TRASSIR®

Active POS

Smart monitoring
of checkout transactions

Recorded losses in retail

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Administrative and others

Supplier fraud

Shoplifting by customers

Supplier fraud

13%

6%

34%

47%

2-2.5% of sales

● Receipt fraud
● Theft from cash register
● Cash fraud
● Forgery of payments

● Theft of money in collusion with management
● Forgery of financial statements
● Forgery of cashless transactions
● Theft of customer bank card information

20% 10% 19% 9% 28% 12% 34% 13%

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47%

losses in statistics

DIRECT LOSSES:

cases of obvious theft and fraud. Lead to a shortfall that can be identified during stock-taking

Beyond the statistics

INDIRECT LOSSES:

when the cashier shortchanges the customer. The resulting loss is higher due to reputational costs

More than half of all losses occur at the POS

Common examples of violations:

Deliberate theft

- Cancellation or partial receipt printing
- Unsettled receipt, when the cashier's accomplice takes goods using previous customer's receipt
- Returns
- Extra goods
- 1+1 offer positions
- Customer loyalty card fraud

Mistakes and carelessness

- Cashier gets the goods mixed up (regrading)
- Errors in the quantity of goods
- Ignoring deliberately under-weighed goods
- Errors when taking goods off the receipt

Violation of cash register discipline

- Shop opening and closing time
- Talking on the phone while working at the POS
- Leaving the workplace
- Mess at the workplace

The smart module ensures synchronisation of the POS with the video stream:

upon reaching ActivePOS, events from the POS go through a checklist according to set parameters, in case of a violation an incident (notification of a violation with a short video clip) is generated and output to the operator for checking. The module also improves the efficiency of conflict resolution with customers.

- Events from the POS and checkweigher are synchronised with a video stream

- Event search and selection based on parameters

- Displaying alarm events for the operator
- Viewing instances in the recording
- Creating a report

Solution best suited for

Hypermarket

Convenience store

Specialised stores

Fuel station

Banks

Fast food restaurants

Pharmacy

Detecting theft and fraud

VIOLATION

- **Receipt cancellation**

The customer did not wait for the receipt and left. The cashier cancelled the purchase and kept the money

- **Fake return**

Using the receipt left by the customer, the cashier returns the goods that were actually sold and takes the money

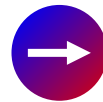- **Cashier's personal discount card**

The cashier does not clear the receipt and waits for the customer to leave. Uses own discount card. Takes the resulting difference between the amount paid and the sum total
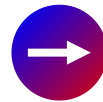
DETECTION:

→ Viewing incidents of cancelled receipts paid in cash

→ Viewing cases of returned goods

→ Viewing cases when the same discount card is used - for example, more than twice per working day

Detecting cashier errors

TRASSIR ®

VIOLATION

DETECTION:

- **Error when letting through a group of products**

When scanning a multipack, the cashier scans the barcode of one product and forgets to enter the actual number of items in the multipack. As a result, the amount on the receipt is for just one item and not the whole package

→ Viewing the entry of groups of goods into the system, during the sale of which such an error might occur

- **Error when entering the product code manually**

When entering the product code manually, the cashier makes an error and sells another product with a different price. As a result, there is a mix-up

→ Viewing manual entry of product codes

- **Error in the quantity or weight of goods**

The cashier makes a mistake when entering the quantity of goods (for example, enters 77 instead of 7), deletes the wrong digit, and does not enter the correct quantity of goods. The customer gets the goods for free because of the error

→ Viewing instances when the number of goods is changed, after which the goods disappeared from the receipt

Detection of violations cash register discipline

VIOLATION

- **Opening a cash register without payment**

Unjustified opening of a cash box with the threat of the cashier pocketing cash that is unaccounted for

- **Selling alcohol without verifying the customer's age**

Before selling alcohol, the cashier must make sure the customer is an adult by checking their ID

- **Not checking high-value notes**

High-value notes shall be checked on a detector to avoid payment with counterfeit banknotes

