

REVERSE LOGISTIC OPERATIONAL RISKS HANDLING USING URGENT IT APPS SOFTWARE FOR STOCK ACCURACY

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ABSTRACT

As a reaction to major structural changes of a speed that exceeds human sensing capacity, companies use software solutions to transfer the perception pressure from the human factor to the implemented software solution. Therefore, it is necessary to implement algorithms that automatically gather information and generate reports on the basis of which the decision makers can enforce changes in line with market movements. Considering all the above, the software system comes and supports the company where it has been implemented with an nowadays average processing speed of less than one second per document, with excellent results of about 10 million records in six months. The implementing company within this article analysis has an average investment budget, senior staff who understand the company's global activity but also newly hired staff with less than one year of experience, who also need to use the company's IT-operational resources in a fast way for optimal productivity in relation to sales volume.

KEYWORDS: *reverse logistics, operational strategies, ERP, stock accuracy, sourcing.*

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1. INTRODUCTION

The competitive environment is more volatile than the buying products. Distributors and resellers appear and disappear from the market as quickly as individual customers (Crawford, 2022), sometimes just one click away.

New online sales platforms are opening up with astonishing speed, sales sites and presentations of projects, products and services are being uploaded and activated online at a speed that exceed human following up capacity.

Urgent IT Apps implements a solution that also shifts this pressure (Nichifor et al., 2021) from the human factor to the software system, managing a company's leads transparently, with the possibility of YTD (Year to Date) as well as reporting and monitoring for periods defined by the user or decision maker. Lead tracking gives a company a competitive advantage (Liu et al., 2022) over other companies in the market.

The reporting needs to be on the increased level of online interaction in order for an import of products listed online to be considered and in order to decrease the pressure on the human factor to manually enter these items, therefore a predefined template will be used with preconfigured columns corresponding to specific fields. Thus, the company was helped in term of time productivity, instead of allocating resources of one person and four hours of work for manual

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importing, the program could perform this task in less than one minute, and the time allocated to these operations could be redirected to other activities.

The software system can also be interconnected with the online website and in real time can update the stocks of goods received from suppliers, the reserved goods, the ordered goods, delivered goods and the returned goods.

2. THE ON-SITE ANALYSIS OF SOFTWARE ACCURACY

In order to ensure accuracy within the strategic sourcing, the product management panel (figure 1) has been upgraded to reflect the new operational needs (Sakas et al, 2021) and features have been added to transfer data from the database mainly to mobile devices such as tablet and smartphone. As a result, the users have at their disposal the updated data in real time and can benefit from them when discussing with the clients about new contracts. At the same time the price calculation is available to them to generate a real-time profit margin for consideration in offering a final price after applying the volume discount and the return percentage from previous orders (in case the customers under analysis are prior to the implementation of the new customer type reporting).

