

VAiOS



VAiOS

HOTELS AND RESTAURANTS



Hotel and restaurant automation systems fall into the BMS automation sector. VAiOS is the manufacturer of the control software and the executable hardware devices that service these systems.

The future in business management



HOTELS

The hotel management system offered by VAiOS is aimed at automating business processes related to:

- ▶ accommodation and
- ▶ the service of the hotel guests,
- ▶ as well as monitoring and
- ▶ business management.



At the same time it provides:

- ▶ more efficiently;
- ▶ more comfortable;
- ▶ lower budget management of business;

You create additional:

- ▶ benefits
- ▶ attractiveness and
- ▶ amenities for hotel guests.

RESTAURANT

The VAiOS restaurant management system, known as VAiOS BPMS (Business Premises Management System) allows:

- ▶ to be served by customers
- ▶ faster and more efficiently.
- ▶ to be tracked



The owners have:

- ▶ full view and control over the business;
- ▶ option to manage one or more objects through common software;
- ▶ opportunity to monitor for effective planning.

The system can be built independently as well as work in a single system as part of VHS.



Web-based business management

The web-based platform for managing hotel and restaurant systems has a number of advantages over the standard management systems of these businesses.



VAiOS hotel and restaurant management systems are built on web-based software (platform). This allows you to access and work with the software from different devices, which requires only an Internet connection.

What does the VAiOS web-based system for hotels and restaurants offer?

- ▶ **access from any point** - login and work in the platform from any point with internet; all you need is a username and password;
- ▶ **convenience for owners, staff and customers** - monitoring and conducting employee-customer communication through the platform, which eliminates the chances of errors and omissions in service; at the same time the possibility for minute control by the managers.
- ▶ **no costs for servers and computers** - the platform works with servers that operate online; this is reduced by the price paid by the customer because separate physical servers are not required for each building.
- ▶ **lower costs for support and maintenance** - the platform is serviced and updated remotely, this reduces the cost for the user, because there are no team visits.
- ▶ **faster response** - if you need support to work with the platform or to troubleshoot, web access reduces to minutes the response time and troubleshooting.



Multi-hotels and Multi-restaurants

The web-based software and the flexible production model of VAIOS allow for upgrading and management not only of one hotel, but also of an entire chain, regardless of their location. This proves to be extremely convenient when the chain has centralized management and general monitoring and analysis of the business.



The main advantages of the multihotel:

- ▶ Management and monitoring of the whole business with full functionalities.
- ▶ Execution of complete accounting and financial reports for the entire business of the hotel chain.
- ▶ Opportunity for management of businesses from different economic sectors in a common panel.
- ▶ The only condition for the location of the business - Internet access.

In business, it is extremely important to have an overview on total income and expenses. Therefore, in VAIOS automation at the software level can unite not only several hotels in a single software, but also businesses of other types such as restaurants.



Security for business

In creating the web-based hotel and restaurant business platform, VAiOS introduced two levels of security for information and communication. These measures provide one of the highest levels of security and minimize the risk of hacker attacks.



