

A photograph of a modern clothing store interior. In the foreground, a rack of white t-shirts is prominent. Behind it, other racks hold various colored shirts and blouses. In the background, two mannequins are dressed in suits, one in a dark blue suit and one in a light-colored suit. The store has a clean, contemporary aesthetic with dark walls and bright lighting.

TRASSIR[®]

Smart retail video surveillance solutions 4.0

Business intelligence as a tool to improve performance management

SINCE 2002

Experience in CCTV surveillance

15000 +

Loyal customers worldwide

800 +

Qualified staff

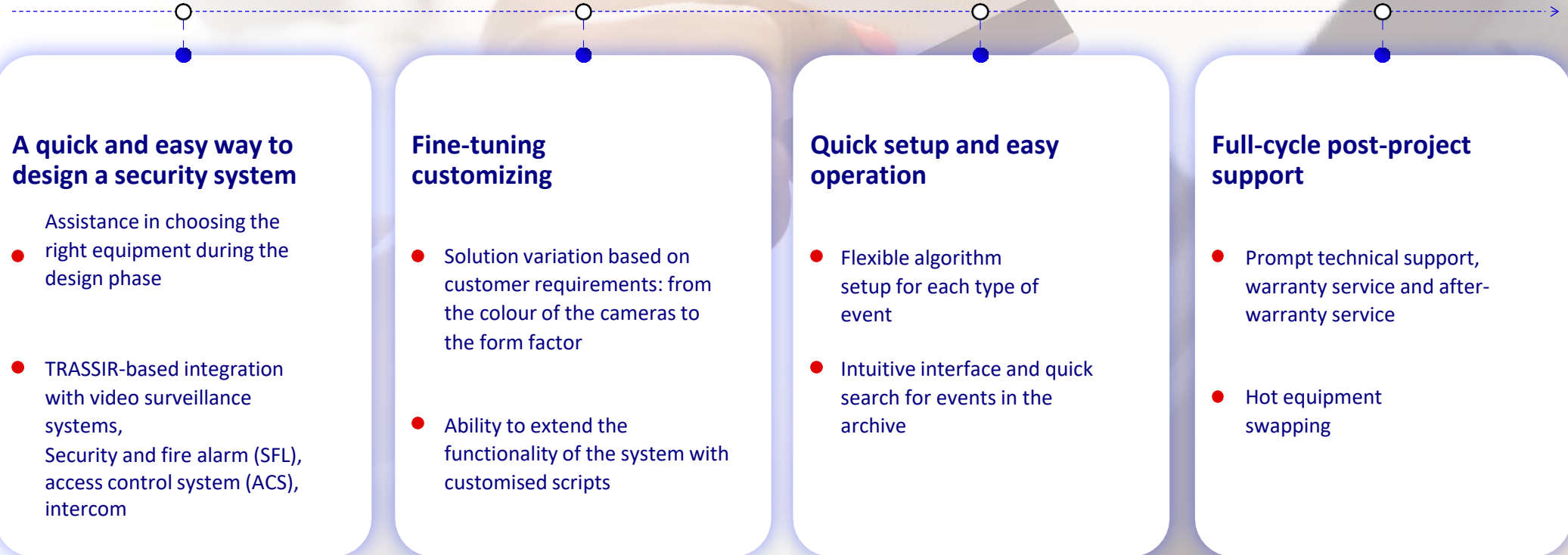
42

Countries with TRASSIR integrated solutions



Why TRASSIR?

Building a seamless security suite and controlling all systems from a single interface is easy



A quick and easy way to design a security system

- Assistance in choosing the right equipment during the design phase
- TRASSIR-based integration with video surveillance systems, Security and fire alarm (SFL), access control system (ACS), intercom

Fine-tuning customizing

- Solution variation based on customer requirements: from the colour of the cameras to the form factor
- Ability to extend the functionality of the system with customised scripts

Quick setup and easy operation

- Flexible algorithm setup for each type of event
- Intuitive interface and quick search for events in the archive

Full-cycle post-project support

- Prompt technical support, warranty service and after-warranty service
- Hot equipment swapping