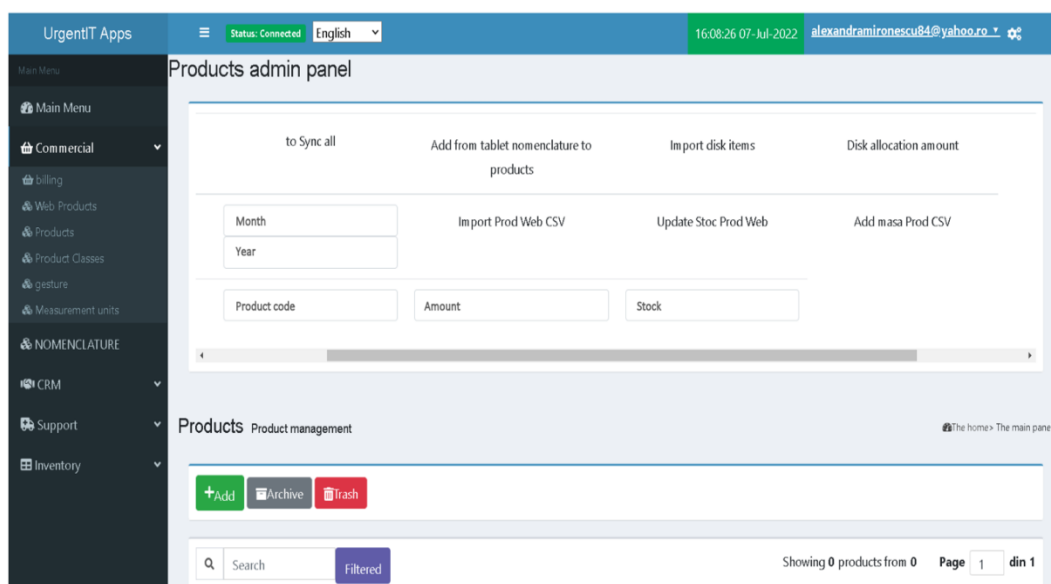


Figure 1. The product management panel
Source: Urgent It Apps Version 1.6.0 software

From Figure 1, in the Urgent It Apps Version 1.6.0 software, there is the option to add from nomenclature to products together with Import Prod WEB CSV, to support the company's activity of updating and completing the database from the internal management system with the products that are listed in the online environment, available for purchase.

Through changes in the core system, all connected applications and software are aligned to the same modifications in the core database. Thus, as can be seen in Figure 1, the changes in the Product Code, Amount and Stock fields by selecting Update Stock Product Web, will instantly update the online listings in the websites and marketplaces, and specific time periods can be selected Month and Year.

As shown in the literature review, companies that do not embrace digitization lose sales, so it is possible to query the existing database and by adding logistical details to the program it can directly propose a mode of transport. If the goods fit into the S (small), M (medium), L (large), XL (extra-large) box sizes of the easy-boxes it can be chosen for this option or it is possible to request delivery by courier with transport to the destination, with handling by one or two people, for white goods.

Depending on the location, delivery time and size, the system can propose the best transport option from a cost point of view. As transport costs are divided by volume, the application suggested helps by adding the net and gross mass of the order to the database via a template.

As can be seen in Figure 2 Urgent It Apps software supports the company's activity to increase the OTIF ratio by providing easy access to CRM components for the centralization of customer data, contact data, head office addresses and work locations. The company's database is easily updated using Urgent It Apps software on various devices such as: computer, tablet and phone. Thus, with the help of a browser it is possible to modify in real time the customer orders, the supplier's orders, the leads and the deals.

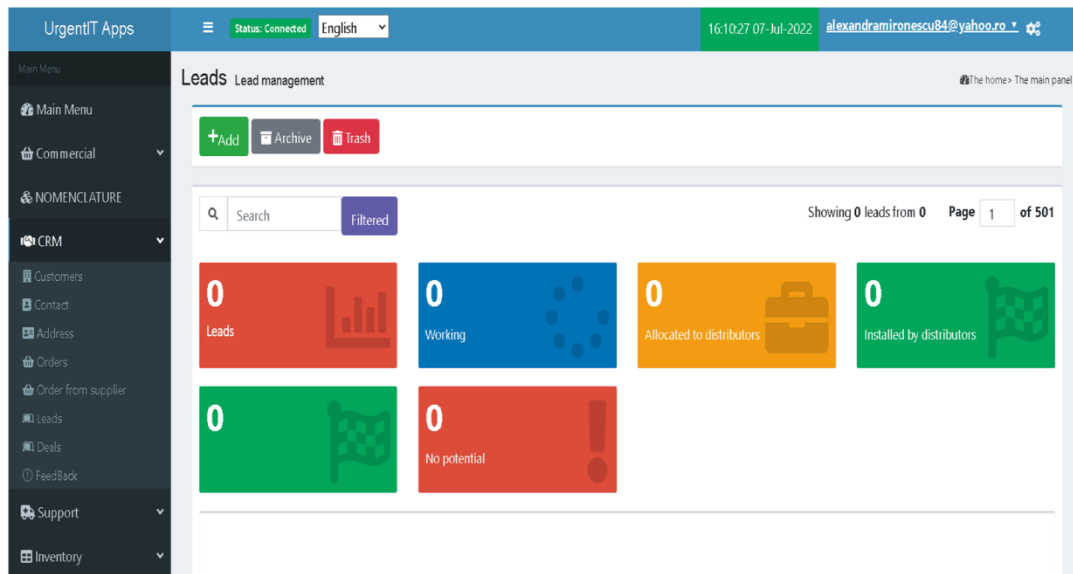


Figure 2. The dashboard of the lead management

Source: Urgent It Apps Version 1.6.0 software

The company targets its resources towards leads that have a higher potential for execution, always looking for new leads that can be finalized with a contract, with orders, always with a view to minimum and maximum stock levels. Offering the possibility of API (Application Programming Interface) integration with customers, the company aims at stock performance by implementing JIT (Just In Time) practices.