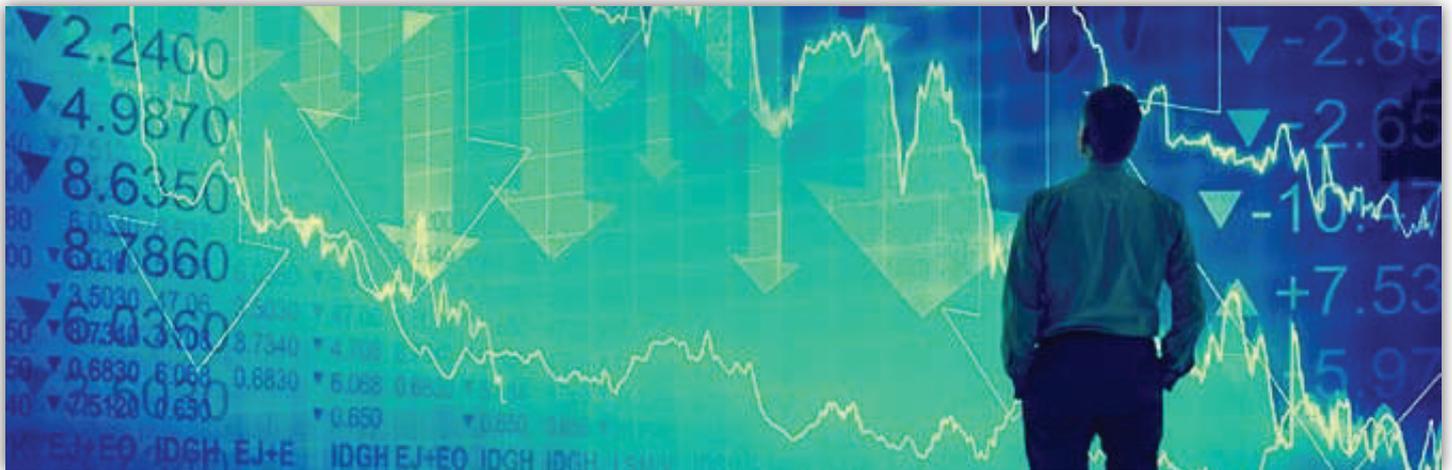
- ▶ The security of the software platform is realized through SSL communication protocol, identical to those used for banking software;
- ▶ Internal communication is encrypted via LAN modules and protects information from internal theft;
- ▶ Possibility for secondary archiving in a local server as a backup option in case of power failure or other consideration.
- ▶ Access to the platform, through a username and password, also provides a tool for the user to add imagination to the complexity of this data to further enhance security.





How do we lend a hand and help business hotels and restaurants?

In recent years, business around the world has gone through a number of turbulences. The latest test for the economy is the COVID-19 Pandemic, which paralyzes a number of sectors in the industry, including and the hotel and restaurant industries.



We at VAiOS are aware of the difficult situation this business has found itself in. We are also aware of the need for automation in order for the business to develop competitively. That is why we have found a way to lend a hand to everyone in these difficult times.

They built our system with the ability to build stage by stage. The hotel and restaurant systems of VAiOS are built on the principle of the designer, which allows everyone to start their automation from the most urgent modules according to their needs.

.... but what is it
VAiOS system on the
lego principle ...?

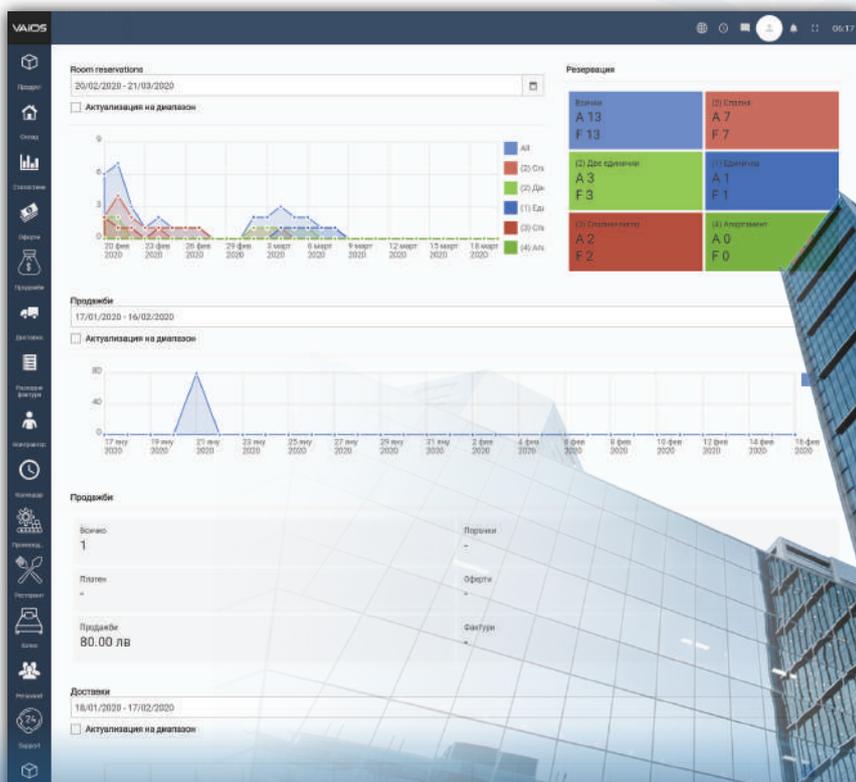
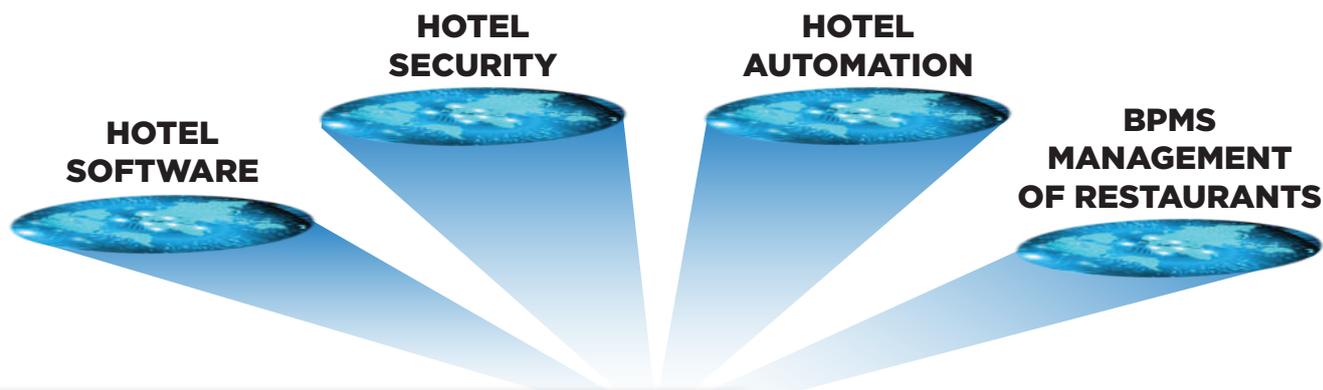




