

**TRASSI<sup>®</sup>**

CCTV ECOSYSTEM

**Intelligent  
Video analytics**

# TRASSIR TODAY

**21 YEARS**

of experience in  
CCTV surveillance

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**5000+**

loyal customers  
around the globe

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**3**

R&D  
centers

**35**

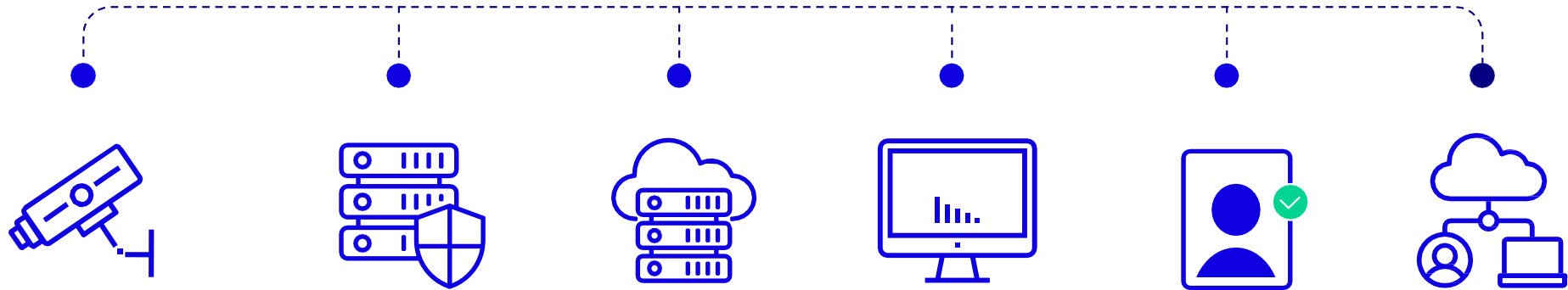
countries of TRASSIR  
installations

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# TRASSI<sup>®</sup>

## CCTV ECOSYSTEM



CAMERAS

NETWORK VIDEO  
RECORDERS

VMS

VIDEO  
ANALYTICS

ACS

CMS

NEURAL NETWORKS

ARTIFICIAL INTELLIGENCE

MACHINE LEARNING

# WIDE RANGE OF SOLUTIONS FOR VARIOUS INDUSTRIES



**BANKING**

**WAREHOUSES**

**HORECA**

**EDUCATIONAL INSTITUTIONS**

**RETAIL**

**MANUFACTURING ENTERPRISES**

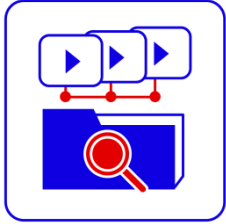
**SMART CITY**



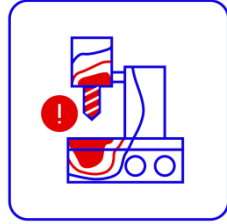
# OUR CLIENTS AND PARTNERS ACROSS THE GLOBE



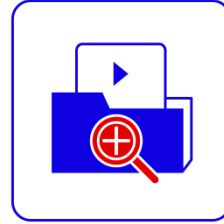
# BASIC ANALYTICS



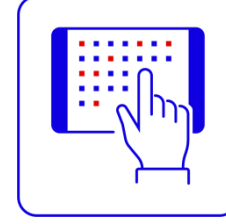
**TRASSIR**  
Multi Search



**TRASSIR**  
Heat Maps



**TRASSIR**  
Active Search +



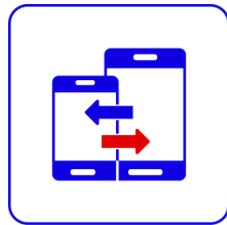
**TRASSIR**  
Event Search



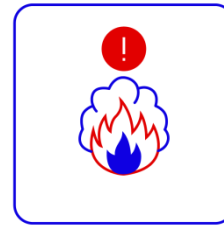
**TRASSIR**  
Client



**TRASSIR**  
Sabotage Detector



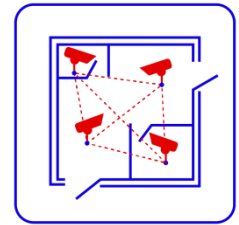
**TRASSIR**  
Mobile Client



**TRASSIR**  
Fire & Smoke



**TRASSIR**  
Sound Detector



**TRASSIR**  
Plans

# BASIC ANALYTICS



## TRASSIR MultiSearch

TRASSIR MultiSearch allows you to play back several fragments from the archive simultaneously from different time points at once and view several recordings from selected areas. Up to 7 independent fragments can be launched simultaneously.

## TRASSIR Heat Maps

TRASSIR Heat Maps helps increase attentiveness of operator via showing colored trail of each moving object. Colored trail disappears in time.

## TRASSIR Active Search

TRASSIR Active Search - for interactive motion search video archive in any selected zone of a frame.

## TRASSIR Event Search

TRASSIR Event Search - for interactive event search based on system log.

## TRASSIR Client

TRASSIR Client - Software application for remote access to TRASSIR servers. Supported OS: Windows, Linux, MacOS.

## TRASSIR Sabotage Detector

TRASSIR Sabotage Detector - video analytics, that detects sabotage: defocusing effect/ field of vision changing, object-glass closing or light striking, connection fault, signal losing. Incident reaction tuning capability, for example: audio signal and/ or message, alarm, contacts control.

## TRASSIR Mobile Client

TRASSIR Mobile Client - mobile applications for remote connection to TRASSIR servers directly via IP address or via TRASSIR Cloud. Live video, archive access, PTZ, sound and other capabilities.

