POSSIBILITIES IN ORGANISING AN INTEGRATED INFORMATIONAL SUBSYSTEM REGARDING STOCKS

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ABSTRACT: An informational subsystem concerning stocks will allow the management to observe the current situation of the company, to notice its opportunities, as well as its potential risks for the politics of the organization, both its advantages and disadvantages, as well as to take the most appropriate decisions and later on to control the derived effects. The existing information in the subsystem on whose basis the managers act can be corrected as a result of the amendment in the supply from providers or delivery to customers. Breaching the transacted contracts or the alteration of the contract terms along entail the reconsideration of the decisions concerning production of goods and services.

KEY WORDS: in organising an integrated informational subsystem, stocks, management

The goal of an integrated informational subsystem regarding stocks will finally satisfy the demands for information that appear in the company which causes the absorption of functions and activities at superior levels of management and, at the same time, it provides the correlation of various operations as elements of stocking. Such a subsystem implies the working and the transmission of a great volume of economic information resulted from various fields of activity and which are meant to satisfy the need for information. This specific methodology implies collecting and recording data regarding stocks from primary documents, analyzing them in all the useful ways, generating reports and situations every time they are necessary without any intermediary transcription. Thus, its efficiency is considerable comparing to the other systems that analyze the economic information.

An integrated subsystem of stocks can not be achieved without an automatic analysis of information; on the contrary, all the aspects ought to be considered carefully, i.e. other technical instruments, either hand-operated or mechanical, that are used together with electronics in the process of provision and administration of

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material resources. Consequently, such a subsystem can be achieved only after a detailed analysis of all its components and after all the difficulties caused by these components had been solved. “The system should include people, machines, goals, stages and methods of the company as a whole.”

The content of the integrated informational subsystem of stocks contains a combination of economic information about the purchase, production and outlet costs, the automatically processing of information, the movement and the destination of information as outlet. The later depend on the informational need of decision-making support for different functional compartments. The informational demands are reflected in the combination of economic-financial indicators grouped in removal/outlet situations and reports based on utility criteria according to the legislation and the methodology establishing the stages of activity. The shape, content and circuit of documents ought to be in accordance to the law since they are meant for a third party and the management.

Whenever the informational subsystem outlet or the document grouping is conceived, they should take into account the activities that complete the goals, such as manufacture programming, launching and survey (calendars that order activities, work charts, programs that give allotments and level resources, production reports, etc), purchase and outlet (charts for purchases and deliveries, data sheets that keep the information of contracts, material consumption reports, etc).

The information outflow specific to the accounting subsystem ought to be analyzed according to applications in order to have them as modules. Later, the existing data in this system can be used for a great variety of removal documents relating to economic-financial analysis applications. The correlation of stock situation with the volume and the structure of production, the analyze of the contract obligations, the fixed assets and the profit and loss account lead to a global analyze of profit.

The influence of factors on levels can be included in video scripts in order to promptly inform the managers on the causes that generate the company’s diminishing performances.

An ordered and systematized informational base is important in order to encode the entry elements that establish a parallel between the initial documentation, data analysis and removal situations.

When it comes to encoding, some rules ought to be respected: the use of the same norms established for the entry vocabulary or the structuring of elements; the use of an accessible and easily interpreted encoded language by its users; the certainty of a unique code so that only one element corresponds to one symbol only.

Another important issue is the establishment of the algorithms to obtain the output/removal documents (information) of the system. This means deciding on the content of data base by fixing tasks according to entities and accounting algorithms which take into consideration the result of the “top-down” and “bottom-up” informational analysis.

For every entity in accordance to its processing, there should be three main distinguishing categories of tasks:
removal tasks as a result of taking and reproducing data from the entry documents. In this category we can include permanent data, such as, in stocks: codes, names, unit of measurement, number of documents, account symbol and name, sums and debtor/creditor balance, etc;
- taken and processed removal tasks as result of applying algorithms, such as: "existing = stock + entry-removal" or "value = quantity * price";
- removal tasks as a result of processing are a less numerous category, but on the other hand more demanding, including economic-financial analysis tasks. For instance: the size of the factors' contribution in the final results, global and analytic trends found in the evolution of the stocking process, unit up-scaling and interpolation.