TRASSIR Retail installations

2000+
Stores



10K+

Neuroanalytics modules
installed in retail

99,9%

Hardware compatible with the
TRASSIR ecosystem

95%

Customers implement
video analytics after pilot
project

TRASSIR Retail installations



Hypermarket



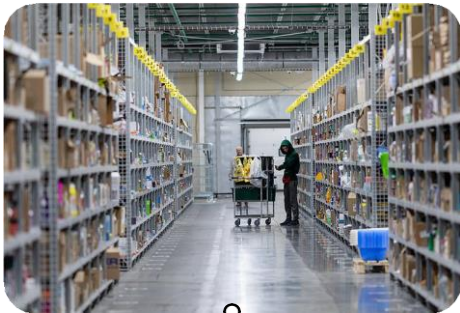
Store chains



Convenience stores



Specialty stores



Dark stores



Marketplaces,
Giveaway Outlet Distribution
centres



Stand-alone shops



Petrol stations

Objectives



Security challenges

- ✓ Decrease in thefts
- ✓ Securing property against tampering
- ✓ Ensuring the safety of visitors and staff
- ✓ Theft protection
- ✓ Preventing staff fraud



Business objectives

- ✓ Collecting customer data
- ✓ Data analysis
- ✓ Data visualisation
- ✓ Transaction report
- ✓ Customer traffic analysis

Objectives



Cash desk area

- Cashier fraud prevention
- Staff errores minimisation
- Cash discipline control
- Reputation losses reduction
- Queue management
- Cashier schedules optimisation
- Outlet capacity increase



Trading floor

- Display supervision
- Staff supervision
- Marketing analytics acquisition
- Theft prevention
- People flow behaviour analysis
- Data collection for merchandising planning
- Compliance monitoring in a pandemic management
- Ensuring safety



Office

- Reports collection
- Automated equipment performance diagnostics
- Single control centre
- Customisable notifications



Entrance

- Conversion counting
- Unique and repeat people flow counting
- Target Audience defining
- Store window marketing promotions evaluation



Parking and unloading area

- Car access control arrangements
- Parking space counting
- Special vehicle operating procedures control



Warehouse

- Theft and damage of goods prevention
- Warehouse supervision operations
- Staff supervision
- Working hours tracking

ActivePOS

All store formats

Smart cash register control module

50%

reduced cash loss

100+

types of
irregularities

Compatibility with
most cash registers

- ✓ Reduced losses due to cashier errors/ misconduct
- ✓ Reduced time to investigate incidents
- ✓ Forecasting demand for goods
- ✓ Increased compliance with cash discipline and warning of potential fraudsters
- ✓ Conversion counting to purchase (in conjunction with the **Neuro Detector** module)
- ✓ Easy monitoring of several stores using statistical reporting



Shelf Detector

All store formats

Automated control of shelf space and merchandise display

+5%

revenue per category
of goods

- ✓ Control of merchandise display
- ✓ Increasing product turnover
- ✓ Notifications of empty shelves
- ✓ Merchandise inventory planning
- ✓ Forecasting demand for goods
- ✓ Adjusting baking plans
- ✓ Generating reports



Heat Map on Map

All store formats

Multicamera customer-flow 'heat map' for the retail space

- Retail space management
 - Checking stock conversions
-
- ✓ Diagram traffic intensity and direction on a dashboard
 - ✓ Collection of marketing and statistical data on customer behaviour
 - ✓ Optimising and placement



