

A SOFTWARE SYSTEM FOR EFFECTIVE GROWTH OF CO-OPERATIVE SUGAR INDUSTRY

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Abstract:

Information Technology implementation process is the study of design, development and implementation of computer-based Information Systems, particularly in software applications, computer hardware & networking. The Information Technology is relatively large field and covers many aspects. Traditional ways of operations can be transformed into interactive and collaborative ways to help management to take appropriate and precise decisions to increase efficiency and awareness of an organization. Present article helps to study 'software system for effective growth of co-operative sugar industry'. Specifically, this study will address the management and organizational issues that have a direct relationship to IT and related processes implementation needs.

INTRODUCTION:

Sugar industry is one of the most important agro-based industries in India. This industry has a long tradition in this country; it started growing in an organized way during the 1930s after introduction of the sugar industry protection act in 1932. In India, Uttar Pradesh share major role in sugar industry.

The first co-operative sugar factory was established in Maharashtra by late Padmashree Vithalrao Vikhe Patil inspired and supported by late Vikunth Mehta and Prof. Dhananjayrao Gadgil. The co-operatives have changed the lives of millions of people from villages. Democratic system is adopted to run their business functions. Boards of Directors are elected every five years from their General Body members to keep control over the functioning. They elect Board of Directors and run the organization. But now a day, the co-operative industries are using software system for solving the many problems related to management.

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The co-operative sugar factories are back bone of ruler economy. They are not generate only business, in today's there are 225 sugar mills installed in the state with sugarcane crushing capacity of 0.59 million tonnes per day, out of these 157 mills are in cooperative sector and 68 mills in private sector.

Therefore the progress of rural Maharashtra depends upon progress of sugar co-operatives. In the era of globalization and liberalization, all industries in private sector have improved their management system through Information Technology and they have improved their performance as well. Information technology is used in cooperative sugar sector for improving management, social and economical growth. The solution this growth is latest developments in the field of IT is 'ERP system', which is gaining success in any facets of corporate world.

2) INTRODUCTION TO ERP:

Enterprise Resource Planning, commonly known as ERP, this system builds on one database, one application, and a unified interface across the entire enterprise. Is also known as packaged business software system that facilities a corporation to manage the efficient and effective use of resource by total integrated solution for the organization's information processing requests, through process-oriented view consistent across the company.

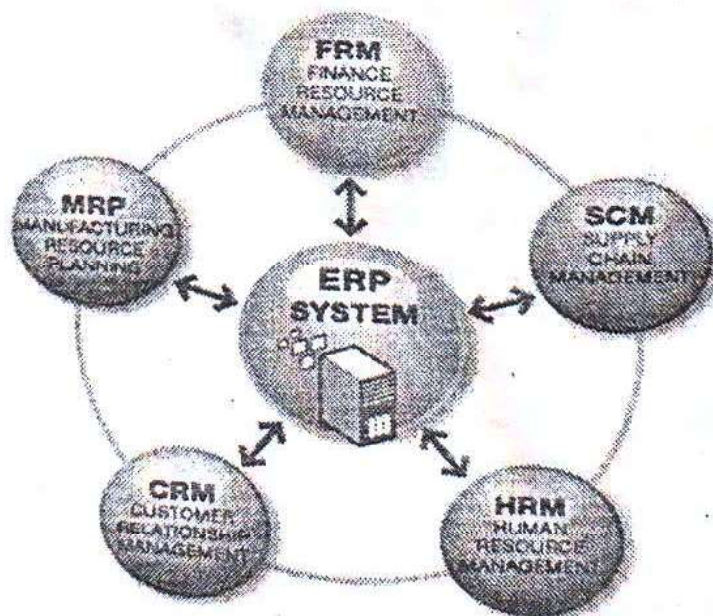


Fig 1.

Fig 1 shown as how information is integrated within an organization using the ERP system.

2.1) ADVANTAGES OF ERP SYSTEM:

ERP system gives number of advantages for direct benefits improved

efficiency, information integration for effective decision making, faster response to customer queries, etc. And Indirect benefits are better corporate image, improved customer goodwill, customer satisfaction.

Some direct and indirect benefits are given below:

- ♦ Business Integration.
- ♦ Flexibility.
- ♦ Better Analysis and Planning Capabilities.
- ♦ Use of Latest Technology.
- ♦ Reduction of lead-time.
- ♦ On-time shipment.
- ♦ Reduction in cycle time.
- ♦ Better customer satisfaction.
- ♦ Improved supplier performance.
- ♦ Improved Quality.

3) SUGAR INDUSTRY ERP SOFTWARE

Case study –

The Sugar industry & allied industries are adopting automization & computerization for gaining competitive advantage in standard of work & better decision making. India is one of the biggest sugars producing country where majority of sugar industries lies in co-operative sector. In fact this co-operative sugar industries & subsidiary business units & helping to raise the living standard of rural India. Co-operative was itself initiated under this vision.