## TRASSIR Fire & Smoke

TRASSIR Fire & Smoke video analytics that detects fire and smoke. Incident reaction tuning capability, for example: audio signal and/ or message, alarm, contacts control.

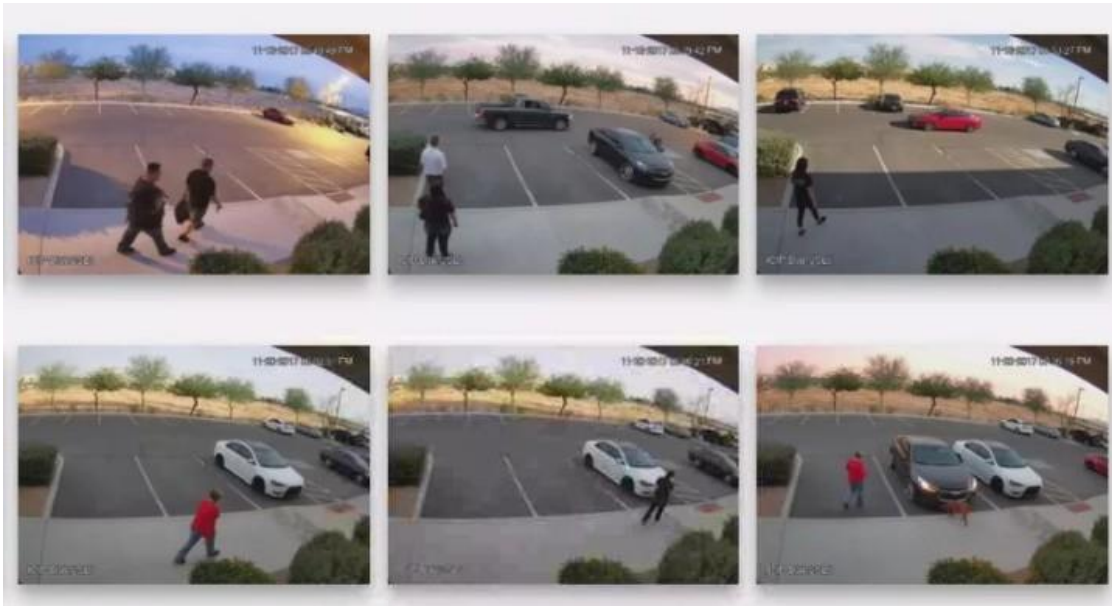
## TRASSIR Sound Detector

TRASSIR Sound Detector - allows to detect loud sound, start recording based on sound threshold before motion starts.

## TRASSIR Plans

TRASSIR Plans - Multi-level maps software module for TRASSIR. Map reflects cameras, servers, other system objects.

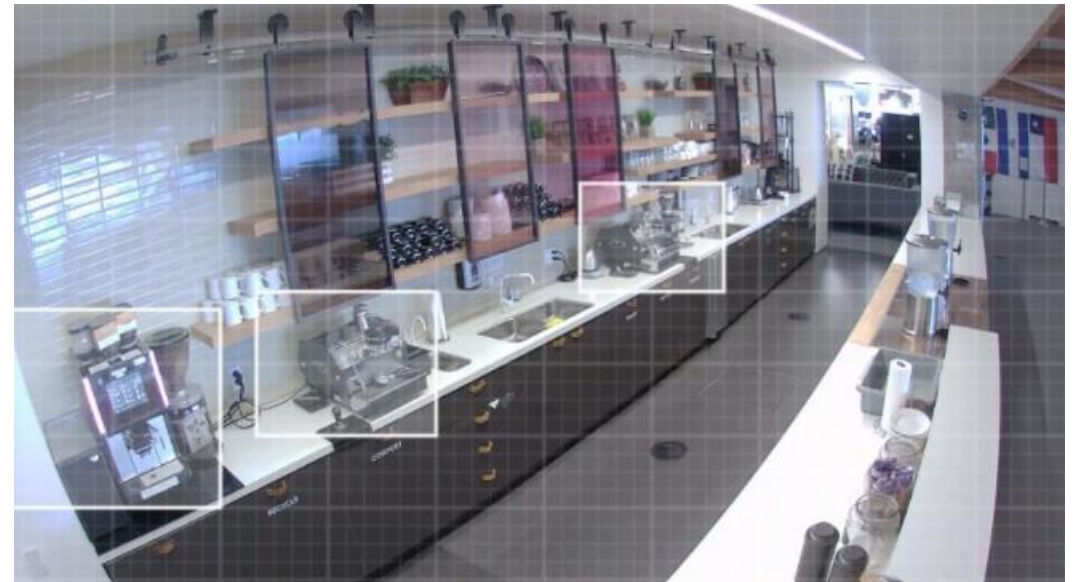




## TRASSIR MultiSearch

is designed for the efficient video analysis of a large video storage.

- Simultaneous video repeat from indicated by an operator time points and selected areas
- Up to 7 independent video fragment launch at one time



## TRASSIR Active Search

is an interactive archive search system based on metadata.

- Navigation through storage of all sizes to find the necessary video data
- Ability to specify a search area in the image
- Minimal use of CPU resources





### **TRASSIR Fire & Smoke Detector**

based on the image analysis allows to detect smoke and fire faster than fire sensors.

- Response to an incident: attracting the operator's attention with audio signal/or message, turning on the siren, managing dry contacts, etc.
- Fire protection in open spaces



### **TRASSIR Sound Detector**

allows to detect loud sounds and starts recording based on a sound threshold.

- Flexible setting of the trigger threshold
- Video starts recording before of the motion and informs an operator on the incident.