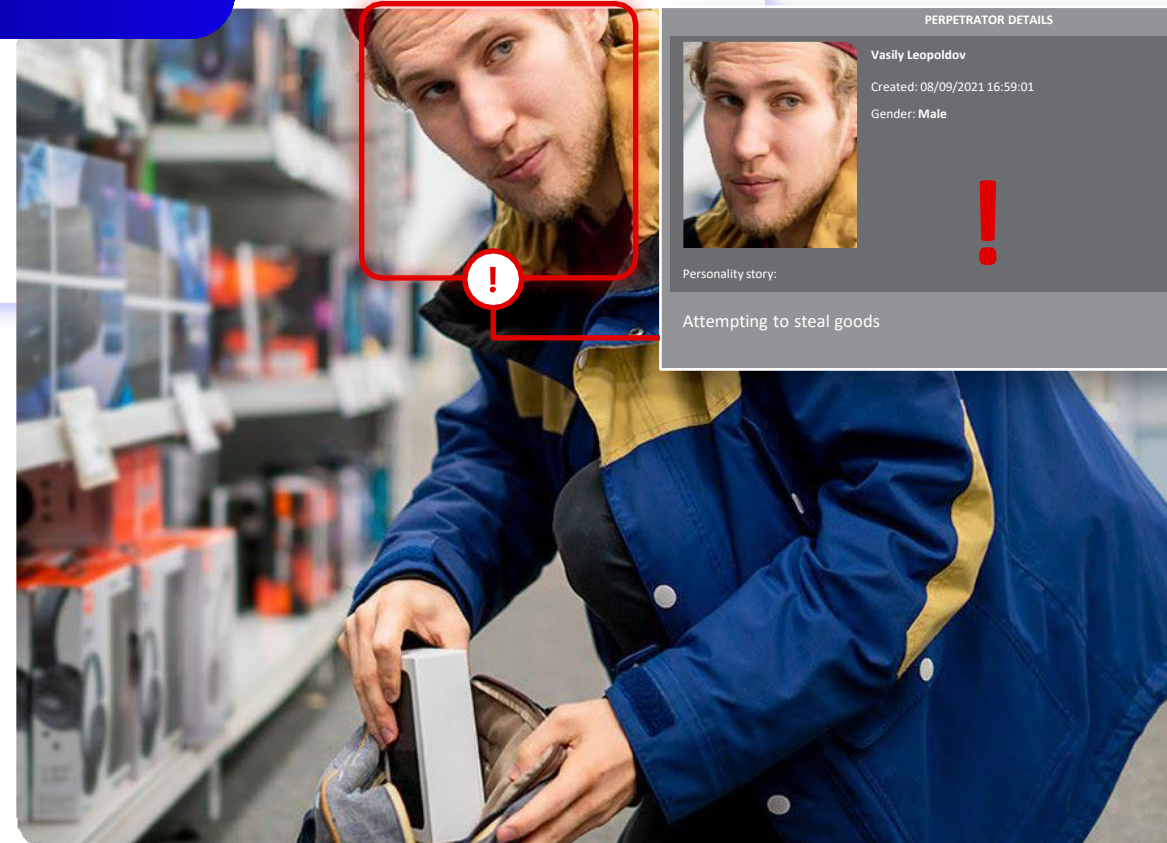
Theft prevention

All store formats

Theft recurrence prevention module

Decrease
in thefts by **75%**

- ✓ Recognition of faces and other facial attributes
- ✓ Easy search and uploading of evidence
- ✓ Quick notifications
- ✓ Thieves base availability at all retail outlets
- ✓ Using offload analytics