The segments in the system for hotels and restaurants

The modules in the VAiOS hotel system are divided into 4 major segments. The unification of the modules in these segments is guided by the main purpose of the modules and they pay only what they have stated as necessary for them.

At the same time, however, the software of each client can include those modules that are needed by the respective business without requiring the mandatory inclusion of other modules that will not be used at the moment. Thanks to this, the users of the VAiOS system for hotels and / or restaurants use and pay only what they have declared necessary for them.





HOTEL SOFTWARE

The Hotel Software segment is engaged in the processes of accommodation, stay and vacating of the rooms by the hotel guests. The system, the segment and the modules in it have the option to be modeled according to the management habits, which facilitates the users.

The main modules included in the segment:

- ▶ RESERVATION module
- ▶ RECEPTION module
- ▶ PAYMENT module
- ▶ INVOICING module
- ▶ STATISTICS module
- ▶ MAINTENANCE and CLEANING module



RECEPTION module

Some of the functionalities of the module are:

- ▶ Check-in and check-out;
- ▶ Room selection - when there is no reservation and selected room in advance in the automated system;
- ▶ Access to rooms and other services;
- ▶ Creating personal access as a profile for each client;
- ▶ Ability to combine guests and their profiles in groups;
- ▶ Possibility to load a deposit at check-in or reservation

(see PAYMENT Module)





Module RESERVATIONS

The functionalities of the module are:

- ▶ Communication between clients (guests, tour agencies, etc.) and the hotel;
- ▶ Distribution in the most suitable room of the guests, based on their preferences;
- ▶ Management of group and single reservations, automatically linked to the roaming list.



PAYMENT module

Payments by hotel guests can be made in two ways.

THROUGH A DEPOSED AMOUNT

Customers can deposit a certain amount of money, which is automatically converted into "points" in the system to facilitate the processes. These points are then used as a payment method during the guests' stay.

- ▶ Customers use only their ID, there is no need for cash in the hotel area and adjacent areas;
- ▶ Customers fully control their spending by monitoring their account in the system;
- ▶ The services are charged automatically from the deposit;
- ▶ The hotel, on the other hand, benefits from immediate payments without delay;

WITH PAYMENT ON DEPARTURE

Through the client ID the staff keeps track of all services used by the guests during the stay. Then, when leaving, the system automatically calculates the customer's bill to pay.

- ▶ The hotel's payment system collects everything due upon departure.





Module INVOICING



VAiOS software for hotels and restaurants can also work as an ERP system for the needs of the billing business. Transferring this process to the VAIOS platform makes it easier to combine, calculate and pay for all procedures and services provided to hotel guests.

The implementation of the invoicing process in VAIOS ERP takes place in a web-based platform. This allows monitoring and even recording from any device with internet access.

