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CHAPTER - V
DEVELOPING LARGE SCALE MANAGEMENT
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Introduction:-

We are living under the array of the Information Age, has been upon us for some time now, and the symptoms of an information explosion are everywhere with the reality of the Global Village. The information age and its technology representatives, the laptop, CDs, and optical drives abound, and they are now increasingly within the purchasing power of vast numbers of people.¹

On the other hand, the inflow of information, and the proliferation of its tools have only led to a marginal improvement in the quality of decision making in the many spheres of industry and economy including cooperative banking. The irony is all more perplexing, since better decision making is supposed to be the reason for technology advancement in this area. However, the results of most fresh endeavors appear restricted to doing the same jobs only, albeit a little faster (makes your graphics fly!). The promised heaven of true Decision Support Systems appears far, and the IT engine seems stuck at database management in terms of storage and retrieval hardware and software.

At the same time, there are notable success stories, too: universal banking access through Automatic Teller Machines, Inter Continental Missile deployment, tracking and targeting, industrial process control by Data Acquisition and Control Systems, and the Passenger Reservation System (PRS) of Indian Railways (IR), amongst others.²
It appears that while there is a comparative proficiency in providing solutions to Small / Medium systems, the expectations from application of IT to Large systems should remain low. It is also essential that the large system sphere of influence remains under special focus of IT industry, and the issues involved in their development be identified and addressed.\(^2\) This chapter focuses its deliberation towards the same.

**How do we define Small / Medium and Large systems?**

If an ambitious developer was to extend the ambit of his system to the entire Cosmos, and then endeavor to build a system to forecast and regulate its behaviour, it would be a fairly simple task to conceive of infinity of homogeneous stars, and predict their orbits and life patterns. Such a system, though large in its geographic spread and in its application to a number of entities, is essentially small as a systems paradigm.\(^3\)

Now let us, introduced the concept of difference in behaviour of these homogeneous stars. Our developer has now a problem, because the possibility of scenarios multiples exponentially. If we further introduce the existence of heterogeneous non-star entities – asteroids and comets – with non-homogeneous behaviour within themselves, our developer is now starting to move into a large system domain.

As a definition, a Small system embraces a universe which is essentially homogeneous in form and behaviour. A Large system, on the other hand, addresses itself to both homogeneous and heterogeneous entities with different behaviour patterns.\(^3\)
On our scale, whereas DCCB customer Related Service would at best be classified as a Medium size system, an information system attempting to tackle the Operations and Customers (Borrowers, depositors, members etc) crossing point of cooperative banks in the country would be a large system.

It is these large systems that present a challenge to both IT developers and DCCB managers, and the end-user executive. The challenge is two-fold:

(a) Formulate a system for cooperative Banking that brings about increased efficiency, and justifies expenditure, and.

(b) Value addition proposition through system of Computer based MIS for managers and staff?

Truly, the MIS is now limited only to one bank and that too incomplete. It is this value proposition which is the key to knowing how computing can be productively applied, as well as identifying its limits.

The major issues that are involved in developing large systems are essentially linked to these value propositions. They aim at increasing MSCB and affiliated cooperatives efficiency, and improve employees’ quality of life. Some of these issues are discussed ahead, and experience suggests that if they are adequately addressed during the development stage itself, they can contribute immensely to the success of IT endeavors.

How big is the DCCBs System under the roof of MSCB?
The answer to this question given ahead will provide the vision towards the bigness of the system required for meeting the needs or Cooperative banking

**Credit Needs of Rural Economy:**

In our country, the credit needs of rural economy are met by institutional as well as non-institutional agencies. The institutional agencies are:

(a) Co-operative credit institutions under the roof of MSCB and other Apex Agencies;
(b) Commercial Banks;
(c) Regional Rural Banks;
(d) State Government.

The non-institutional agencies consist of money-lenders, rich landlords, traders, commission agents, relatives etc. The importance of private agencies in rural credit has been decreasing because of expansion of institutional credit agencies. The indigenous bankers and money-lenders have been following many malpractices to exploit the borrowers; moreover, their accounts are not open to inspection due to which people have started doubting their integrity. It is also said that, the credit provided by the private agencies is unproductive as its main object is not to increase agricultural production but to bring the farmers in the grip of perpetual indebtedness and as Henry W. Wolff graphically put it, "It is the bond of debt that shackles agriculture." Because of all these reasons the non-institutional agencies are bound to reduce their importance. The development of institutional credit is, thus, a basic condition for agricultural progress. The history of agricultural development in all the countries shows that an integrated system of institutional credit laid the
foundation of agricultural prosperity. The objective of the institutional credit is to make a breakthrough in the vicious circle of poverty, rack-renting, usury and debt and to stimulate the farmer to boost agricultural productivity.