Face Recognition & Face Analytics

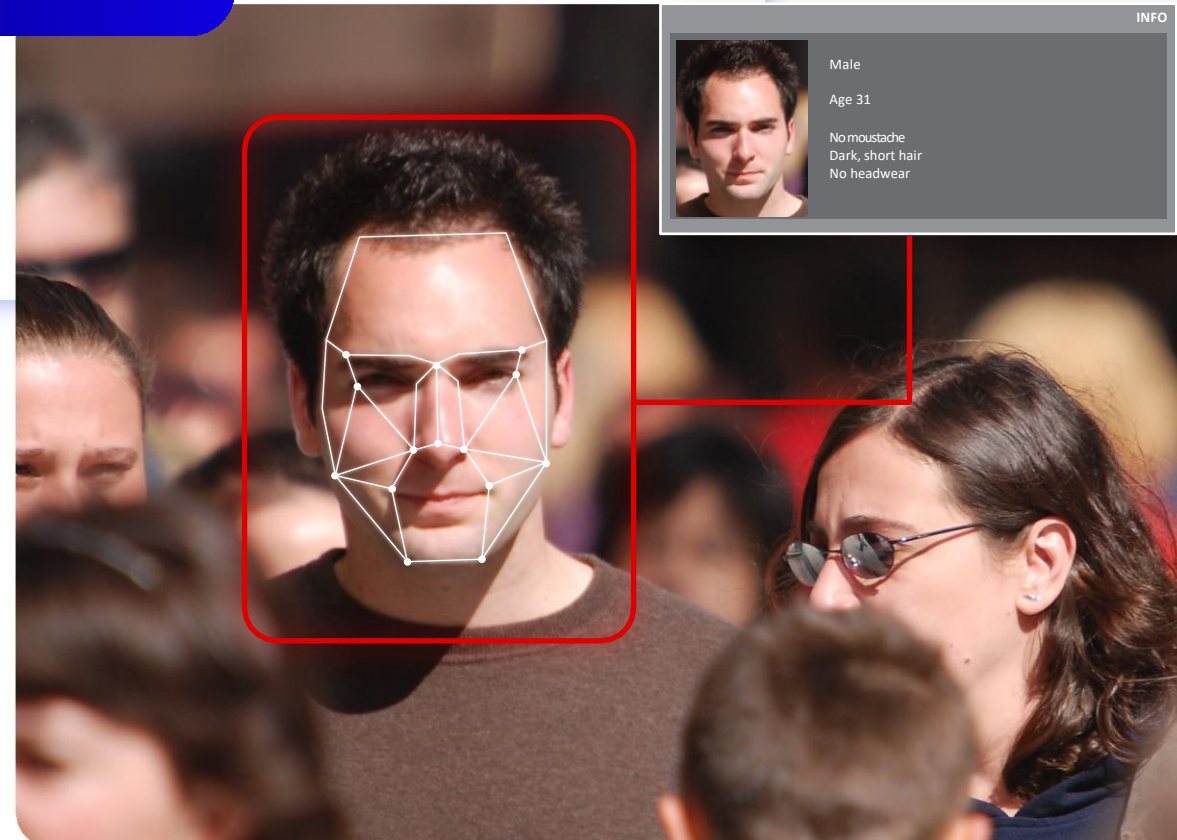
All store formats ___

Biometric recognition module

VIP know your customer

8 key parameters to identify the TA

- ✓ Marketing analytics and data collection
- ✓ Counting % of repeat purchases and unique visitors to the outlet
- ✓ Creating a base with demographic segmentation
- ✓ Defining the Target Audience
- ✓ VIP customer identification
- ✓ Personalising in-store offers
- ✓ Timekeeping accounting and attendance monitoring
- ✓ Integration with access control systems ACS



Queue Detector

Smart queue control module

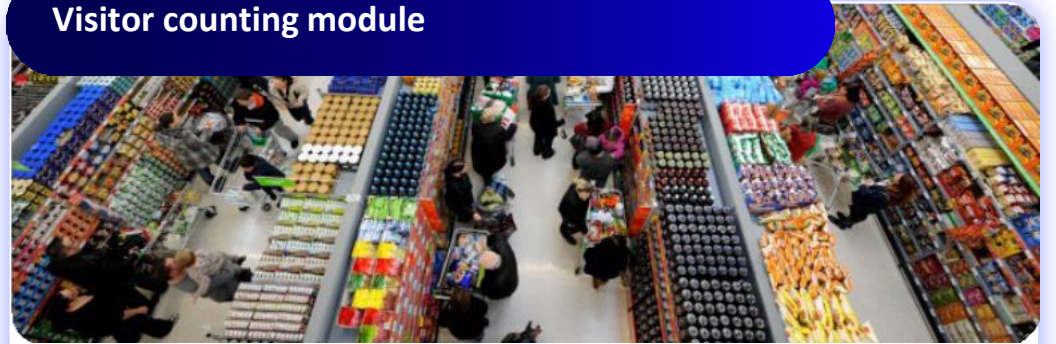


9% increase in the number of receipts per cash register
2 reduction in the number of complaints and queues
by 10% reduction in refusal rates

- High accuracy > 99%
- Increase loyalty and repeat purchase %
- Optimise cashier schedules
- Increase outlet capacity
- Statistical records

Neuro Counter

Visitor counting module



+99.9% counting accuracy
16 zones crossings to count visitors in the frame

- Unique object counting based on neural network
- Excludes employee counting
- Estimating traffic flow
- Counting conversions to sales
- Evaluating the conversion rate of marketing promotions
- Displacement analysis

Staff Tracker

Staff control module



99%

Recognition accuracy

- Monitoring the availability of staff in the service areas
- Monitoring the implementation of work procedures
- Tracking KPIs
- Record of visitors served and neglected
- Report on the speed of service

Wear Detector and Neuro Detector

Control of compliance with uniforms and employee visits to specific areas



- Identifies and classifies people wearing uniforms of a particular colour
- Generates reports
- Monitoring of safety and sanitary standards
- Control of staff visits to specific areas at specified intervals

Active Stock

Smart warehouse operation control module



Reduction of incident investigation time

- Tracking where and at what stage goods are lost or damaged
- Monitoring staff performance and safety procedures
- Monitoring the movement of goods and the picking process
- Detecting errors and fraud
- Adherence to schedules