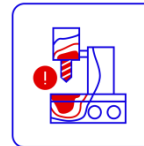
### **APPLICATION:**

Streets | Stadiums | Concert venues | Parks | Manufacturing enterprises



## TRASSIR Sabotage Detector

- automatically detects any problems with the camera image.
- Response to an incident: attracting the operator's attention with audio signal/or message, turning on the siren, managing dry contacts, etc.
  - Reports image issues: camera defocus, change in the angle of view, lens flare or covering, link interruption, loss of the signal



## TRASSIR Heat Maps

- thermal analysis of video images.
- Dynamic mode - any moving object on the screen is highlighted with warm tail area: the more activity is recorded, the more intense of the color is.
  - Static mode - accumulates activity map highlighting on video «cold» and «hot» areas

**TRASSI<sup>®</sup>**



# Neural Video Analytics

# Anti-Covid solutions



Intelligent video analytics to respond to pandemics



## TRASSIR Social Distance Detector

was designed as a response to the COVID-19 pandemic for keeping social distance while in a crowd.

- Alert system via notification bars, sms
- Speakerphone notifications
- Customized set up of the appropriate distance



## TRASSIR Face Mask Detector

helps control if people are wearing protective masks in public areas.

- Alert system via notification bars, sms
- I Speakerphone notifications
- Access lock if synchronized with doors or turnstiles

# TRASSIR solutions: retail



Intelligent cash control video Analytics



## TRASSIR Active Pos

Helps bring down both planned and unplanned POS losses

**50+**

Active scenarios

**10+ available live reports:**

- employees' KPI
- cash transactions' KPI
- the amount of losses

**Versatility:**

Supermarkets | restaurants gas stations | pharmacies | fast food cafes | boutiques | etc.

**Customization available upon request**



**Connected to the Active Pos the video analytics modules will expand the capabilities analytics and control:**

- Store traffic monitoring
- Automatic sales conversion report
- Queue monitoring
- Customer flow analysis
- On-shelf availability control
- Customer activity and places of interest monitoring
- Automatic time sheets
- Employees' presence in the workplace control



## TRASSIR Queue Detector

is an intelligent video analytics based on neural networks designed to count people in the queue.

- Automatic reporting: number of people in the queue, time spent in the queue.
- Notification module for exceeding the queue length

### APPLICATION:

Retail | Banks



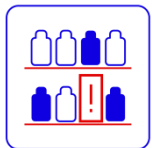
## TRASSIR People Counter

counts customers crossing the border indicated on the image in one direction or another.

- Works from the «top view» angle
- Enables conversion calculation at a point of sale
- Helps to determine peak load periods, the number of people entered and exited the facility, as well as the number of people inside.

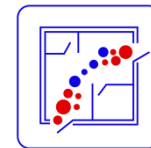
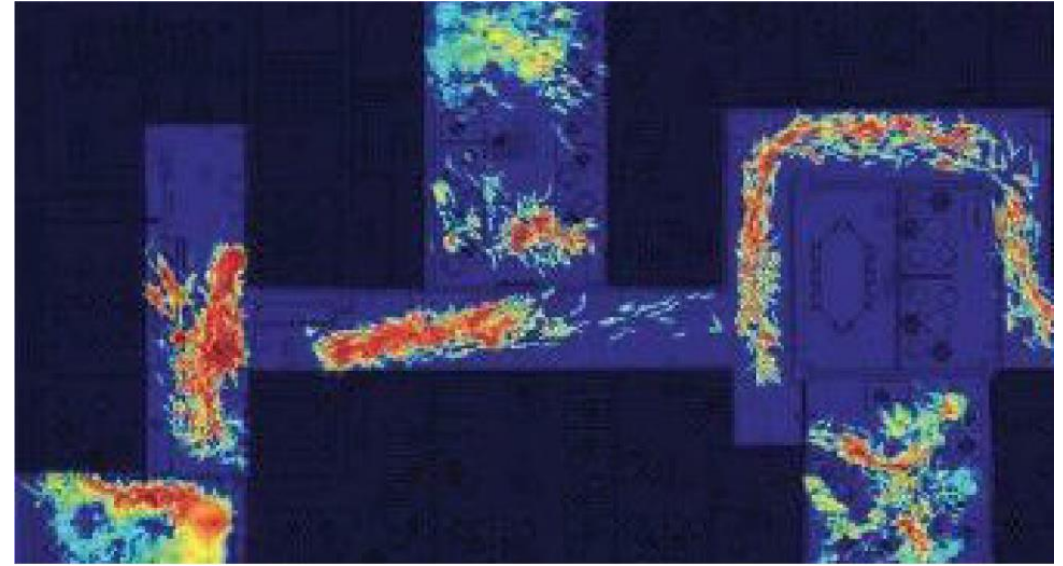
### APPLICATION:

Retail | Banks



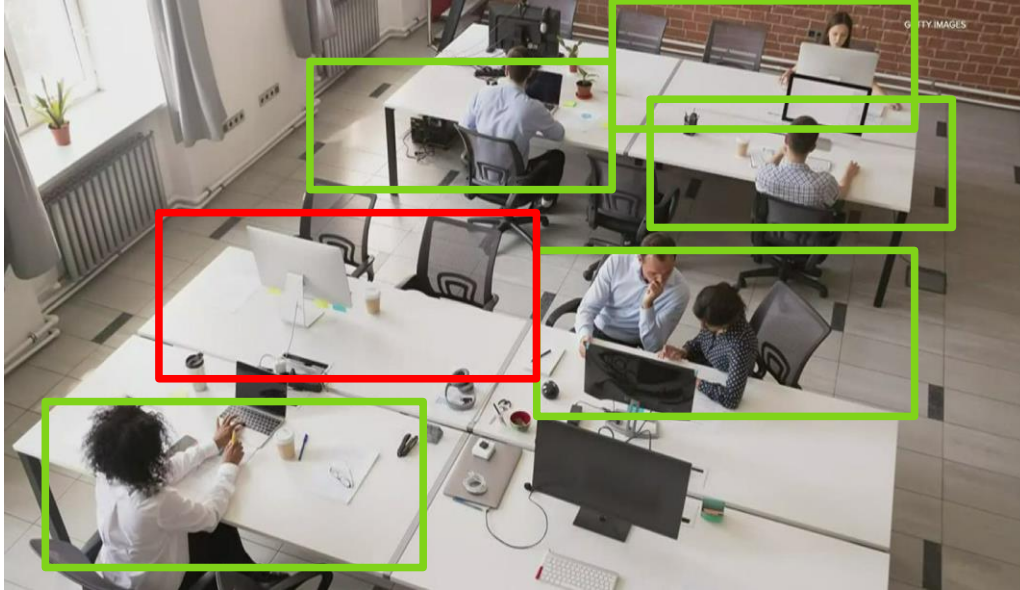
## TRASSIR Shelf Detector

- enables intelligent video analytics based on neural networks designed to spot empty/occupied shelf spaces.
- Shelves merchandising monitoring
  - Out-of-shelf notification
  - Automatic reporting to forecast the customers demand on certain SKUs ®
  - Automatic monitoring of the staff performance



## TRASSIR Heat Map On Map

- is an advanced thermal image analysis technology.
- **Kinetic map** - shows the areas with high human traffic flow
  - **Stationary map** - shows the areas where people are more likely to stop
  - **Trajectories** - the approximate movement direction on the map



## TRASSIR Workplace Detector

- tracks a person's absence from the workplace.
- Alarm notification via email or sms in the absence of the worker
  - Daily reporting on employee's actual time on-site and time off

### APPLICATION:

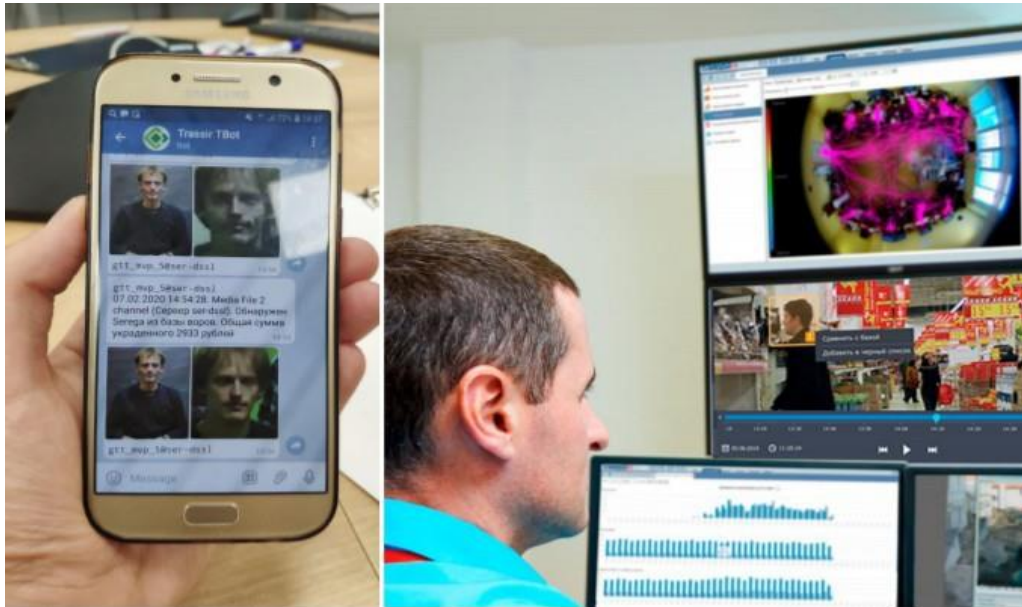
Retail | Manufacture | Construction



## TRASSIR Staff Tracker

- allows to inspect the personnel work performance in offline retail: sellers, promoters or managers.
- Tracks the availability of the required personnel in the service areas
  - Keeps the record of customers received the service and left unattended, reports on the service quality and speed
  - Alert system in real time if violation of customer service standards occurred





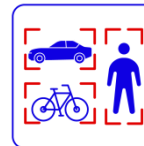
## TRASSIR Theft Prevention

allows to reduce or compensate the losses from a theft at the point of sales.

- Stores video evidences of an incident
- Keeps the record of the amount of losses for each person
- Alarm via notification bars or sms on theft revisit

### APPLICATION:

Retail



## TRASSIR Neuro Detector

allows to detect intrusion into a protected area by a stranger, a car or a bicycle with the advanced filters for no false positives.

- High accuracy object recognition
- Up to 16 trigger zones or lines can be set Alarm notification via email or sms. Customization available upon request

### APPLICATION:

Manufacture | Construction | Retail | Warehousing | Transportation



## TRASSIR HardHat Detector

enables HSE compliance for industrial and other manufactures and construction projects.

- Notification system: email, sms
- High accuracy object recognition
- Definition of hardhats and clothes colors



## TRASSIR Wear Detector

is an analytical module detecting if staff wear their workwear based on garment color.