The institutional credit arrangements are expected to do the following functions which are to be noted by those who are going to build IT models to strengthen the MIS for Cooperatives, especially for MSCB and its Affiliated DCCBs:

(i) To facilitate and to encourage saving and their mobilization for productive investments;

(ii) To reduce the cost of credit administration;

(iii) To pool the risks of lenders;

(iv) To face the competition between private money-lenders and effectively counter the local monopolies;

(v) To help farm families fully to understand the opportunities with wise use of credit afford and flexible repayment provisions;

(vi) To minimize the risk of losses by borrowers.

(vii) To promote thrift so as to increase the supply of funds;

(viii) To draw on sources outside the society;

(ix) To promote the effective use of loans and to reduce the risks in granting loans by careful and continuous supervision;

(x) In consequence, to reduce risk to lenders and to credit co-operative by adequate security;
(xi) By this means and by low cost of management to keep the cost of credit as low as possible; and

(xii) To endeavor to make societies so credit-worthy that, they can obtain sufficient funds to finance other cooperative undertakings.

The co-operative credit structure in India, so far as rural finance is concerned, consists of two wings one dealing in short-term and medium-term credit and the other in long-term credit. The short-term and medium-term credit structure is a three-tiered one.

The primary agricultural credit societies at the Village forms the base. It is on this, that the whole edifice of co-operative credit is based. They federate into D.C.C. Banks usually at the district level. At the state level these are federated into an apex bank serving the entire state. The apex bank (i.e. state cooperative bank) in its turn was closely linked with the Reserve Bank of India till July, 1982 and with the National Bank for Agricultural and Rural Development (NABARD) since July, 1982, which provides among others, considerable financial assistance to agriculture through the state co-operative banks, D.C.C. Banks and Primary Societies.

The long-term credit structure consists of two tiers. There are Primary Land Development Banks' at the base (generally at Taluka/Block level) and Central Land Development Banks at state level. The long-term credit is provided by the Central Land Development Bank for each state at the apex level. The apex bank operates through Primary Land Development Banks and where Land Development Banks do not exist, it operates through its own branches or D.C.C. Banks. Thus, the structure is unitary. It will be seen that co-operative credit structure is of pyramid, the
broad base of which is represented by the primary societies at the village level. At the top are the apex societies at the state level and between these two are found the central societies.

These different societies are confined to villages, the state and the Taluka or district headquarters respectively. If the borrower in a village needs credit, he applies to the society. If the society has no funds at its disposal, it applies to the D.C.C. Bank and if the D.C.C. Bank is in need of funds, it applies to the State Bank. That is why it is said that the cooperative movement links the farmer in the remote villages with the money market of the country. Together these institutions constitute effective machinery functioning as balancing centers within the movement and supplementing the internal financial resources by borrowing from outside. They, thus, assist in supply of agricultural credit in the quantity required, supervise its use and effect its recovery on due dates. The fact that the structure is federal in character and the institutions at the different levels are independent legal entities, it also implies that the strength of the chain depends upon the strength of each of the links. The study group of the National Credit Council (headed by Dr. Gadgil) has stated, "The cooperative banking system is an integrated one and because of its three tier structure, has been able to extend credit to agriculturists, artisans etc. The three tier system also allows a rationalized flow of resources from the metropolitan centers to village and combines this with fairly low cost of operations."

Reasons for Integration with MSCB by DCCB

Although Cooperative Banking in India has reached, the take off stage they have not developed a good financial and finance related
information system. The management information system in all the DCCBs is still at its infancy. None of the DCCBs in the state has with centralized management information system. Although it exists in some of the key areas like loan deposit, investment etc. The manpower training, development and planning for effective MIS is indispensible for laying foundation of computer based MIS but the same has remained at flipside. The bank should make efforts to develop MIS through the beginning of the manpower training and development in handling the computers. In the management information system every person in the bank plays a vital role. The information received by the bank must be accurate and intime. All the personnel who are involved in the MIS should have knowledge about it. Training programme should be organized to train the employees in the tools and techniques of MIS. The bank should introduce the data bank system. The commercial banks use computer for better result. The DCCB with its large number of existing branches can also avail the services of the computer on par with the commercial banks. Although the policies have been framed earlier of RBI, NABARD etc. the DCCBs should pay more attention to strengthen the existing management information system. The DCCBs at present are operating a reporting system for different purposes rather than introducing an integrated management information system.