The Urgent It Apps software also provides the feedback module, as can be seen in Figure 2, where it can also store the information received from customers, such as: what works great and the commercial-operational-logistical reasons why do they choose the current company for recurring business, the reasons why customers choose the company for occasional business or what are the reasons why they refuse to work together. By collecting and reporting (Xia et al, 2021) this valuable information to the company's decision-makers, the board of directors can make an informed decision to update the product portfolio or the commercial strategies, as well as to outsource certain logistics services to third party logistics, forth party logistics or fifth party logistics operators, if the financial-accounting analyses show the beneficial direction to take.

The group of leads with no potential (Figure 2) must have a clear justification from both the commercial marketing and the operational logistical point of view, in order to stop spending on customers who have been justifiably placed in this category. These expenses cover several aspects such as the cost of a sales team member traveling by company car to such a customer, the time spent on the telephone call and the actual visit. The Urgent It Apps software provides this lead monitoring as well as the conversion rate of a lead into a sales order with considerable frequency on a weekly, monthly and yearly basis.

The screenshot displays the 'Lead #' form in the UrgentIT Apps software. The interface features a dark sidebar menu on the left with options like 'Main Menu', 'Commercial', 'NOMENCLATURE', 'CRM', 'Customers', 'Contact', 'Address', 'Orders', 'Order from supplier', 'Leads', 'Deals', 'FeedBack', 'Support', and 'Inventory'. The main content area is titled 'Lead #' and includes a breadcrumb trail 'The home > Leads > publishing'. At the top of the form, there are 'Approval' and 'cancellation' buttons. Below these is a dropdown menu labeled 'Choose reason for cancellation'. The form is organized into three columns of input fields:

- Left Column:** Lead Name (text input), Source (dropdown), City (text input), Contact person (text input), Email (text input).
- Middle Column:** Assign The (text input), Visit planning date (calendar icon and text input showing 20.08.2021), Street (text input), Function (text input), Chance of collaboration (text input showing 'The chance to collaborate').
- Right Column:** Status Lead (dropdown), County (dropdown), Number (text input with 'Nr.' label), Phone (text input), and Remarks (text input).

Figure 3. How to define and manage a lead
 Source: Urgent It Apps Version 1.6.0 software

From the moment of monitoring the movements of increasing or decreasing the OTIF ratio, the company has targeted the operational-logistic flows for identifying bottle-neck points and to relieve them through various operations, such as a system upgrade or allocation of personnel and equipment resources. For this reason, the rate at which a lead is transformed into a contract with orders occurring with considerable frequency on a weekly, monthly and yearly intervals, depends on the feedback received (Klumpp & Loske, 2021) from the customer and the justification for placing leads in a certain category according to the up and down movements. In Figure 3 there is an option to record and centralize the lead status data, so the user can choose from a predefined list the following fields: the option, the status lead, the country and the source while the other fields need to be filled in manually. Also, the comments that are collected in the Remarks field are analyzed and it is decided if it is necessary to add a new category to be taken into account in the drop-down lists which are monitored financially-accounting from the point of view of the profitability of the business carried out.

The monitoring capability was evaluated to assess the company's ability to adapt logistics capacity, human capital in the logistics-operational segment and the capacity of the software systems to support the need to deliver products to the customer with a satisfactory OTIF (On Time-In Full) indicator, and the Urgent It Apps software provided the user company with the Ticketing module (Figure 4). Within this module, the types of activities reported can be viewed by customer category and distribution. Tickets are predefined and can be chosen from a drop-down list, and can be monitored by checking the status and operational time elapsed from the time of entry to completion and response. Of course, depending on the commercial conditions, there is the possibility of being classified in priority classes.

In addition to lead-time monitoring, in this section it is possible to select the types of solutions offered in the ticket (Figure 4). The use of the ticketing module thus provides, together with the feedback module (Figure 2), both an operational picture of leads and the reasons which transform them into deals or activities without potential.