DETECTION:

→ Viewing instances of a cash box being opened without the customer paying in cash

→ Checking the sale of all goods from a given list (alcohol, sigarettes)

→ Viewing purchases paid for in high-value notes

Key advantages

TRASSIR

Reduction of financial losses at POS via quick search of incidents

Common interface for multiple locations

Creation of any search algorithms and combinations of events

Flexible filter parameters and events sorting

Only 1 operator per 100 POS at several stores

Reduced service time in case some receipt positions are cancelled

100+ types of violations

50% reduction of cash losses

10k+ TRASSIR modules reduce the financial losses of our customers every day

99,9% equipment is compatible with the ecosystem TRASSIR

Common interface

TRASSIR®

One-contact principle
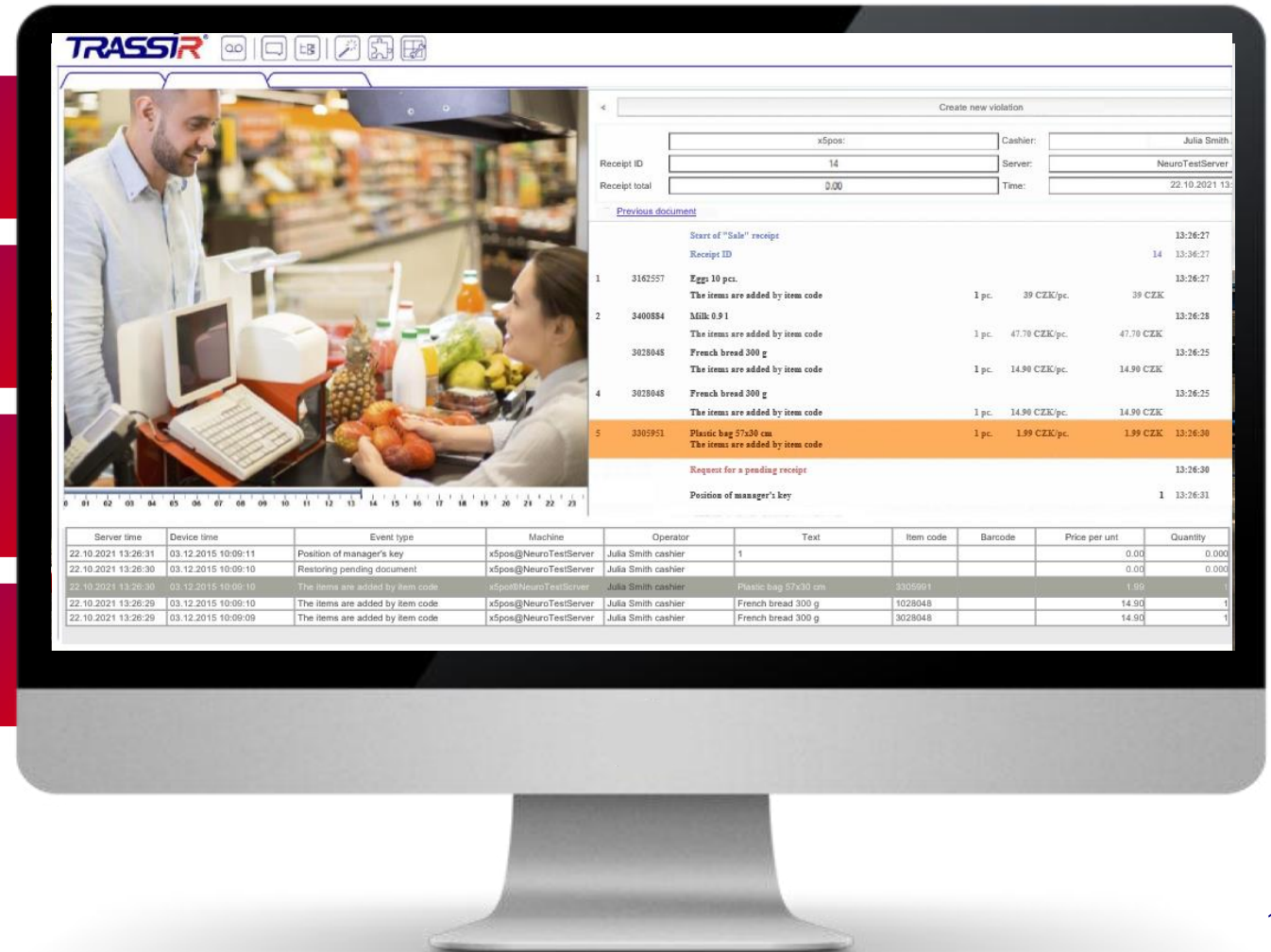
- Timely prevention of violations
- Multiple stores at the same time
- **100+** Types of violations for analysis
- Generating detailed and convenient reports with one click

