart Checkpoint' solution eliminates human error entirely

How it works

- The AutoTRASSIR module maintains a registry of authorized vehicles.
- The system is configured to automatically open the barrier only for registered vehicles

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Employee time tracking and attendance control

Task

Remotely monitor employee presence at the workplace and detect unauthorized absences

Solution

- Tracks employee presence/absence statistics at workstations, monitors and evaluates actual working time
- Generates reports and notifications about labor discipline violations when an employee is late, leaves early, or is absent beyond permitted time limits



TRASSIR Workplace Detector



Intelligent module for tracking actual time employees spend in the workplace

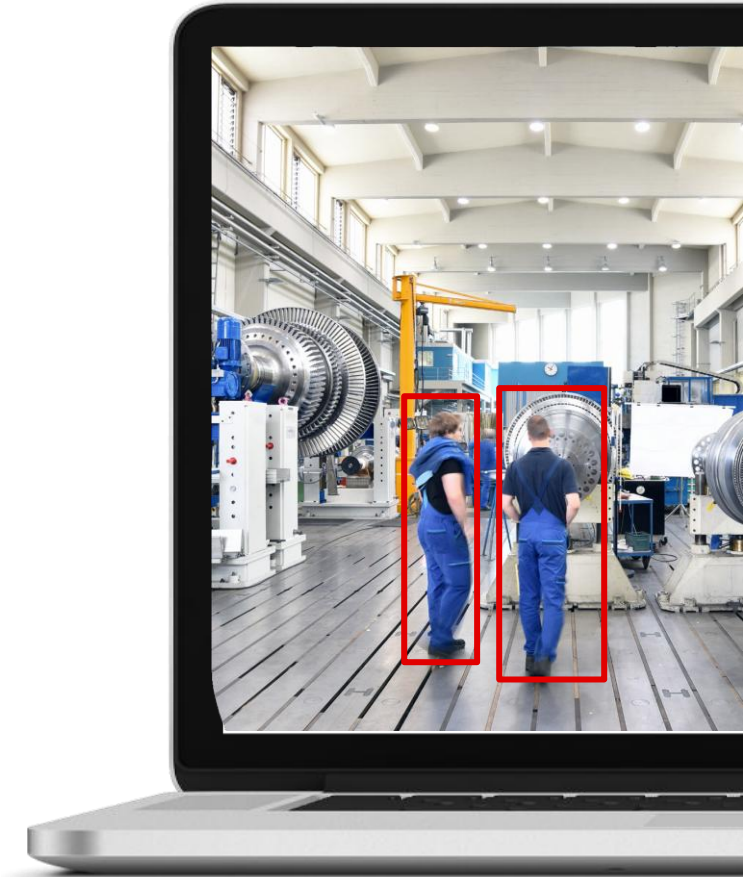
How it works



The TRASSIR Workplace Detector module is based on a neural network which ensures high object detection accuracy and reduction of false positives.

TRASSIR Workplace Detector

- One or more surveillance cameras are installed in the working area, the TRASSIR server is installed
- The person in charge sets the necessary parameters for the module's operation: working zones on the surveillance camera channels, employee working hours, permitted personnel absence time from their workplaces
- TRASSIR Workplace Detector generates a notification and sends an alert to the responsible party when employees arrive late, leave early, or are absent from the workplace for more than the time permitted
- The module creates daily reports on the actual time staff are present and absent on site and sends reports to the responsible party by email
- Functionality can be expanded by connecting additional scripts



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Access control for restricted areas with TRASSIR ACS



Solves the following tasks

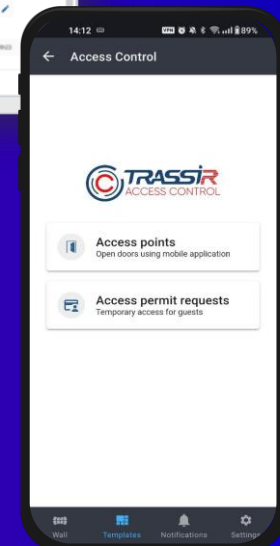
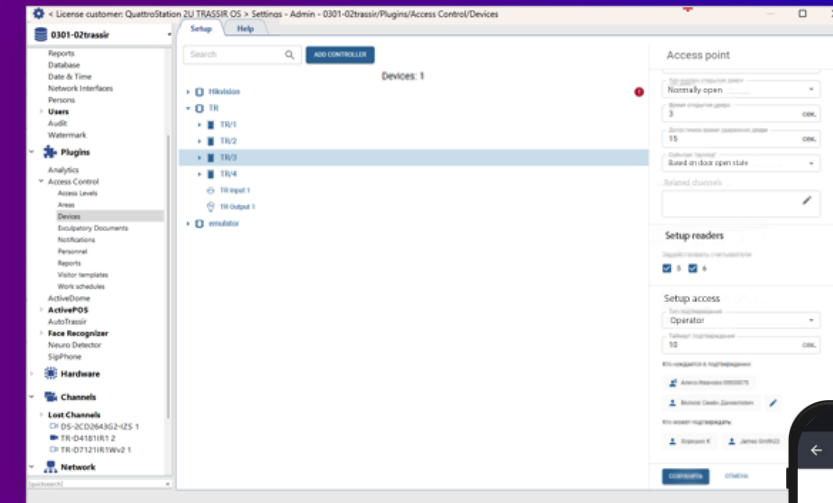
- Face, card, and fingerprint authentication
- Employee time tracking
- Payroll automation (with accounting system integration)
- Personnel & visitor database management
- Seamless security system integration