Figure 4. The use of the ticketing module
 Source: Urgent It Apps Version 1.6.0 software

Ongoing reporting supported by Urgent It Apps software, helps the company make quick decisions when OTIF drops and the number of responses for correction increases, so the company's responsiveness adjusts and readjusts in real time according to market fluctuations. In the analysis it was introduced the monitoring part of the ticketing activity and the time recorded between the moment of the ticket introduction and its completion, with the followed-up details and summary (figure 4), which revealed that there are lower costs in the company than those generated by IT (Information Technology) employees through salary, specialized training and their equipment. These avoided problems related to staff turnover and there was total transparency regarding projects and investments in the necessary equipment.

Figure 5. Tracking of existing products in the warehouse
 Source: Urgent It Apps Version 1.6.0 software

The Urgent IT Applications software enables IB Cargo SRL to have full and unlimited access to five vital service packages: the automation of business processes, the information access, the storage and the retrieval, the customer relationship management and the productivity and performance tools.

The Urgent It Apps software allows visualization (Figure 5) of the monitoring of existing products in the warehouse as well as competing products in the marketplace. By filling in the Product Class, Product Code and Item Name fields and by monitoring products in similar sites in the online environment with the retention of web addresses where these products are available for purchase, the company increases its chances of reacting to the market, a vital precursor to recovering the existing activity, improving performance indicators and, ultimately, moving from one class of classification to another. Practically, by reacting as quickly as possible to changes in the specialized market, the company is capable of adapting. Where market changes are structural, and old commercial and logistical-operational strategies are no longer effective, Urgent It Apps software allows visualizing a company's place in the market.

Assigning a team to monitor and centralize such commercial changes across the online medium would entail an enormous cost and it cannot be said with certainty that the results are up-to-date. The Urgent It Apps software has automated this activity whereby the company can report on its market position in real time by goods and product classes (Figure 5).

Furthermore, Urgent It Apps software is also scalable and has the ability to grow with the company and manage both simple and complex business flows with the same performance, depending on how the company evolves.

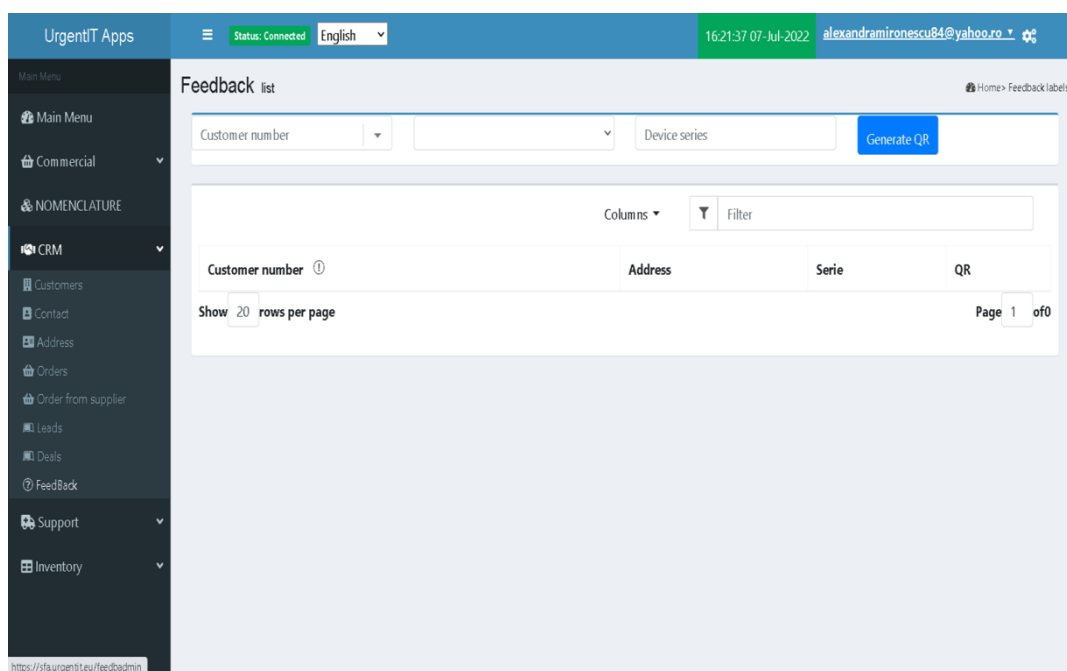


Figure 6. The module for monitoring customer feedback

Source: Urgent It Apps Version 1.6.0 software

Moreover, in addition to the real-time adaptability to changes in flows, it can rely on an increased performance due to load balancing, sharing to several NOD (Network One Distribution) users, the chosen software thus helping to increase the performance of the deploying company.