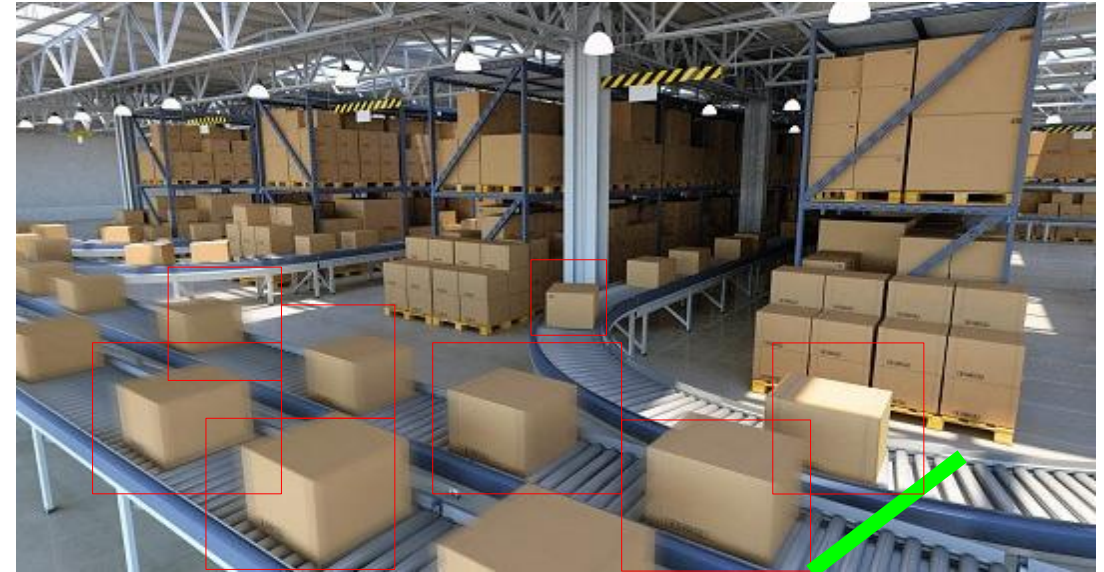
- Customization available upon request
- Various color classification for different types of employees



## TRASSIR Active Stock

serves for event-based video monitoring of warehouses operations.

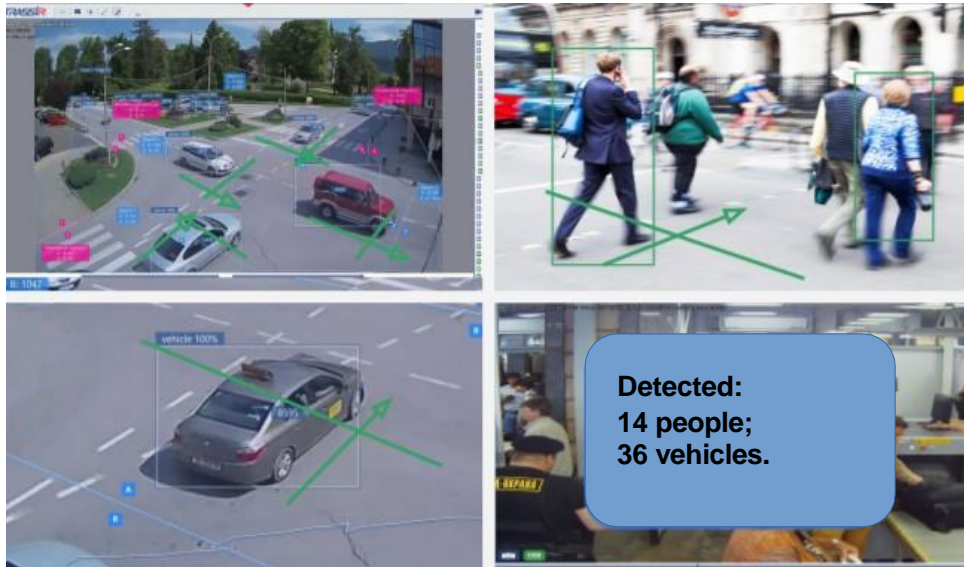
- Allows to regulate potential disputes, determine responsibility for the availability of goods, and investigate cases of damage in the warehouse
- Available offline and online monitoring
- Event search: numbers of reporting documents, product name, quantity, cell IDs, pallet, customer name or organization name, and much more.



## TRASSIR Bag Counter

is an analytical module detecting if staff wear their workwear based on garment color.

- Tracks the availability of the required personnel in the service areas
- Keeps the record of customers received the service and left unattended, reports on the service quality and speed
- Alert system in real time if violation of customer service standards occurred



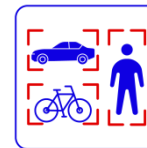
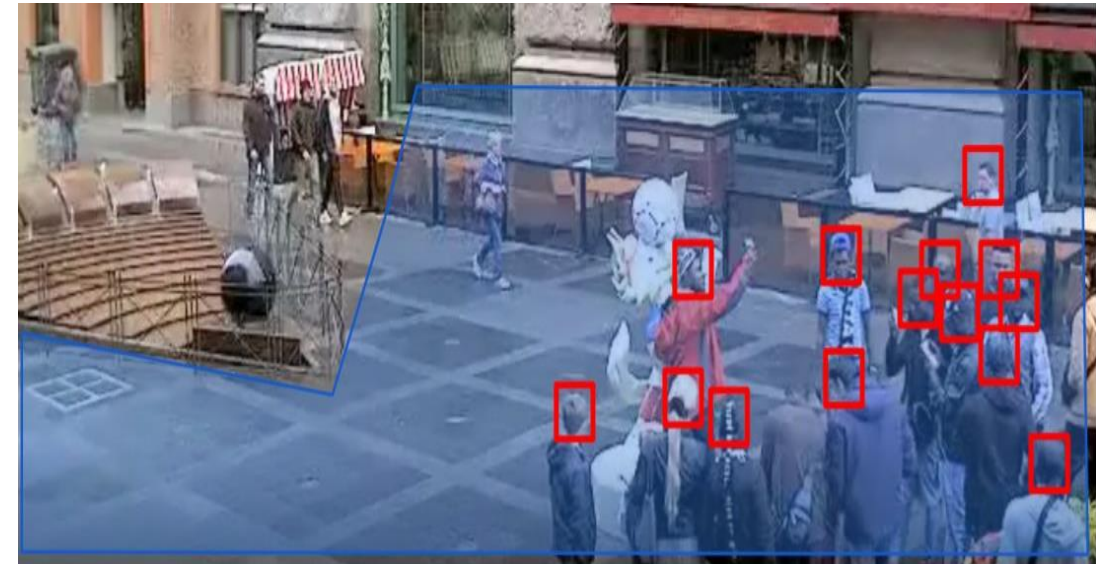
## TRASSIR Neuro Counter