Seamless integration with leading manufacturers' devices:

- Hikvision
- ZKTeco

Seamless integration with other security systems (Fire Alarm systems):

- Suprema Biostar 2
- Bosch FSM 500
- Honeywell winmag v7



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Face Recognition+ INT

Use cases: Two-factor verification

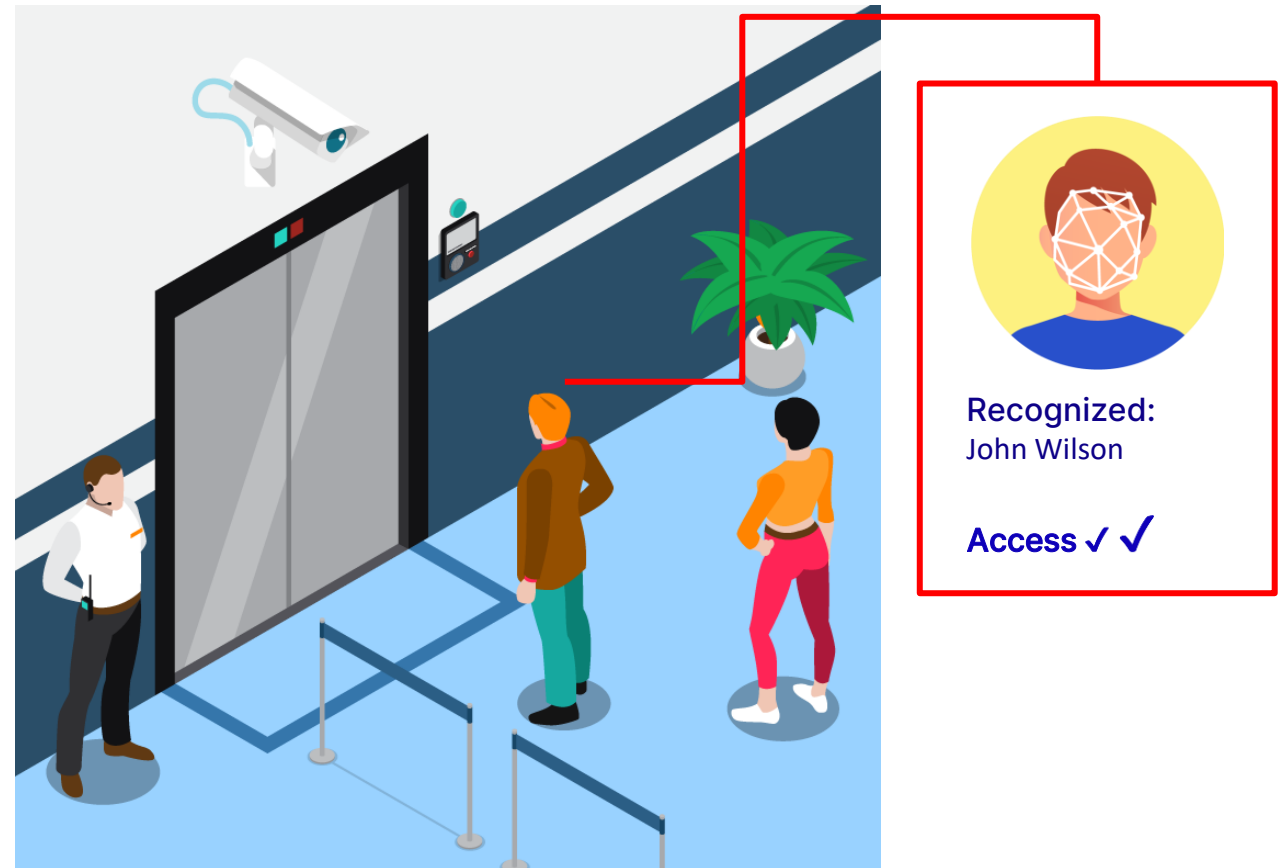


Face Recognition+ INT is used to enhance security by adding biometric identification.

When integrated with an ACS, the capability for verification using facial recognition is added to person identification by access card.

Where used:

- ✓ Office buildings
- ✓ Banks
- ✓ Hotels
- ✓ Stores
- ✓ Manufacturing facilities
- ✓ Warehouse complexes





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🌐 www.trassir.com