Reducing the number of unidentified losses

AutoTrassir

Neural network-based recognition of vehicle licence plates



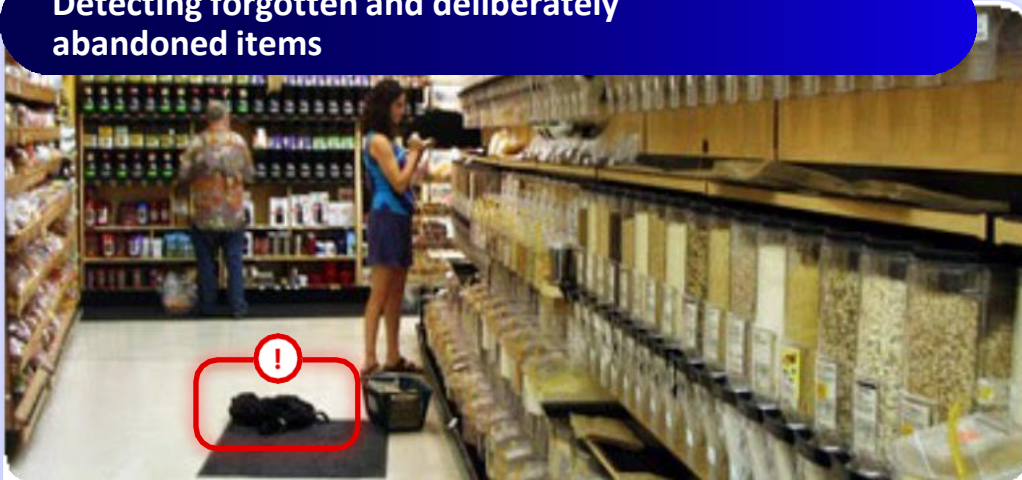
28 number plate standards

- Organising access control to the parking space and unloading
- Automatic gate control
- Vehicle and parking space counting
- Prompt investigation of incidents
- Special vehicles monitoring
- Speed detection
- Database generation

Organising access control

Neuro Left Object Detector

Detecting forgotten and deliberately abandoned items



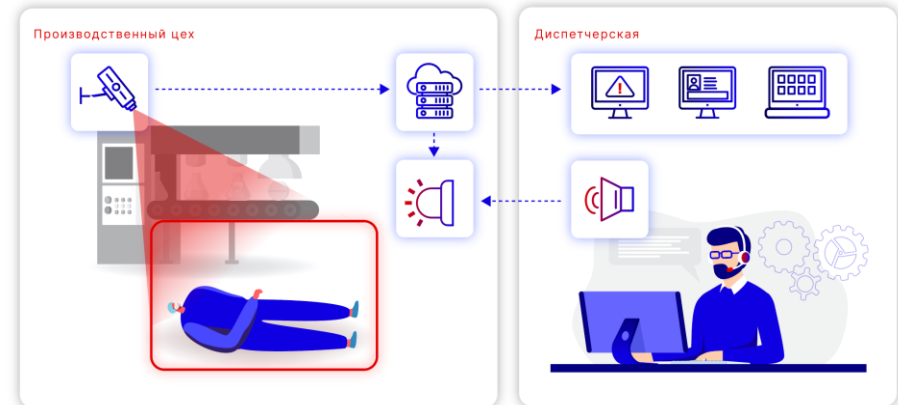
6 Typical objects for recognition

Suitcase | back pack | box | bag | duffle bag

- Defining the object type
- Notification after a set period of time
- Automatically links an object to a host

Pose Detector

Identifying abnormalities in people's behaviour



6 Basic behavioural patterns

Arms outstretched and firer's position | Arms raised above head | Squatting person | Falling person | Person holding handrail | Fighting positions

- Notification of homeless people, of a fallen person, of suspicious visitor behaviour characteristic for intruders
- Offload analytics are possible

TRASSIR ACS

All formats

Access control and management system for rule-based security arrangements

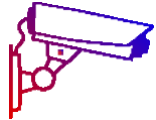
- Biometrics
- Mobile access
- 1 server for ACS and video operation
- ✓ Personnel management
- ✓ Setting access levels
- ✓ Flexibility of work schedules
- ✓ Photo verification of passageways
- ✓ Object monitoring and manual control of devices
- ✓ Event log
- ✓ Working time record
- ✓ Mobile remote access



TRASSIR CMS

Petrol stations | Store chains | Hypermarkets

System for centralised management of a large-scale video surveillance system and the possibility of organising a situation room via a single interface