is an intelligent video detector that allows counting unique objects in a certain area.

- Counts people, cars and bicycles.
- Allows to count objects crossing the set up line - up to 16 lines can be supported at one time
- Number of active scenarios: traffic control, store's conversion measurement, promo efficiency estimation

### APPLICATION:

Application: Retail | Transportation | Public places



## TRASSIR Crowd Detector

is an intelligent detector of excessive crowding of people with a configurable trigger threshold based on neural networks.

- Automatic reporting: number of people, minimum time spent in the crowd, etc.
- High accuracy object recognition
- Alert system via notification bars, sms, emails

### APPLICATION:

Public places | Stadiums | Schools | Train stations | Manufactures



## Auto TRASSIR

is designed to automatically recognize license plates once captured by cameras

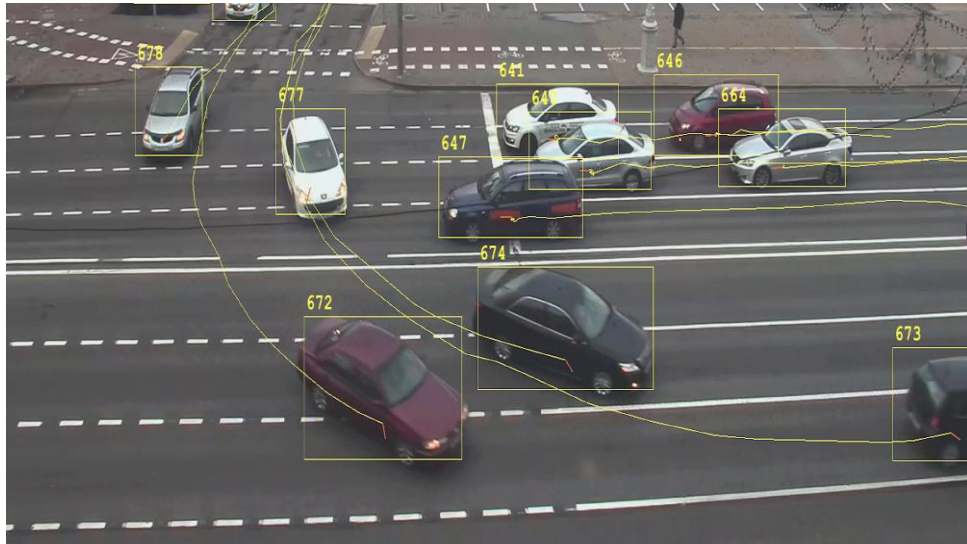
- High accuracy of license plate recognition
- Defines the vehicle classes: motorcycles, passenger cars, minivans/vans, trucks, buses.
- Defines two-line numbers
- Recognizes license plates from difficult angle

### APPLICATION:

To monitor/control the in-/outcoming vehicle flow (public and private parking lots or garages, checkpoints)

To control automobile traffic at all types of roads

**THE MODULE'S CAPABILITIES MAY BE ENHANCED** BY INTEGRATING IT WITH THIRD PARTY SYSTEMS (ACCESS CONTROL SYSTEMS, VIDEO AND AUDIO CONTROL) AND EQUIPMENT (BARRIERS, ACTUATORS, ETC.).



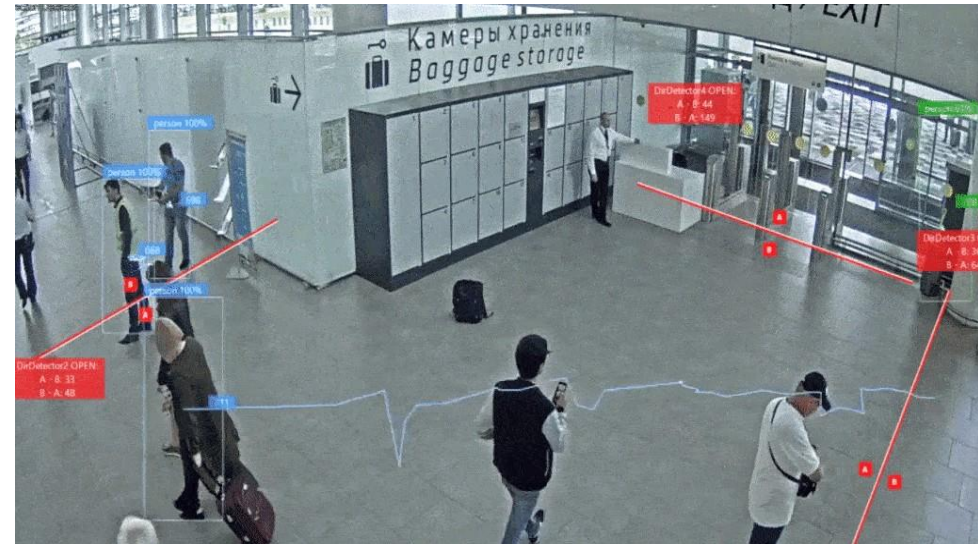
## TRASSIR SIMT (Simple Intelligent Motion TRASSIR)

allows to separate moving objects from the randomly moving background.