At the same time, the whole process goes through ERP:

- ▶ Bidding;
- ▶ Sales archive;
- ▶ Invoicing.

With just one button is the transition to the next stage of the sale. The system generates the necessary documentation automatically.

Module STATISTICS

This module gives you access to business process statistics tracked by ERP:

- ▶ customer flow;
- ▶ turnover from sales and goods;
- ▶ occupied rooms by type of rented, time of stay, etc.
- ▶ average values for the listed and other indicators for marketing analyzes, etc.

Because the software is web-based, the data that is collected and processed can be analyzed both for individual sites and for an entire business built by more than one hotel. The data includes everything from all over the world and the data filter is at the user's choice.





CLEANING and MAINTENANCE module

VAiOS software for hotels and restaurants has a built-in system of indicators that monitors the IDs of each of the staff and customers. In this way, staff can be informed in specific situations or upon request by a hotel guest.

- ▶ when a room is vacated
- ▶ when there is a cleaning room
- ▶ when requesting a replacement of consumables (such as a light bulb or sheets) or repairs, etc.

WHEN THE ROOM IS FREE

When a guest leaves the hotel, the system reports as soon as his obligations for the used services have been repaid. After reporting the payment, the maid in charge of the room receives a notification that the room is free.



WHEN THERE IS A ROOM FOR CLEANING

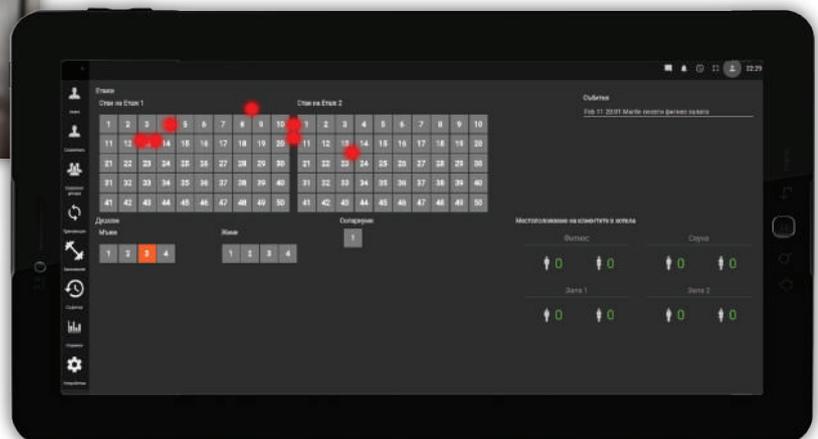
The vacated room means that the relevant maid must clean and prepare the room for the next guest.

The same cleaning notification can be received during the stay of a hotel guest, if he requests and declares this service through his account.



ON REQUEST BY A GUEST OF THE HOTEL

When a request is received from a hotel guest for a certain service - change of linen, room service or other problems or wishes; then a notification is received from the system. This automated communication process is another of the functionalities of the module.





HOTEL SECURITY

Today we live as much in and out of the network. In our Internet world, security must be the same as at a better level than in the physical world. Therefore, we ensured the security at the software level through SSL communication and encrypted code (see page 4).

As for the security of the people in the hotel - guests and staff; The VAiOS system for hotels and restaurants has a segment of "Hotel Security" modules. This segment is modeled on DMS systems in building automation. The system includes separate modules to work together and separately to ensure the safe stay of guests and staff.

The modules that are mainly involved in security are:

- ▶ Access control module, also involved in the tracking of working hours.
- ▶ Alarm alarm module
- ▶ Parking system module
- ▶ Video Surveillance Module
- ▶ Fire Alarm and Fire Extinguishing Module
- ▶ Module Announcement and Sound, etc.



The system is programmed to respond automatically through safety scenarios in:

- ▶ Fire;
- ▶ Flood;
- ▶ Earthquake;
- ▶ Entries with burglary and others

The setup of the system can be done in a way that monitors the habits of guests and staff. Based on the accumulated data from the observations in case of an emergency, the most effective scenarios for action and evacuation can be predicted:

- ▶ Leaving only the most exits open;
- ▶ Activating the lighting only on the safest and fastest way to evacuation;
- ▶ Activation of fire scenarios, etc.