Timely prevention of violations

TRASSIR®

Timely prevention of violations

Multiple stores at the same time

100+ **Types of violations for analysis**

Generating detailed and convenient reports with one click

- Automatic selection of suspicious incidents and immediate notification

- Broadcasting incidents and operations from the cash register in the visual backdrop

- Options for filtering and sorting per specific cashier or store

Timely prevention of violations

Automatic withdrawal of incidents online based on specified setting rules

- Timely prevention of violations
- Multiple stores at the same time
- **100+** Types of violations for analysis
- Generating detailed and convenient reports with one click

Working with multiple stores at the same time

Timely prevention of violations

Multiple stores at the same time

100+ Types of violations for analysis

Generating detailed and convenient reports with one click

- **Control of access** to information from trading points based on job role

- Option to select **multiple stores** for the analysis of suspicious incidents

Working with multiple stores at the same time

Timely prevention of violations

Multiple stores at the same time

100+ Types of violations for analysis

Generating detailed and convenient reports with one click

Built-in algorithm constructor

of search for violations to create any combinations of events

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Own settings development
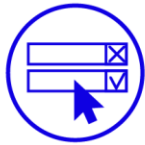
No need for an IT expert — all rules are easily created in the interface
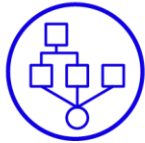
Create unique rules with a complex sequence, selection of products, cashiers or other parameters