- High resistance to precipitation, interference and other noises
- Detection of speed, direction of movement, distance passed and size of moving objects Control of border crossing by objects
- Minimum of settings, automatically adjusts to the working conditions

### APPLICATION:

Perimeter protection | Transportation | Public places | Manufactures



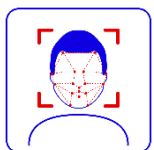
## TRASSIR Direction Detector

allows to detect any movement in the forbidden direction of a person, car or bicycle.

- Up to 16 lines can be supported at one time for direction control
- High accuracy object recognition
- Alert system via notification bars, sms, emails

### APPLICATION:

Public places | Transportation | Airports | Trainstations



## TRASSIR Face Recognition

- intelligent face recognition and search module based on a pre-configured database of people (residents, staff, etc.).
- Prevent access of undesirable people to the facility;
- Detects special guests (VIP) to improve the customer service.

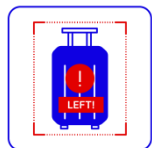
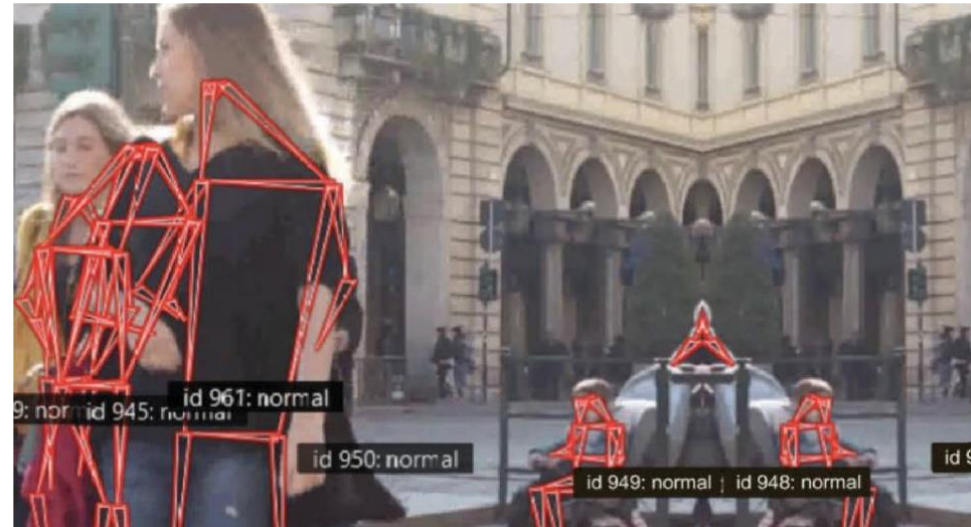
### APPLICATION:

Hotels and Restaurants | Schools | Clinics | Sport facilities | Banks



## Integration TRASSIR video surveillance

- system with ACS (Access Control System) provides the client with an integrated ACS will help you to keep track of all events with time reference: each check-in to the parking lot and every passage to the hotel room will be recorded and stored in the archive.
- Receive all the movement statistics immediately for both the hotel guests and the staff;
- Quickly access to all the information about the latest cases of entering the hotel room;
- Set the desired reaction on specific events using the built-in TRASSIR system of rules (scripts).



## TRASSIR Abandoned object detector

is designed to detect abandoned and forgotten things left in the areas monitored by cameras. The detector has the ability to determine the class of the abandoned object: suitcase, backpack, box (and objects similar in shape), bag, duffle (large sports bag) and bag (usually a small woman's bag)

### APPLICATION:

Airports | train stations | streets



## TRASSIR Neural Pose Detector

allows to detect different people's postures and classify them. For instance it helps to track a non-typical behavior of people at ATMs, falls of people in hospitals or nursing homes, raising hands up in an armed attack.

- Recognition of the following set of poses is currently supported:
  - \* sitting
  - \* lying
  - \* raised right hand
  - \* bending over
  - \* raised left hand
  - \* both hands raised

All other postures are classified by the detector as "normal posture".