All the DCCBs are affiliated to MSCB and, hence, the MSCB as an APEX authority shall assume a responsibility to establish computer based MIS in all its affiliated cooperatives. The MSCB has the numerous functions to discharge with the help of its affiliated cooperatives especially those with DCCBs.
Major Issues Involved in Development of Large IT Systems to support the MIS:-

After much experience it is found unanimity amongst practicing managers on one issue: the failure of IT systems to generally come up to the level of a Decision Support System.

It would appear that while the greater portion of the blame should rightfully be shared by the IT industry in promising the moon and the failing managers themselves cannot escape their own shortcomings in the matter. They relate primarily to a rather casual approach to a serious subject, and an adoption of technology more as a dysfunctional fad than a strategic business tool.⁶

It is told by one DCCB manager that it is very much difficult to interrogate IT professionals by refusing to converse in any jargon, and forcing them to answer clearly as to what they can do. The IT vendors beat for the money, and MSCB has always adequately compensated to them. These may include projects like a Deposit Management System, Situation Report, the Interest Operations Information System etc.. By keeping the following major issues in clear focus, it has been possible to contribute positively in the implementation of IT endeavors. These issues ensure that cooperative leaders / managers can say an impartial ‘Yes’, or ‘No’, to a project while keeping the organization’s best interests at heart.

First Pre-Requisite: An Information Policy:⁷-

Before embarking on an IT for Maharashtra State Cooperative and its affiliated it must be first lay down a clear information policy. This will necessarily flow from the cooperatives mission, objectives and goals. IT is essentially a tool to achieve them, and in the absence of a clear policy governing its application and use in the MSCB and its affiliated DCCBs, it is likely to degenerate into a dysfunctional status system, with marginal productivity.
This policy needs to flow from no less than the CEO of the IT project in Bank, because the information process flow essentially codifies business rules, and grants powers and privileges.

It is equally important to decide upon the areas where IT is to be applied in the MSCB and its affiliated DCCBs. Managers sometimes mistake Information Systems with Information Technology, and attempt to replace or duplicate entire I.T with IT tools. The results of such unclear exercises can be disastrous, and established systems can get replaced by tentative ones.

The MSCB and its affiliated DCCBs are concerned with Information System, and view IT as a tool to make it more efficient. Thus, it is customary to see both manual and automated systems in concurrent use in most banking organizations, depending upon the relative strengths of both types to handle the job in question.

The I.T policy exercise should clearly demarcate the following areas:

- Cannot be automated.
- Can be automated.
- Should be automated.
- Should not be automated.

Thus, policy lays down the domains of manual and automated systems, and establishes the essential blueprint for an I.T vision. Once the domain of ‘can’ and ‘should’ is identified, IT then aligns with the business objectives and a new IT vision emerges, which is used by managers to promote an IT culture in the MSCB and its affiliated DCCBs.

A clear statement of Information Policy is proof of the existence of I.T vision, and without this basic step, the MSCB and its affiliated DCCBs cannot get full benefits from their IT investments.
All Large Systems should be Projects:-

Large IT systems have an unfortunate tendency to prolong into a legacy system stage. Boulding and Spivey (1960) say that firms are social entities, and have a compelling urge to survive. This seems true of most large systems, which develop a life of their own, at times independent of the users in the parent organization. In some cases, their inception, development, implementation, and continuance presents a sorry picture of ad-hoc decision making, which is responsible for their inefficient functioning.  

It is necessary that every aspect of the system in the MSCB and its affiliated DCCBs, right from the first analysis to its final phasing out, is carefully planned before work actually commences. The system is conceived and executed as a project, with a life span, and periodic reviews to take corrective actions which reflect changing realities both internal and external to the MSCB and its affiliated DCCBs. The external parameters could be status of IT, and the fund procurements and deposits/loans marketing scenario, while internal parameters could be cooperatives missions, and labor unions.

The detailed planning process of MSCB and its affiliated DCCBs will also help vendors working on out-sourced activities. They will be able to commit funds, manpower, and other resources in a manner that are cost effective for the vendor, and also ensure that there are no slippages in delivery schedules.