>12 report templates

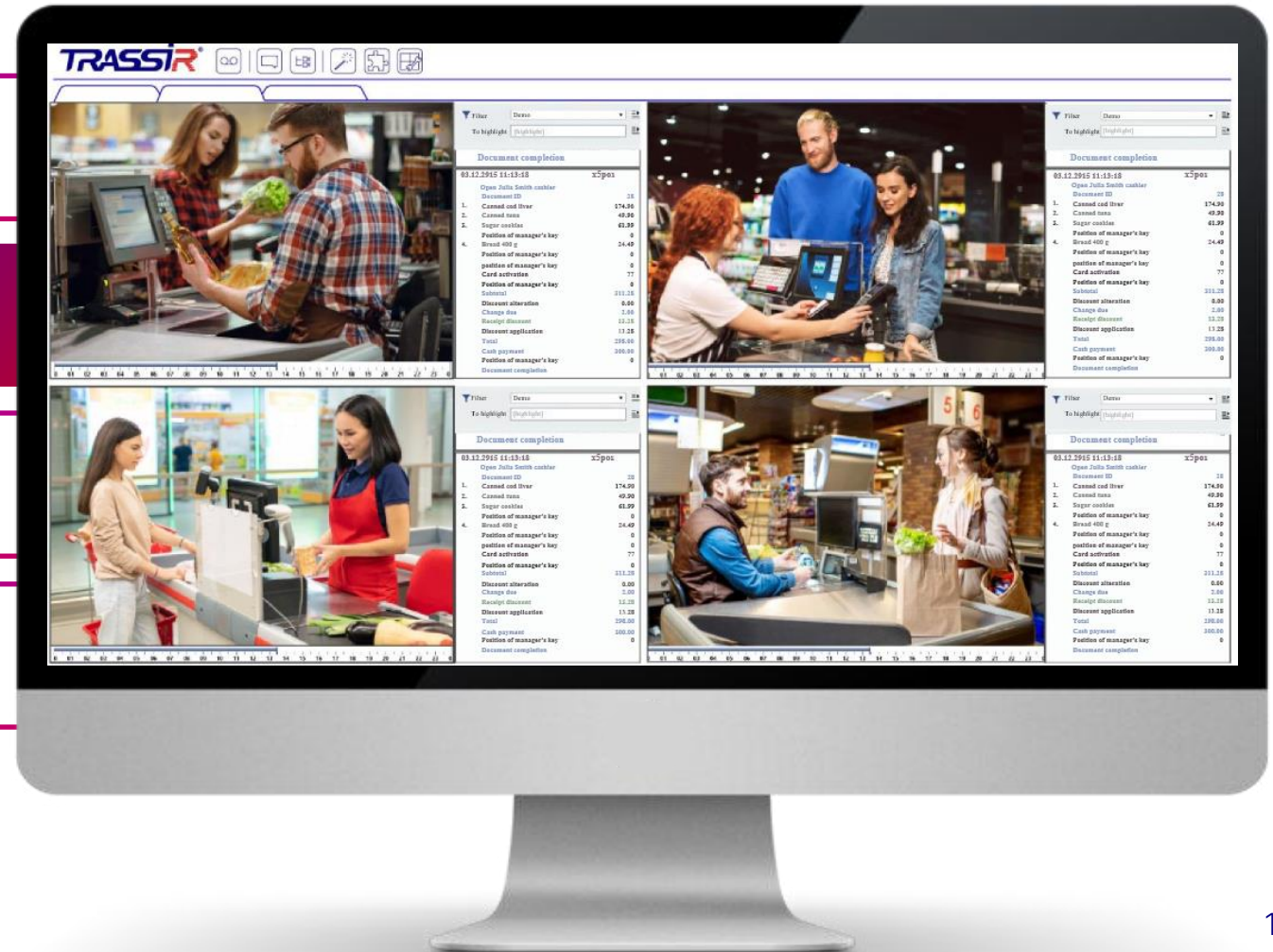creating own flexible templates

Timely prevention of violations

Multiple stores at the same time

100+ Types of violations for analysis

Generating detailed and convenient reports with one click

- Detecting multiple violations in the same incident
- Detecting violations outside the receipt (moment of service)
- Tools for working with record archives
- Automatic generation of reports according to specified filters, generation rating reports (best/worst)
- Uploading the evidence base to the report (date, type of incident, receipt number, cost of damage, cashier's name, comments, imagery, etc.)

Automatic generation of a report

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Timely prevention of violations