The data base must include relevant data while their managing should be enough for any informational need of the management at any level. The design of an informational system in modules with the same entry data in order to get all the removal documents specific to the requesting compartments, can pull out informational patterns used both in accountancy and in economic-financial analysis.

The principles applied in this informational system refer to: removal of any redundant information; removal of any department borders that cause latency, and encouraging communication inside task focused teams; available updated information; expanding on-line informational exchange with exterior; removal of any informational errors; a simple view on information; a shorter logistic flow and automatic information.

Connecting functional departments and compartments of the company to a system of information concerning stocks allows its users to have smaller costs and higher information quality and flexibility. However, all these would be possible on the condition that there is communication and collaboration among departments, a parallel involvement in the process, and, finally, the available information is shared. Thus, its advantages are: the removal of any formal borders between activities, of any sequential process of data in the system, and the focus on the desired goal or process.

We consider that the achievement of informational applications whose processing can generate data base used in the systems of information for the management and support for decisions is the solution for the desired goals.

When we create a new application containing all the folders, we must take in consideration:
- the list of stocks with the main data of identification of every element in stock;
  This folder contains permanent data about every article (reference, name, storing place, providers, purchase price, retail price, discount, etc). The final content of the folder depends on the type of items so that in the case of raw material we can find information about the way they are stored and used, while in the case of deliverables and goods we can find information about the commercial management. A larger alternative for this folder may include information about the stock available, in store, orders towards providers, reserved by customers, prices, account stock, trade for the specific month.
- the trade affairs completed that include stock input and output as a result of data processing from the specific documents, stock and purchasing price update, output
value. The existence of this folder accounts for the quantities and the value of items in account stocks. The data in this folder can be processed related to: stock value, monthly movement, need of purchasing, different stock situations. A computerised management of the goods value in stock implies the existence of a permanent inventory, that is, a permanent survey of the amount in stock considering the entry and the removal. Entry from stock will be calculated at the purchase or production cost considering their origin. The goods with spotted origin are calculated at the real entry cost while the inter-changeable goods, on the other hand, will be calculated at an estimated entry cost (CMP); when they are removed on of the FIFO or LIFO methods will be applied to them.

The recorded and processed data are the basis for the following reports, situations and documents:
- the stock situation makes obvious the value and the amount of every item in stock at a certain moment;
- the list of providers identifies the provider/providers for every item with all the information in the entry documents;
- the list of orders from customers that helps to identify the demand over a certain period;
- the reception information of material values that emphasize the goods entry over a period of time as purchase or production;
- the report including the price variation which is used in order to control the changes appeared in value quantification of stocks It focus on the stock items that were modified and the date when it occurred.
- an analytic balance that emphasizes material values with no movement in every analytic account. It is an exceptional report that reflects the date of the last entry or removal of some items hose stock has not been modified over a longer period of time, as well as its existing amount.

In the supply activity, the structure of received data collected from contracts with suppliers and from received documents of raw materials and materials is completed in a disbursement report for analysts, as follows:

**Table 1. Disbursement report**

<table>
<thead>
<tr>
<th>No</th>
<th>Materials name</th>
<th>U/M</th>
<th>Supply in previous period</th>
<th>Of witch</th>
<th>Necessary in the plan period</th>
<th>Possible to insure</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Total</td>
<td>Supplier 1</td>
<td>Supplier 2</td>
<td>Supplier 3</td>
</tr>
<tr>
<td>1</td>
<td>Green protection helmet</td>
<td>pcs</td>
<td>2800</td>
<td>1300</td>
<td>900</td>
<td>600</td>
</tr>
<tr>
<td>2</td>
<td>Electro-insulating boots</td>
<td>pcs</td>
<td>1600</td>
<td>600</td>
<td>0</td>
<td>1000</td>
</tr>
<tr>
<td>3</td>
<td>Electro-insulating gloves</td>
<td>pcs</td>
<td>3400</td>
<td>0</td>
<td>2200</td>
<td>1200</td>
</tr>
<tr>
<td>4</td>
<td>Protection goggles</td>
<td>pcs</td>
<td>1800</td>
<td>1400</td>
<td>400</td>
<td>0</td>
</tr>
</tbody>
</table>
Another aspect of interest within the supply market survey is the offer of material resources and suppliers terms, like: possible quantity to deliver in a period of time; insured quality of commodities; transport and payment terms; possible discounts. The data base that includes all possible suppliers can be structured as a list of suppliers for every material, so that the option for their choice can be made based on the correlation of direct and derived information. For example, the influence of the quality upon the specific consumption, transport, supply, costs, deliveries frequency.

Table 2. List of suppliers

<table>
<thead>
<tr>
<th>No</th>
<th>Specification</th>
<th>Average price</th>
<th>Supplier’s price</th>
<th>Quantity possible to deliver in batch (pcs)</th>
<th>Period between deliveries</th>
<th>Quality compared to the needs</th>
<th>Payment methods</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Electro-insulating boots</td>
<td>16.600</td>
<td>16.550</td>
<td>100/550</td>
<td>18</td>
<td>Compliant</td>
<td>CEC</td>
</tr>
<tr>
<td>2</td>
<td>Supplier 1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Supplier 2</td>
<td>17.000</td>
<td>17.000</td>
<td>350/800</td>
<td>15</td>
<td>Superior</td>
<td>Transfer</td>
</tr>
<tr>
<td>4</td>
<td>Supplier 3</td>
<td>16.800</td>
<td>16.800</td>
<td>200/1000</td>
<td>21</td>
<td>Compliant</td>
<td>CEC/D.P.</td>
</tr>
<tr>
<td>5</td>
<td>Supplier 4</td>
<td>16.725</td>
<td>16.725</td>
<td>400/900</td>
<td>10</td>
<td>Inferior</td>
<td>Transfer</td>
</tr>
</tbody>
</table>

Managers are interested in the optimization process, the establishment of an adequate batch to order which involves the achievement of minimum total costs being the solution of this activity capitalization, and costs reduction in production. Computerized processing of current data resulted from the real status of supplies, compared to possible variants they refer to, facilitates operative decisions.

Another situation that has to be submitted to the attention of the supply department is that of optimization of ordered batch and total costs, under the circumstances of practicing different prices depending on suppliers, depending on ordered quantities. Storage and consumption of goods in the production process is an operation equally concerning both the head of the supply department and the managers of the fabrication activity. Providing the continuity of lignite extraction activity is a vital condition, so that its monitoring and signalling of any faults that may perturb the activity in real time, through a computer application, is absolutely necessary.

The retail sale also supposes the relation of information with the production activity, being important to know the availabilities for the finished products that are already contracted and orders for a period of time. Data processing in the orders file, their correlation with the data related to the daily achievements of production and automated update of stocks file allows achieving sales reports by the heads of retail sale department, for them to be able to make the corrective decisions in useful time.

A model of this report could have the following structure (table 3).

This presentation of supplies, stocks and deliveries of material commodities with updated information allows the management to know the entire activity of this department and make decisions in useful time.
Table 3: Report

<table>
<thead>
<tr>
<th>No</th>
<th>Product name</th>
<th>UM</th>
<th>Existing stock</th>
<th>Recorded orders Cr.</th>
<th>Invoice d orders Cf</th>
<th>Orders to be invoiced Cd=Cr-Cf</th>
<th>Achieved production P</th>
<th>Reserve stock R=S+P-Cr</th>
<th>Alert (R&lt;100)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Lignit</td>
<td>Tones</td>
<td>1273</td>
<td>1579</td>
<td>765</td>
<td>814</td>
<td>325</td>
<td>19</td>
<td>da</td>
</tr>
</tbody>
</table>

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