Setting project-based time frames to Large IT systems for the MSCB and its affiliated DCCBs will also ensure that there is no build up of vested
interest pockets in the organizations, who are unfortunately (Politically?) wedded to specific technology platforms. Since unlearning is tremendously more difficult than learning, large system administrators stick to the familiarity of what they know, even in the face of new and more efficient systems. The result is a forced technical obsolescence for the MSCB and its affiliated DCCBs, jeopardizing them very existence in a competitive world. Faced with a fixed time span for the project, IT managers or vendors are forced to upgrade their skills to the latest technologies, to ensure their continued relevance for the project revision.

In 1990, Kodak signed a $1 billion deal with IBM to handle all their data needs. In 1995, IBM signed an equal deal with Kodak to handle its world wide image repository data requirements. In a changing technology world, it is difficult to predict even traditional buyer and seller roles over time. Truly speaking, IT projects to be used by the MSCB and its affiliated DCCBs should have definite life spans, which are just enough to exploit investments, but do not tie down the corporative.

Thus, project-nature IT implementation benefits both the MSCB and its affiliated DCCBs and its associated vendors in getting the best out of systems, and ensures timely migration to new technologies.

Organizational Focus: IT Management:-

An unending debate is on regarding in-house IT efforts versus outsourcing, the answer probably lies, as usual, somewhere in the middle.

While it is true that IT is not a core competency area for the MSCB and its affiliated DCCBs needing to develop and install Large systems, but
at the same time, IT management is a critical competency area for them. Given today’s banking environment, it becomes imperative to put in place an organization structure that optimizes the issue of Management of IT in the MSCB and its affiliated DCCBs, as against a structure that starts specializing in IT per se. For a number of reasons, IT specialists, in non-IT DCCBs are not sustainable. Foremost amongst them are their insular character, inability to attract the best talent, poor employee motivation, and a creeping sense of obsolescence in the technical staff. Many large banking organizations, including MSCB, have experienced these difficulties in maintaining existing specialist IT setups.

IT management for the MSCB and its affiliated DCCBs would include:

- Systems analysis
- Awareness
- Project management
- Training management
- Implementation
- Vendor management

The MSCB and its affiliated DCCBs would do well to stay away from core specialist IT functions like software writing, and direct maintenance of both hardware and software. A large number of competent vendors are available to handle these areas, and the job is best left to them.

**Restructure to Inculcate IT Management:**

The Field Unit (FU) procures budgets from the MSCB and its affiliated DCCBs to answer information needs, and then engages the Software Development Unit (SDU) to design a solution. At all times, the
FU, as the budget controller, remains in charge, and its decision in project matters is superior to the SDU. Standard IT practices of analysis, clear system specs, acceptance testing etc., shall be practiced between the two units.

At each stage, the SDU shall revert to the FU and take its concurrence before committing resources. These include, amongst others:

- Inputs
- Outputs
- Hardware selection
- Software selection
- Maintenance methods
- System Life Cycle

This concurrence, while ensuring that the project results approximate FU expectations, will also safeguard the SDU against any charge of in-fructuous development.

The FU will be responsible for implementation of the project on the ground, with help from the SDU, wherever necessary. In case of non-implementation of a successfully developed project, the responsibility shall lie with the FU.

This tentative model is likely to make both the FU and SDU alive to and fully accountable for their role in every project.\textsuperscript{10}

For most organizations, IT is not their core competency area, and it appears desirable that the activities of software writing are best left to the
large number of competent professional organizations available in this area.

**The User as Final Judge:**

The MSCB and its affiliated DCCBs must ensure that the structure of the IT regime should be laid down in a manner that ensures that the User is the judge. This is more relevant for large systems projects, which are structured for implementation around an in-house IT team.

In the earlier years of IT development, IT professionals ran their own departments in dust free areas, behind closed doors. The user view of the system was a black box, which expected him to deliver input as hard copies to the IT staff, and collect processed output. The user was not involved in the system operation stage, and indeed, some users had never seen the inside of the ‘EDP Centre’. When managers required output in a non-standard format, the final judge on the availability or otherwise of the request were the IT manager. If available, the indicated timing of the output was usually beyond the limit by which the dependent decision was required. In those days, managers quickly learnt not to expect anything more than the standard output from IT staff.

For a number of reasons, modern day IT departments have been forced to adopt a greater transparency in their working. What’s needed is a further change where the system is configured to view the user as the final judge of the output. Since some in-house staff has been drawn from the ranks of former users, avoidable differences of opinion arise. The situation may be compounded if the user is junior in hierarchy to the TI staff.\textsuperscript{11}
In a large Banking application, there arose a problem of fictitious data input, just to ensure that the internal database was synchronized. Whether a software solution could have been found or not, is not the issue; what really surprised the user team was the insistence of the developers that the system was OK, whereas the MSCB and its affiliated DCCBs operations are required to be modified to suit the system.