Multiple stores at the same time

100+ Types of violations for analysis

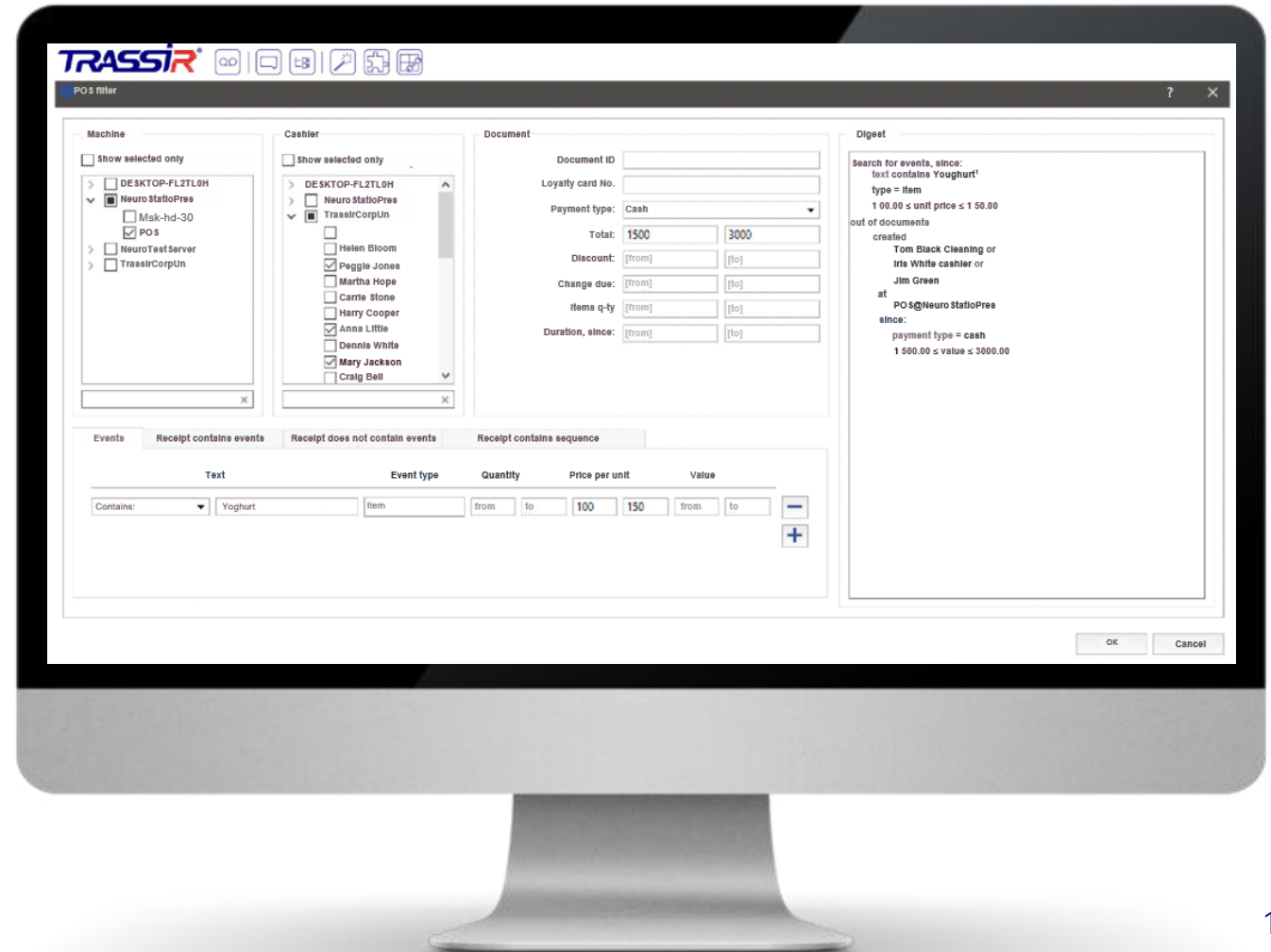Generating detailed and convenient reports with one click

TRASSIR

Events by Operators	Events by Devices	Items by Cashiers
Possible filtering by event types and operator names	Possible filtering by event types and devices	Possible filtering by item name and cashier names

Receipt amount report	Duration of receipts by Cashiers	Duration of receipts by Terminals
Interval report. Possible filtering by receipt amount intervals as well as the names of cashiers	Interval report. Possible filtering by receipt duration intervals as well as the names of cashiers	Interval report. Possible filtering by receipt duration intervals as well as terminals

Item statistics	Violations report	Items by Devices
Possible filtering by item codes	Summary of detected violations	Possible filtering by item name and device

Discount cards by cashiers	Statistics per cashiers	Average incident handling time
Possible filtering by discount card numbers and cashier names	Possible filtering by cashier names	Incident handling time statistics. Possible filtering by operators

