

 made
in Russia

"SMART REFRIGERATOR" SYSTEM

TO MONITOR GOODS
IN A REFRIGERATOR



facemen



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FACEMEN REFRIGERATORS



THE CHALLENGES THAT DISTRIBUTORS FACE

untimely display of goods

- 5-10% reduction in average product sales due to lack of product on the shelf in low season and heavy losses in high season

display of someone else's product in the refrigerator

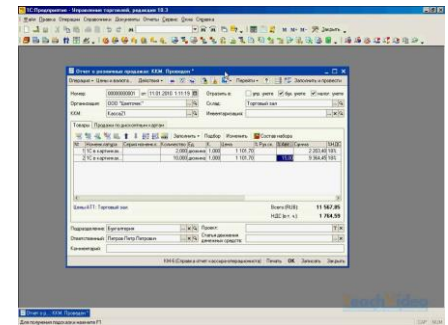
- display of someone else's product in the refrigerator: the misuse of the refrigerator, the negative image, sales of competitor goods from the distributor refrigerator

lack of information on the dynamics of sales

- retail networks provide only aggregated data for the month in the context of the store as a whole
- no information on expired products, difficult to monitor the presence of expired products on display
- merchandising costs are from 3 to 6 rubles per bottle

merchandising and call center costs

- difficult to check the quality of the merchandiser's work
- a merchandiser provides information only at a specific date
- you have to keep a call center to get immediate information on the shelf stocks



SOLUTION FROM FACEMEN, THE MANUFACTURER OF RFID-EQUIPMENT

FACEMEN TOGETHER WITH THE RUSSIAN MANUFACTURER OF RFID-TAGS MIKRON HAVE DEVELOPED A UNIQUE TECHNOLOGICAL SOLUTION - **"SMART REFRIGERATOR."** THE SOLUTION CONSISTS OF THREE BASIC COMPONENTS:

RFID equipment
suitable for mounting
in any refrigerator
with metal liner



- the device can be mounted in any commercial refrigerator
- the interval of usage tracking (may be set from 10 ms to 24 hours)
- keeping record of how many hours the refrigerator works
- detection of the refrigerator's location
- measuring the temperature and humidity in the refrigerator
- measuring the volume of untagged products in liters in the refrigerator
- the ability to connect external devices - for example, a mini-projector to display an image on the glass door of the refrigerator

RFID tag that
is read from bottles
(including plastic ones)

- 100% identification of tagged products in the refrigerator
- a tag is made on self-adhesive tape compatible with modern applicators and can be stuck to a bottle automatically when bottling