HOTEL AUTOMATION

The unified software and hardware (controllers and sensors) of the hotel in a smart building. This is a Smart Home multiplied by the number of rooms in the hotel. At the same time, the common system allows their management and monitoring together and separately.

Smart Hotel in the context of all this signifies automated control of:

- ▶ The lighting.
- ▶ Air conditioning and ventilation.
- ▶ Multimedia (TV, sound, etc.).
- ▶ Electricity and water consumption.
- ▶ Management of curtains and blinds.
- ▶ Planned access to rooms, restaurant, gym, pool, etc.



What in the hotel can be automated?

The individual functionalities of the automation also provide specific benefits for hotel guests, staff or management.

- ▶ Instant payment via bracelet / card / chip;
- ▶ Two-way communication: Reception Room;
- ▶ Control and optimization of resource consumption (electricity, water, etc.);
- ▶ Cost monitoring - guests can check how much and what they are spending on at any time during the stay;
- ▶ Personalized ID account for guests, staff and managers with regulated access level;
- ▶ Monitoring the location of guests and staff on site and others.





Personal access and automated payment

The system of controllers and readers not only in the rooms, but also in the rest of the hotel, gives hoteliers a look at the habits of their guests and staff.

At the same time, the implemented credit system and the online payment system allow the used services to be paid without carrying cash. Each customer



has his personal account accessible through his smartphone from where he can repay any debt to the hotel. With this account, even the bank card does not need to be physically in it.



At each check-in in the system, for example at the entrance of the sauna in the hotel, the system reports the purchase and sale and according to the tariff set in the program, the payment is automatically calculated from the amount deposited in virtual credits.

There is also an accumulation of what is due for hotel guests to pay upon departure.

Two-way communication: Reception - Room

The VAIOS system for hotels allows the communication between the Reception (staff) and the hotel guests without the need for physical contact between them. This, in addition to convenience, is extremely important for pandemic situations and measures that we have to comply with in recent months.

Through the software, a customer can request the provided hotel services (TV, food, SPA procedures, etc.) from his smartphone or computer through his account while resting in the room and surfing other sites.





Comfort according to preferences

The VAiOS hotel system functions as a Smart Home in a larger capacity. This means that all the automations known when building a smart home or office are possible.

The automations for each room are managed from the guest's account during his stay, as well as through the account of the maid serving his room.

Tracking activities and visualizing who gave what commands to the system eliminates the risk of abuse of the system.

Everyone sets the parameters for their "luxury"

With their accommodation each client can set their preferences for:

- ▶ room temperature,
- ▶ humidity level,
- ▶ light intensity,
- ▶ degree of illumination of the room by adjusting the curtains / blinds,
- ▶ preferred radio station or TV channel, etc.



All of the above the guest programs through the system, logging in with his account. Thus, with each check-in when the guest enters the room, the system knows what the person wants and automatically adjusts these preferences.

AI in favor of the guest

The system also has the machine self-learning typical of a smart home. With it, the guest can, without adjusting his preferences in advance, "tell" the system to join only a training mode about what he likes. Thus, when the required minimum is accumulated, the system itself adjusts the settings for temperature and humidity in the room, light level, preferred TV broadcast, etc., preferred by the guest.





Location tracking

At the hardware level, the VAiOS hotel and restaurant system is a series of readers and controllers. Each check of some of the readers the system reflects it and knows the holder of the respective key (chip, card or bracelet) is at that moment. Thanks to this, the system locates the location of everyone in the hotel on a room level.

This functionality is extremely important for disaster situations. Thanks to it, the most adequate evacuation routes for the people in the building can be prepared.

Another neglected but extremely useful option is for families visiting the hotel. Parents can at any time find out from their smartphone where their children are in the hotel and thus have a better rest.



Smart Localization is a tool which can be used and as a powerful marketing tool. It adds security and convenience for hotel visitors.



Custom accounts

Like all VAIOS software, here every user - a guest of the hotel or part of the staff or management; everyone can have their own account. Depending on the role of the account, access is different.

For example, the guest account can manage the electricity consumers in the room where they are accommodated and have access to the services they have requested. On the other hand, the account of a person from the staff can monitor the actions of suppliers and customers according to the work and tasks they have, without violating the personal rights of others. Accounts can be profiled in the system, including for consumable suppliers. Thus, each supplier will receive notifications for requests for specific deliveries, which also provides better coordination of deliveries.