Automatic generation of a report

on the identified violations

- Timely prevention of violations
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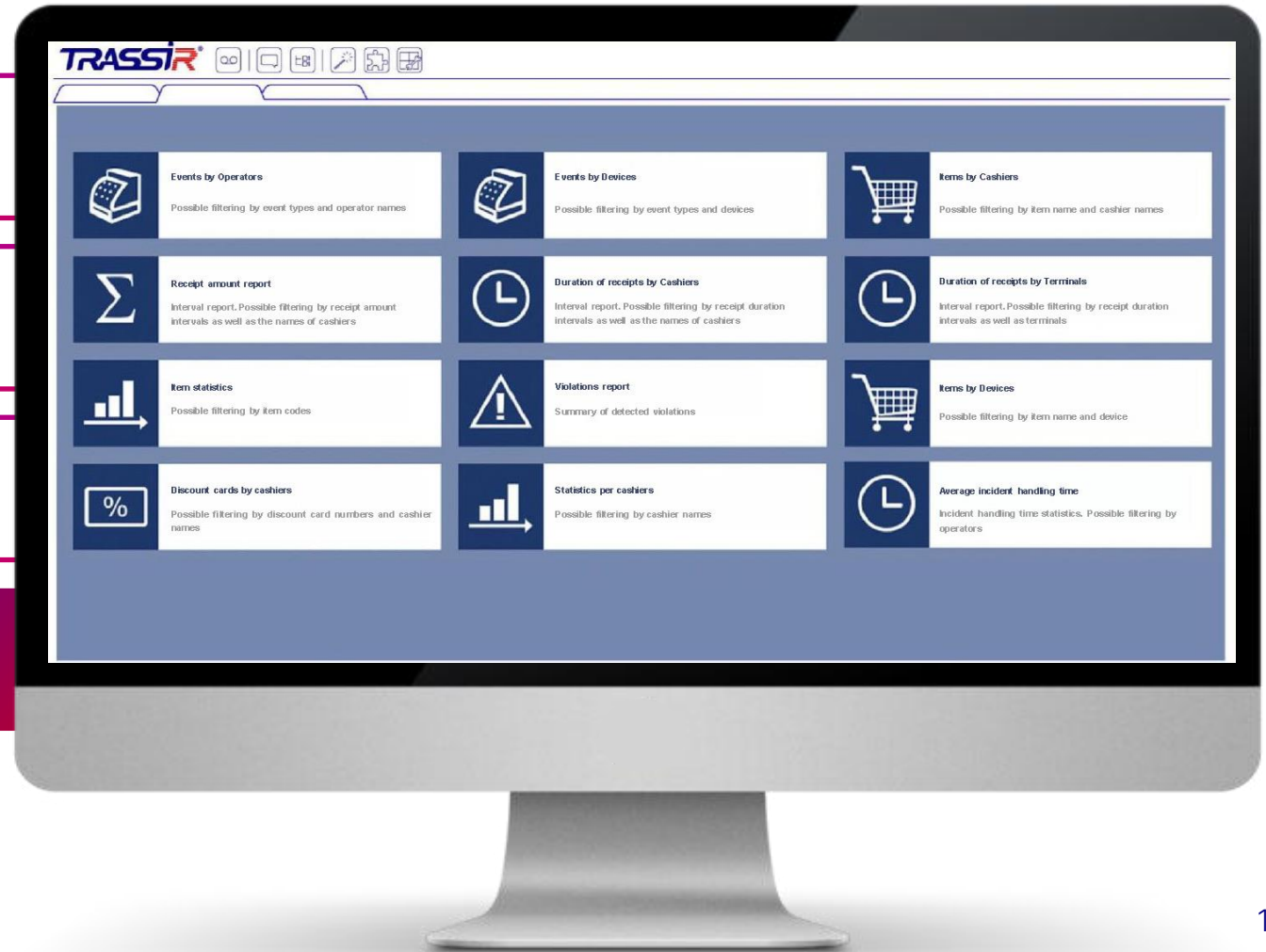- Generating detailed and convenient reports with one click