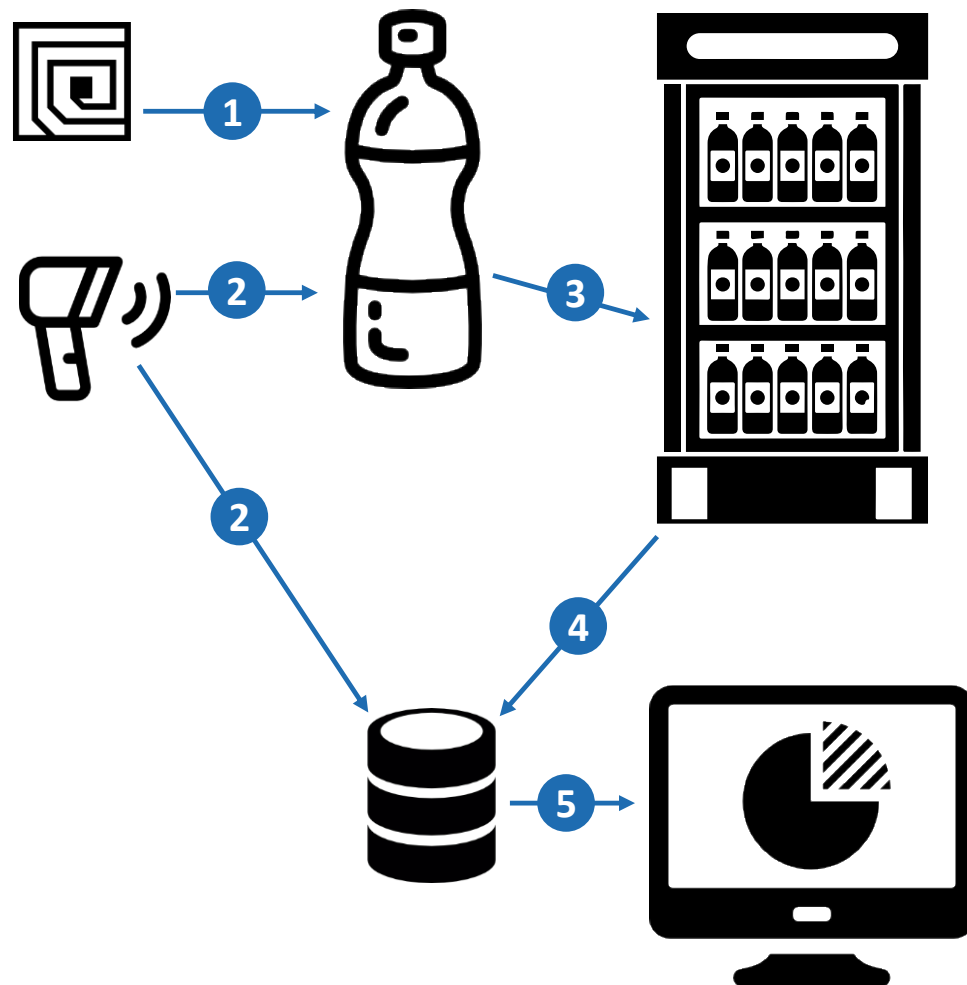
Software
to transfer data to ERP systems of
the distributor / to create reports
using web-interface

- software allows to transfer data to ERP system in real-time or to display information on the amount of goods in the refrigerators
- create detailed reports on product sales in the context of a refrigerator / refrigerator groups, varieties of products, with the ability to drill down to every minute

HOW DOES IT WORK



- 1** The tag is automatically placed on a bottle (for example, under the label) during bottling.
- 2** RFID-equipment records a unique lot number on the tag, the necessary information about the lot: grade, production date, shelf life, etc., is transferred to "Smart Refrigerator" software.
- 3** The bottle is sent to the retailer, placed to the refrigerator, or extracted from the refrigerator.
- 4** All the information about the movement of the bottles is transferred to the "Smart Refrigerator" software.
- 5** "Smart Refrigerator" software transfers the data to ERP system or prepares analytic reports for users.



EFFECT OF THE TECHNOLOGY IMPLEMENTATION

FROM A PROBLEM...

TO ITS SOLUTION

untimely display of goods

- real-time control of goods being displayed

display of someone else's product in the refrigerator

- detection of placing untagged goods / someone else's products in the refrigerator, measuring the volume of untagged products in liters
- monitoring of time and mode of the refrigerator operation (humidity, temperature)

lack of information on the dynamics of sales

- collection and transmission of information about the product movement in real time
- product movement control within a few seconds
- creating reports on the sales dynamics in the context of product grading, size of containers, packaging type, etc.
- automatic location (address) of the refrigerator
- automatic control of expired products in the refrigerator

merchandising and call center costs

- merchandising costs reduction (a merchandiser is needed only to settle disputes such as display of untagged products in the refrigerator)
- call center costs reduction (information about sales now comes directly from the refrigerator)

ECONOMIC IMPACT



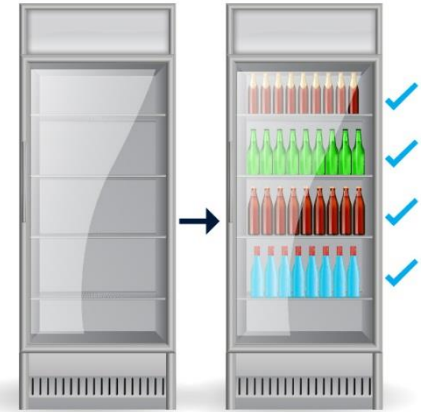
1. **Approximately, a single poorly filled refrigerator shelf at the standard refrigerator control results in 10% of loss in profit of the total refrigerator volume.**

Example: in the refrigerator, there are 64 products each costing 100 RUB on the average with the total cost of 6 400 RUB.