Auto-surveillance system performance monitoring



Saving on traffic



Backup of settings, centralised update

- Single entry point for all users
- Provides a convenient work with video on distributed objects when the system has a large number of video registrators
- Management accesses for users
- Centralised data collection of video analytics
- Automated distribution of updates with an option of individual servers selective update
- Saves traffic when simultaneous viewing live video from endpoints by multiple operators

To whom this solution suits:

- Who has a large number of recorders. From 10 pieces.
- Who needs a situation centre
- Starting from 20 users
- Who cares about the usability of a large, distributed system and needs a single entry point
- Who has a large number of users and/or where users change frequently
- Who maintains and runs the system

TRASSIR Cloud

Petrol stations | Store chains | Hypermarkets | Convenience stores

Cloud video surveillance

6 years

Cloud infrastructure development examinations

200 000

Satisfied users worldwide

10+

Tier III security modern data centres



Low costs

Minimal maintenance costs and constant updating of the system without owner involvement



Customisable notifications

Receive notifications by email or phone, e.g. if the camera has detected movement or is switched off



Easy to operate

The single video surveillance control centre and fine access rights setting



Cell phone access

Mobile app for easy system management



Flexible payment option

Pay for the archive recording on a monthly basis or for a year at a time



Access from wherever you are worldwide

Remote and convenient video monitoring of your business from any device



Autocheck of all cameras

Automatic camera and recorder monitoring system



Video footage cloud storing

A failsafe solution and cutting-edge encryption ensures high security and safety

Video analytics available:

- Face recognition
- License number recognition
- Queue management
- Object recognition
- Neural network based counter
- Heat map of people's traffic

Cases | SPAR Supermarkets

A wide network of outlets that have service areas with their own kitchen. The network is actively expanding, opening new facilities in Moscow

Objectives:

- To reduce losses due to theft in stores
- To provide a solution to combat fraud at the cash registers
- To supervise the process of self-weighing of goods by customers in self-service areas

Solutions:

- During the month, **Face Recognition**, **Active POS**, weight data control modules and special recorders for video analytics were installed. Thanks to these solutions, cash is now automatically counted together with the cashier when shifts are closed, cash shortage has been reduced by **30%** and theft losses have fallen by **40%**. Weight data control has also been developed to track the process of self-weighing of goods by customers. Thanks to the Face Recognition module, the customer estimates a **60%** reduction in the theft risk.



TRASSIR



2 NeuroStation servers



30% reduced inadequacies

40% reduced theft losses

60% reduced theft risk

Cases | Fresh Market "Yes!"

The Yes! brand is owned by Fresh Market LLC, part of the O'Key Group, one of Russia's largest and most successful retailers

Objectives:

- To create a system to control cash transactions
- To minimise cash shortage at cash registers due to staff errors and misconduct
- To implement the project in the shortest possible period

Solutions:

- Trassir cameras were used for the project. The cash analytics module was implemented and took **2 months** to install. As a result of the work done, the customer's needs can be fully met. Following the phased implementation of the proposed solutions, cash losses were reduced by 30-50% and now account for only 5% of cash turnover. The customer continues to use video analytics at new outlets.



TRASSIR
ActivePos



9 NeuroStation
servers



1466
cameras



TRASSIR
Cloud



30-50% Reduced cash losses

100% Chain stores are gradually introducing video analytics

Cases | Hypermarket chain

The Russian largest hypermarket chain. 16,960 stores, of which 12,503 convenience stores, 244 hypermarkets, 213 supermarkets and 4000 drogeries. Outlets are located in 2808 locations across the Russian Federation. Total number of employees of the company is more than 270,000

Objectives:

- national developer;
- scalability;
- hardware fault tolerance;
- a flexible, client-oriented system that allows customised developments to suit the customer's specific situation;
- warranty, service and technical support.

Solution:

- The TRASSIR Cloud network was implemented based on the scale of the customer's needs. Currently, 10,000 servers are running at the same time. This makes TRASSIR eligible for the nomination for Russia's largest cloud-based video surveillance system with a record number of servers connected. And, most importantly, tested in the field.
- The Active POS module is installed in the stores.

Result:

- Theft of cashiers by 400,000 roubles in one of the stores in a month was confirmed, staff was replaced and business processes were created taking this module into account. The solution has been extended to store chain. Losses from checkout fraud have been minimised.



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Cloud



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Hardware Catalog



Video Management
Software Catalog



Success Cases