Sugar industries are the first business sector of Co-operative to adopt computerization. Sugar industry works in very complex environment & various bodies regulating & controlling its working right from government, cooperative ministry, international market, labour unions, farmers etc. To handle such complexity with giving quality there is only one way & that is computerization of sugar factories.

Preferring ERP will be a good solution because rather than using many solutions for each & every different works, a single perfect solution will work best. A centralized database, rich features, perfect data integrity will work superb. It will also support good decision making because of variety of reporting tools & categories. Rarely factories are demanding custom made ERP solution as per their requirements, but prefer readymade quality ERP software products to standardize

their factory work also. So sugar ERPs are making their impact on development of sugar industries & helping rural economy to boost.

Sugar ERPs are made in various modules. Industry can demand & accept number of modules as per their requirements. Best way, choose the whole package at once. More the modules, more standardised working the client can get. Again Sugar industries have also some subsidiary units for by-products. These are alcohol, co-generation, bagas, etc. So this will be beneficiary for industry to use whole package to make full use of it. Sugar industry activities are not only data oriented but various tasks are machine oriented. So there is need to collect such data from microcontroller based systems into ERP data directly. Such provisions are also provided in many ERP solutions.

It is the sugar ERP software "VSI sugar ERP", developed by Vasantdada Sugar Institute, Pune. Many of the sugar industries uses this software as it provides the standard working mechanism.

3.1) ADVANTAGES OF USING ERP

- ◆ Improvement in Efficiency
- ◆ Reduction in manual transaction
- ◆ Information integration between various units & departments
- ◆ Flexibility in functioning
- ◆ Better analysis & planning capability.
- ◆ Accurate monitoring on inventories, purchases, bills, etc
- ◆ Higher data security
- ◆ Avoid data & work redundancy
- ◆ Maintain smooth flow of working

Variety of reports in manual, graphs, charts format for better decision making

3.1.2) SUGAR INDUSTRY ERP MODULES –

- | | |
|--|----------------------------------|
| ◆ Sugarcane management | ◆ Sugarcane Development |
| ◆ Sugar manufacturing & chemical laboratory analysis | ◆ Weigh Bridge |
| ◆ Sugarcane farmers billing | ◆ Harvesting & Transport Billing |
| ◆ Sugar Sale | ◆ Godown Management |
| ◆ Store Inventory | ◆ Purchase & store costing |
| ◆ Financial accounting | ◆ Time office |
| ◆ Shares | ◆ Sugarcane Deposit |
| ◆ Distillery | ◆ Fixed Deposits |
| ◆ Petrol pump | ◆ Sugar SMS |

◆ Weigh bridge for other products

- ◆ Molasses sale
- ◆ Press mud sale

We will see the modules & its functionality in brief as follows –

- Store Inventory, Purchase, & Store Accounting

System designed as per client's requirement which include Material purchase register, indent wise & division wise, job allocation summary, annual purchase register. For costing it uses weighted average method.

- Financial accounting

It includes financial entries like sugar sale DD, Supplier bill, employee advance, etc. This module uses Uniform codification & a separate approval system has been introduced with flexibility option

- Sugar Sale & godown management

Here purchaser account & godown wise stock is maintained. Excise duties are automatically added to the invoice. Various categories of reporting is possible.

- Time Office

Provision of different types of supplementary payments such as retention, back salary, provision of ECR creation, auto voucher facility has been made. This is related with all HR related activities specially designed for sugar industry.

- Distillery

It covers daily production, molasses purchase and billing. It includes distillery products such as RS, ENA, SDS, ODS, ethanol along with removal notice, gate pass, sample slip, TP was added. Supported by various types of reports.

- Sugarcane Management

It is related with sugar plantation. It supports maturity wise, recovery based cane harvesting program to increase recovery of sugarcane. Contains MIS reports section wise, village wise, member & non members wise, etc.

- Weigh Bridge

It records cane weight automatically. Also include information about harvester, transporter, farmer & field.

- Sugarcane farmer billing

It is connected with weigh bridge module to generate farmer's bills i.e. member, non member, gate cane, section wise, village wise, etc

- Harvesting & transport billing

It generates harvesters & transporters billing. Dedicated Ledgers are provided to store transactions. Generate periodic bills also.

➤ Sugar SMS

Notifications can be given using auto SMS, for information such as bill generation, payment & other notifications also.

➤ Sugar share

It is for member's share calculations & payment. Provided by member code, certificate number, number of shares, share amount, date of membership, gender, age, etc. Election list, & various summary reports.

➤ Cane Deposit

It is about refundable & non-refundable deposits. Can be deducted by farmer billing, refundable can automatically transferred to farmers bank account. Are generated for quarterly or yearly.

4) CONCLUSIONS:-

This system is used by 14.86% of sugar mills in Maharashtra. These clients may use full version or may be selective modules as per their requirement. Due to this uniformity, it is beneficiary for mills to achieve management economical & social growth. So we can say that, ERP software contributing for the growth of sugar mills. Directly can say growth of total co-operative sector.

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