Losses can be:

Daily	640 RUB
Monthly	19,200 RUB
Annual	230,400 RUB

In a network of 5,000 refrigerators, the annual profit shortfall can reach 1,152,000,000 RUB.



2. **Reducing the size of the merchandiser staff due to the automated system of orders and monitoring of expired products.**

Example: the average salary of a merchandiser is 30,000 RUB.

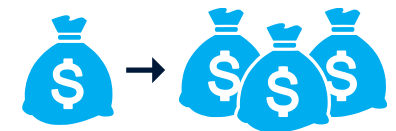
To service a network of 50 stores, at least 5 merchandisers are required. Thus, the savings on merchandiser salaries are at least 150,000 RUB per month.



3. **Call center costs reduction (information about sales now comes directly from the refrigerator):**

The average salary of a call center employee is 15,000 RUB.

To keep a full-fledged call-center, at least 10 employees are necessary. Thus, the savings on salaries of the call center staff can be at least 150,000 RUB per month.



TECHNOLOGY



The mechanism of an RFID system and RFID UHF tags

RFID readers are able to read ultra-high frequency RFID tags working in the range of 860-960 MHz (Ultra high frequency – UHF), compatible with EPC Gen2 and ISO18000-6.

The readers of UHF frequency range may have different distance range: short, medium or long.

Some readers are designed to encode tags, they are often used in their desktop versions and have a distance range of less than 20-30 centimeters.

On the contrary, others are intended for long-distance (dozens of meters) identification of RFID tags, as a rule, they are fixed, wall-mounted readers Long range readers.

There is a class of portable handheld readers and a class of readers integrated into complexes and terminals of modular devices to read and record UHF RFID tags.

Typical fields of application:

- Automation
- Industrial process control
- Product distribution control, supply management (retail, warehouse and transport logistics)
- Control and inventory of fixed assets and products



CASE STUDY



The group of companies **FACEMEN** has implemented its own "Smart Refrigerator" system in OOO "NikitiN" (its trade mark is "Afanasy" beer).

The situation in the company before the implementation of "Smart Refrigerator" system:

Management of the manufactured products has been organized, sales representatives were responsible for control in the retail outlets.

Main problems:

- The display of the products has been delayed, so other products sold in the store have been displayed in the refrigerator
- Lack of real-time sales management
- Theft of products

The solution from FACEMEN

A system of control and real-time product management of OAO "Afanasy" has been created in its warehouse, during transportation and sales.

Aims

- Creation of an automated management system of the actual product movement
- Prevention of product thefts
- Control and operating sales and sales representative management



FIELDS OF APPLICATION



- 1** Healthcare, pharmaceuticals industry, pharmacies



Tasks to be performed:

1. Tagging biomedical materials
2. Identification and tracking drugs and materials

Easy integration with different systems of accounting

Integration with different accounting systems of the customer (at the database level, or using the API library): 1C, SAP, Microsoft Navision and others.

- 2** Hotels, restaurants, catering



Tasks to be performed:

1. Identification and tracking of every bottle in the refrigerator
2. Antitheft protection of goods

- 3** **Trade:**
- Alcoholic beverage
 - Soft Drinks
 - Food



Tasks to be performed:

1. Untimely display of goods in the refrigerator
2. Display of someone else's product in the refrigerator
3. Lack of information on the dynamics of sales
4. Antitheft protection of goods

RFID

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радиочастотной
идентификации

 made
in Russia

THANK YOU FOR YOUR ATTENTION!

CONTACT US

SALE@1RFID.RU

WWW.1RFID.RU

+7 (8352) 37 70 32

+7 (495) 748 85 40



facemen