Load balancing comes as an IT addition to the adaptation of logistics capacity, human capital in the logistics-operational segment and Urgent It Apps software capacity to support the need to deliver products to the customer with a satisfactory OTIF (On Time-In Full) indicator, for the company

under test that wants to be profitable in a highly competitive market, users not being limited in their daily activity by software system bottlenecks due to its increased usage or increasing number of active users in the same time slot.

An important component of the program is the customer feedback and its centralization into customer classes structured around upward and downward movements (Figure 6). Monitoring supported by Urgent It Apps software, helps the company to take prompt decisions to adapt for changes in the market, in real time, to predict major negative impact fluctuations and smooth out commercial bumps. If a product is in short supply in the market, the company, if it has stock, can push the market to empty stock or propose to customers a similar product that it has in stock, in its portfolio or available in the supplier's warehouse.

In this way, the reporting part had a major impact on the scaling of the activity, as decision makers (Schiller, 2022) had access to real-time data and comparative data on last mile issues, stock issues, allocated resources, lead evolution, competition price evolution, online presence evolution, evolutionary analysis of number of visits versus order value, number of hits versus order value, order frequency, year-to-date sales value, today's sales value, as well as closed orders from the perspective of the delivery period elapsed from the order day to the actual delivery day.

Moreover, the software solution we propose to the company IB Cargo SRL can dynamically adapt to the data traffic and the number of users, therefore providing a high-performance scalability at the database level, at the moment when companies reach a large number of customers, products (Hermes & Riedl, 2021), reports, it is not necessary to change the application, with the effort of a new investment, since Urgent IT Apps automatically scales to prevent this shortcoming.

3. CONCLUSIONS

The main conclusion of this research paper is that there is a direct correlation between the use of elements (the equipment, the software products, the algorithms and others) in the IT domain and the development of the activity of a company from the logistics sector.

The Urgent It Apps software is a program which has in its architecture all the necessary elements, without them a system cannot exist in relation of its use in the commercial, logistic-operational field, where a real time workflow automation is needed. If we analyze the software product proposed for business recovery, we can identify some limitations (Urquhart et al, 2022) here too, such as: the software follows faithfully the business architecture of the company that adopted it; to change something in the structure of the software, all the existing processes in the supply-chain must be reanalyzed and the impact of the changes on the performance indicators must be reviewed; the implementation in another company must be done prior to a very rigorous analysis of the operations and movements of documents, equipment and human operators.

As the company using the Urgent It Apps software product grows, there is a need to develop the software as well, thus: the requirement for developing a module to save transport quotations: sea, rail, road, air and courier, for cargo receipt operations on all cargo, per linear meter required on the floor for LTL (less-truck-load) or LCL (less-container load) transports, per loading location and number of kilometers between the loading location and the unloading location; the need for functionality to enter the transport costs per piece delivered from the sales order, in order to analyze the cost of delivery of a piece of product from the sales order at any time; new features have been introduced to the program, such as: the predefined drop down list fields in the item form for segmentation of SKUs into different product types: over 50 cm, under 50 cm, under 40kg and over 40kg. It is also necessary to have the facility to divide into categories of normal use, general use and oversized products, and to define the type of storage required for the product according to its characteristics: storage in stacks (bulk on the floor), storage on racks, storage on shelves, storage on platforms, storage in dry areas, refrigeration, freezing, isolation, so that at the time of reception the

correct space is automatically allocated from the software system to the SKU's and the need for the development of the reverse logistics module aimed to closely monitor the level of returns in relation to the level of sales and deliveries of goods, the causes of returns and the stage at which the goods have been returned, going as far as the segmentation by saleable-saleable type after reconditioning and repackaging.

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