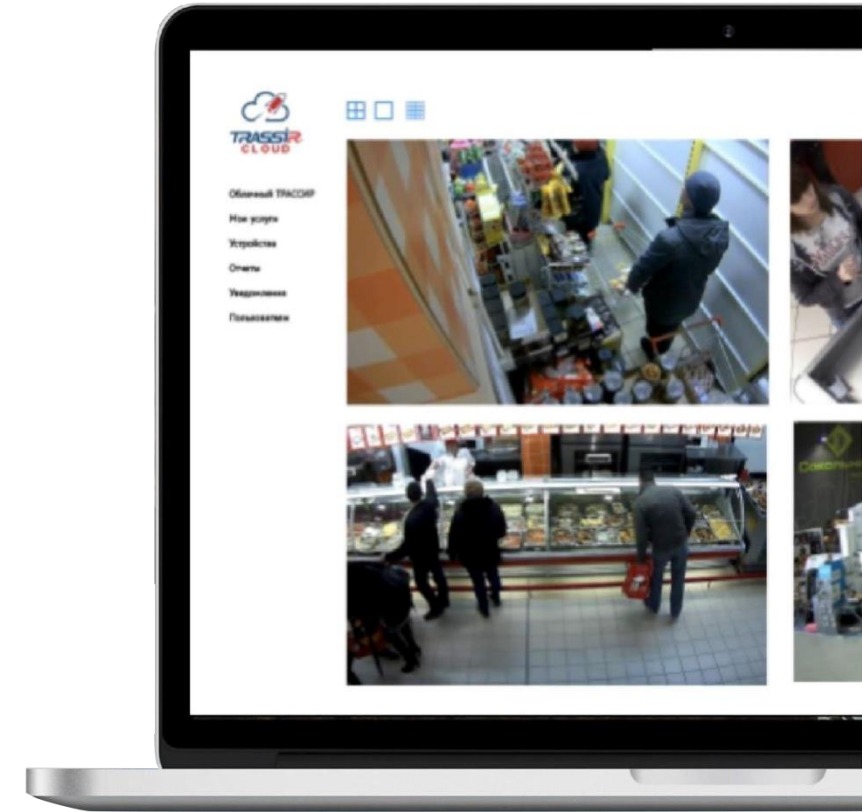
# TRASSIR CMS



TRASSIR CMS is a professional cloud-based web service with the record protection functionality

## MAIN ADVANTAGES:

- Supports an unlimited number of IP-cameras and video servers.
- Instant alerting: e-mails or push alerts.
- Archive video storage with customizable archive depth.
- Exports video archive to the file. Video archive is stored at the Cloud and can be downloaded to any device.
- Private Cloud installation for companies that require independent local-based video surveillance.
- Double-stream archive record: main and sub stream. Stream back-up allows to save all data even with low-speed or unstable connection.



## Any time. Anywhere

Access the system from a mobile device or desktop:

- [www.cloud.trassir.com](http://www.cloud.trassir.com)
- TRASSIR app: Android | IOS
- Client for Windows | Linux | MacOS



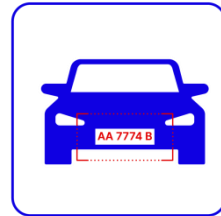
**Complex  
Solutions**

# Complex solution: Smart city



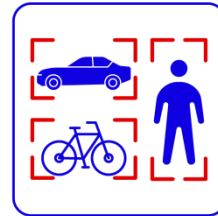
Anything can happen in a large city, every minute of every day. It's impossible to be everywhere at once, and definitely is a waste of time and police force. TRASSIR delivers a complex solution to ensure everything is under control.

- Complete automated video monitoring of large areas: streets | parks | public | buildings | squares
- High accuracy recognition
- Open system, compatible with legacy equipment



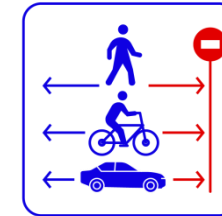
## Auto TRASSIR

License plate recognition module



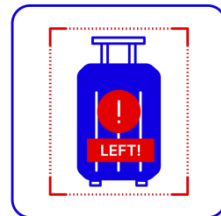
## TRASSIR Neuro Detector

Determines – detects prohibited visitors (people, cars, or bicycles) within protected areas



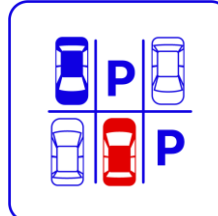
## TRASSIR Direction Detector

Detects an object's movement in the prohibited direction (people, cars or bicycles)



## TRASSIR Abandoned Objects

Detects abandoned and forgotten items that potentially threatening the city security



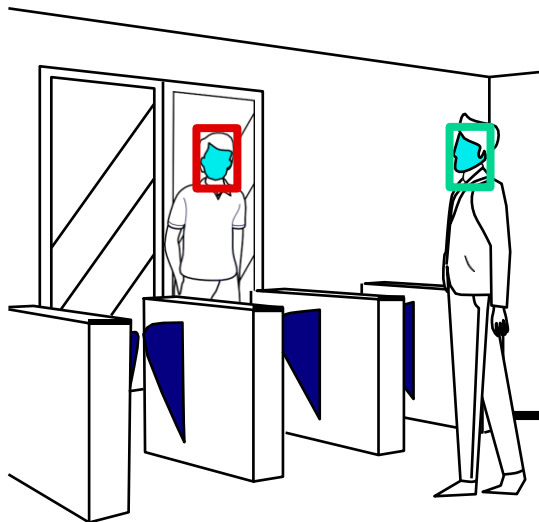
## TRASSIR Parking

Counts the number of vehicles, as well as the time spent in the parking area

# Complex solution: TRASSIR integration with access control system

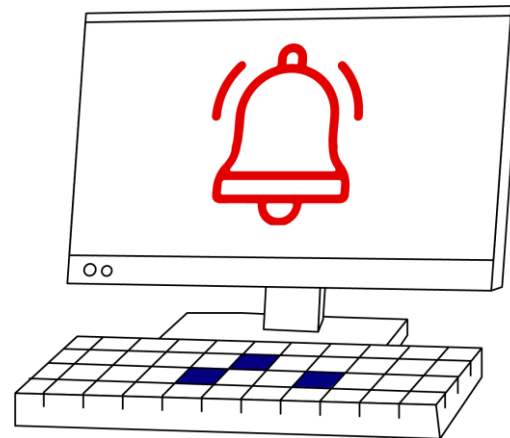
## ACCESS CONTROL

- Customized rules for access authorization and restriction
- Multi-factor authentication: complex algorithms for human identification
- A convenient smart alert system



## MONITORING

- Real time supervision with access from any part of the world
- History of all events and operator's actions



## VIDEO ANALYTICS

- Face recognition, employee time record keeping, crowd detection, face masks and uniform recognition
- Non-contact access to the facility of the guests and employees in the current pandemic situation
- Regular reporting to prevent the future violations





trassir.com



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