TRASSIR

Event type	Total	Total	Tatyana Gorelkina	Микаева Анна...	Anna Plekhankova
Receipt cancellation	5	5	0	4	0
Adding cash money into cash box	7	7	0	3	2
Login to cashier mode	9	9	1	1	2
Log out of cashier mode	8	8	1	1	2
Adding an item to receipt	5712	5712	666	1913	0
Item alteration	268	268	42	89	0
Taking money out of the cash box	6	6	1	2	0
Total	1015	1015	119	410	0
Receipt end	898	898	91	368	2
Start of "Sale" receipt	888	888	89	368	0
Receipt ID	893	893	90	368	0
Item is cancelled	51	51	7	30	0
Printing X-report	15	15	2	6	2
Receipt printing	879	879	90	361	0
Cash payment	1015	1015	119	410	0
Increasing goods quantity	614	614	81	201	0

Presenting an incident in a report

TRASSIR®

Timely prevention of violations

Multiple stores at the same time

100+ Types of violations for analysis

Generating detailed and convenient reports with one click

Incident report	Detected	Not viewed	Confirmed	Declined	TrassirCorpUp Total	Neur
Violation of POS servicing rules	28	5	1	22	1	
Cancellation of a pending receipt	8	4	2	2	2	
Receipt cancellation in the absence of the manager	2	2	0	2	0	
Receipt cancellation with delay	2	2	2	0	2	
Item input by calculation	0	0	0	0	0	
Selecting an item from the list manually by price	6	0	3	3	3	
Issuance of a sales voucher without signing	2	1	1	0	1	
Reloading the cash register in the absence of the manager	2	1	0	1	0	
Cancellation of items in the receipt in the absence of the manager	8	0	4	4	4	
Selling without receipt	2	0	1	1	1	
Printing return receipt in the absence of the manager	2	0	2	0	2	
Counting cash in a cash box	0	0	0	0	0	
Printing X-report	2	0	1	1	1	
Printing X-report and withdrawing money in the absence of manager	3	0	0	3	0	
Acceptance of a high-value note without detecting	14	14	0	0	0	
Selling alcohol to minors	2	1	1	0	1	
Selling cigarettes to minors	2	0	2	0	2	
Working with an open cash box	0	0	0	0	0	
Selling alcohol at night	4	0	1	3	1	
Unintentional damage to the seller or customer	25	20	0	5	0	
Alteration of quantity or weight when accepting	2	0	1	1	1	
Unintentionally cheating a customer by scanning the same item twice	3	0	2	1	2	
Cutting off small amounts	5	1	3	1	3	

Sorting incidents

by type of violations, cost of damage, number of incidents

Timely prevention of violations

Multiple stores at the same time

100+ Types of violations for analysis

Generating detailed and convenient reports with one click

Statistics per cashiers	Suspicious...	Working time	Receipts	Receipts total	Cancelled amount
⌄ DESKTOP-CCGMIDR	6	51 m 17 s	888	131432.411	67406.25
Peggie Adams	7	6 m 9 s	89	7793.98	67.99
Alex Levine	3	15 m 13 s	224	19984.87	94.94
Ann Gordon	9	17 m 26 s	368	86445.35	67189.34
Fred Blossom	0	0 s	0	0.00	0.00
Andy Novak	3	12 m 29 s	207	17208.21	53.98
James Murray	0	0 s	0	0.00	0.00

- Sorting incidents by the cost of damage. Special attention is paid to 'costly' incidents.
- Marking of viewed incidents

Reduced service time

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In case some receipt positions are cancelled

- The traditional method of fraud prevention, when each incident of cancelling goods in the final receipt requires confirmation from the senior staff

- Queuing - people with small purchases are leaving as they are unwilling to waste time in queues, the visitors' loyalty decreases

- The shift supervisor is distracted from his duties during peak hour, he is forced to dash from one POS to another

By reducing customer service time you get:

Increase of conversion to payment

Customer loyalty improvement
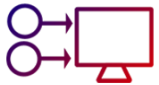
Increasing the quantity of receipts per one POS

Opportunities to:

Monitor the presence of staff in the workplace

Simultaneously process information from the weighing equipment and the POS

Investigate incidents from their beginning without having to scroll through the entire till roll

Conduct marketing conversion analysis when used in conjunction with the Neuro Counter module

Determine the presence or absence of violations from the video frame

Integrate with most retail and cash register systems based on protocols

Significantly speed up the process of removing a product from the receipt if the customer so wishes

Conduct 'health monitoring' of the entire system using Trassir CMS

TRASSIR CMS

Solution for managing an extensive CCTV system in retail

Basic features

24/7 monitoring of surveillance system

System status reports

Convenient user management, LDAP

Situation Center

Traffic reduction

Centralised server update and management via scripts

Advantages

You will not miss equipment failure and will not lose important data. Set up notifications or view the status online

To analyse situations, you can create reports on the state of the system for any period. We can customise the CMS and collect reports on any system data

Easy creation of users and flexible management of their rights based on your corporate user system

Security guards will not miss suspicious situations and they do not have to monitor all cameras. You handle only alarms from the right detectors and flexibly set their trigger scenarios

With slow Internet speed or narrow channels, the desired channel can still be viewed by multiple users

You can update all or individual servers at once using the CMS and also manage them via scripts

For whom:

More than 20 recorders

Many locations with video surveillance
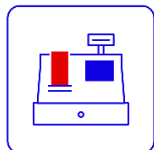
Uninterrupted 24/7 monitoring is critical

Conversion marketing analysis

TRASSIR
Neuro Counter module

Intelligent object detector

- Counts visitors based on neural networks
- Excludes employee counting
- Gives an estimate of passability

TRASSIR
Active POS

→ **Gathers marketing analysis of conversion to purchase**

→ **Unites groups of people at POS for accurate conversion estimation**

Reduction of losses in cash turnover in the banking system

For POS cash registers and counting rooms

The module is integrated with money counting machine and bank software

Creating a list of all events

Creating and storing evidence base to investigate incidents. The archive of video recordings of all transactions passing through the ATM allows promptly investigating customer claims and the precedents of fraud

Synchronisation of event video monitoring of cash and payment centres **using Active POS.** Synchronisation of video recording of all of the cashier's actions with the data received from bill counters enables the merging of this information for easy monitoring of all operations with banknotes at any time

Cases

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SPAR supermarkets

A wide network of retail shops that have service areas and their own cooking facilities. The network is actively expanding.

Project objectives:

- To reduce losses from shoplifting
- To provide a solution to prevent fraud at POS
- To control the process of independent weighing of goods by customers in self-service areas

Implementation result:

30%
decrease of shortage quantity

40%
decrease of losses resulting from shoplifting

60%
decrease of shoplifting theft

Cases

**Largest fast food restaurant chain
opens more than 500 outlets**

Project objectives:

- Minimising delays in receiving and delivering orders
- Preventing POST fraud
- Preventing theft

Implementation result:

- Video surveillance as a regulatory control tool
- Collecting statistical data for marketing research without the involvement of third-party services
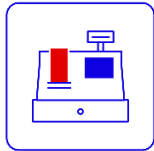
2 months
for payback

70%
reduction of financial losses resulting from theft

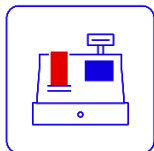# Additional implemented solutions and development vectors

Zone for self-checkout

TRASSIR ActivePOS

- Generating incidents at self-service checkout points

Zone for delivery, Distribution centre, warehouse and logistics hubs

TRASSIR ActivePOS

TRASSIR ActiveStock

- Helps to reduce unidentified losses
- Significantly speeds up the investigation errors and fraud cases
- Optimises the monitoring of shipping and palleting areas
- Helps monitor the movement of goods
- Improves monitoring the work of employees and compliance with safety regulations