We built an identical system for hotel Marinela (Sofia, Bulgaria)



Optimization of energy consumption



The automation of the hotel with VAIOS turns the building into a Smart House. But not one but a series of smart homes that can be controlled at different levels and with different accessibility. While guests can use their accounts to manage the parameters of the rooms in which they are staying, on the other hand, staff and managers can monitor the consumption of consumables, both plumbing and electricity. This allows owners to optimize and reduce unnecessary consumers.

On the other hand, Smart House has the ability to work on given scenarios according to customer preferences. For example, by checking the customer when entering the room, the air conditioner automatically adjusts to the degrees preferred by the guest, the TV turns on a certain channel, and the lighting specifies only the desired power to turn on.

When the same guest leaves the room, the air conditioner goes into energy saving mode, the forgotten lamps are turned off, as well as other electrical consumers (without the minibar and refrigerator, of course), even an installed solenoid valve can automatically stop the flow of running water to prevent unforeseen trouble.



BPMS - Business Premises Management System

This segment of the VAiOS system, as its name suggests, can be integrated and used independently of the overall hotel system.

The restaurant after the room itself is perhaps the most important element associated with the good image of a hotel. However, this also has its responsibilities and costs, the management of which often turns out to be a conundrum with a difficult decision.

- ▶ Deliveries of products
- ▶ Inventory management in the warehouse,
- ▶ Fast and adequate service, preparation of well thought out and fulfilled recipes.

These are just some of the things that every restaurateur has to deal with. and this is where automation comes to help his business.



Automation in the restaurant business

Regardless of the size of the restaurant, bar, even fast food restaurants have a number of options for automating work processes:

- ▶ execution and tracking of orders for products;
- ▶ ordering from customers via tablets;
- ▶ receiving orders from customers on devices (tablets) of the waiters, as well as parallel notification of the order on a monitor in the kitchen;
- ▶ automatic removal of the products needed for ordering from the stocks;
- ▶ in case of reduction of the necessary stocks, automatic receipt of notifications for necessary new delivery;
- ▶ compiling statistics for business analysis;
- ▶ processing of online orders and others.



Modern way of service

Eating is both a social and a personal experience. Therefore, unnecessary contact with staff can be crucial. Therefore, the VAiOS restaurant management system provides services in the following ways:

- ▶ Automated customer service system from order to bill payment;
- ▶ Optimizing staff costs;
- ▶ Direct transfer of the order to the kitchen (bar), eliminating errors in orders and service time.



How does the system work?

- ▶ The staff is equipped with hardware devices: the waiters take orders to the kitchen and bar on touch-screen devices.
- ▶ Customers have touch-screen devices on the tables, through which they view the menu and place their orders.
- ▶ The order manager receives everything requested on his device, along with information about the table from which the order comes.
- ▶ The order is automatically sent to the kitchen or bar for cooking.
- ▶ Once customers have finished, they can request the bill via the smart device with a digital button "Bill, please!" of the devices arrangement of the tables. This option automatically calculates everything ordered from the table.
- ▶ Payment can be made by cash payment, as well as by using a deposited amount.





Automated warehouses and Prescription and Production module

VAiOS automation for fast food restaurants has a very convenient functionality - tracking of inventory and storage quantities. This unification of the production module together with the sales and storage modules.

The system works in several successive logically connected steps:



1 ► The preliminary work is on the preparation of the products offered here are listed for each recipe for the necessary products (sausage, cucumbers, tomatoes, sauces, etc.) involved in making the proposed finished product.

2 ► Then a request is made for the necessary products as raw materials and when delivering to the platform with one click, the quantities are entered in the warehouse of the site.



3 ► This is followed by an order and sale, for example of a fish sandwich - according to pre-set recipes, the necessary products with their quantities for making 1 fish sandwich are entered in the panel. With one click to order on the image "fish sandwich" the system automatically removes the quantities from the warehouse needed for its production.

4 ► Next is the making of the sandwich and a request to a waiter - at this stage the chefs in the kitchen have done their job and with a button on the touch monitor they call a waiter, who receives a notification on his tablet that he must deliver the prepared food.



With this automation, inventory tracking management is greatly simplified and simplified. This optimizes the time of the site manager, also eliminates the possibility of theft, because stocks from the warehouse can not go without a sale in the software.