While it is clear nowadays that the User should have a greater say, it would be desirable to advance this notation to 'full control'. One way to ensure this is to place the entire budgetary control with the user.

Zero-Based Budgeting in IT Projects:

It is customary to cite past investment as a reason for continuation of existing systems and IT strategy to answer the organization's information needs. Decision makers, especially in the government and cooperative sectors, tend to get awed by logic of money already spent, and fall prey to continuation of redundant legacy systems. Insulated IT staff usually suggest "re-engineering" as an attractive proposition which would safeguard existing investment. This course may be suggested without understanding the real dynamics of compelling market forces, and other external imperatives, which are forcing a re-thinking of information strategy.\(^{12}\)

Managers would do well to set aside the easy option to continuing without-dated systems, and resort to zero-based budgeting in IT projects. Faced with the fast pace of technological change in this area, such analysis may reveal savings in debunking existing development, and adopting
new technologies. This exercise should go beyond a technical audit, and encompass an exploratory survey of the emerging information needs of the MSCB and its affiliated DCCBs. A periodical and regular exercise of this nature would establish the relevance of existing systems, and suggest a viable future course. This viable course may be re-engineering as a brigade option between the present, and the envisaged future, or a complete change.

Experience suggests that the MSCB and its affiliated DCCBs continue to depend upon established systems, even when they stop answering a large number of requirements. It is only when critical information needs are compromised that organizations knee-jerk into an analytical mode. IT staff then react in a defensive manner, and while maintaining that the present system is suitable, suggest 're-engineering' as an option. While a regular audit would have ensured a smooth migration to modern technology and need fulfillment, an irregular panic audit is likely to lead on to a less than optimum path.

The MSCB and its affiliated DCCBs apathy to the monitoring of systems under development is severe. Since managers do not depend upon the proposed system as yet, there is little control on its delivery. Projects suffer time and cost over-runs, and even end up losing their relevance in the revised scenario. In-house developers then don the user's hat, and may even deviate from original system specs.13

DCCBs would do well to practice regular audits on large IT systems, even during developmental stages, and bring in zero-based budgeting. Past investments should rightfully be construed as sunk costs,
and not allowed to cast a shadow on future decision making in this regard.

No Jargon Accepted:-

Practicing Bank managers have often discovered that when IT vendors run short on solutions, they revert to jargon. Users should be aware when this happens, and steadfastly refuse to carry on from that point, unless IT product sellers are willing to talk in terms that the user understands.

As far as the user is concerned, he has information problems, and IT is attempting to answer them. He understands the problem, and should accept a solution which is equally clearly understood by him. When vendors start talking 'protocols', 'TCP/IP vs. X.25' etc., it is always found it useful to insist on either the term being clarified, or to go back to using simple English to let me know what will happen. IT managers would do well to avoid all jargon with users.

All technology is ultimately common sense, and rather trying to impress the user with something he does not understand, it is better to convince him with what he does. Under the latter conditions, the IT deal will be much more fruitful, with both user and vendor clear in their idea of the project. We must remember that sophisticated fighter aircraft need to satisfy the (non-technical) pilot, and even the world's most expensive motor cars have only one master - the common non technical driver. The better the technology, the easier it is to understand and use.
Users (the MSCB and its affiliated DCCBs) would do well, therefore, to be totally hard-nosed with IT vendors, and cut out all jargon, while clearly focusing on their needs. They will then force the IT industry to do like-wise, bringing about a quantum improvement in the quality of IT implementation in the corporation.\textsuperscript{14}

Experience suggests that the fundamental issues raised above are seldom addressed by users, and the IT industry. Large systems carry everybody along in the euphoria of anticipated benefits, and unless the system is developed by answering these issues, less than optimum results are achieved by the MSCB and its affiliated DCCBs.

Experiences

\textit{Difficult to Implement New Systems:}

SBI has the oldest Banking network, with one of the best laid down systems of operation and daily accountable performance. When we are dealing with IT induction in a system that has been working in MSCB for more than a century, the task is doubly difficult from the normal management of change.

SBI experienced great difficulties in convincing staff to switch to the new systems.

However, the challenge has to be squarely faced, both by the organization and the IT industry. Projects have to demarcate suitable education and training budgets, and the implementation phase carefully planned to prevent any sabotage from staff apprehensive of new technology.
Encourage Multi-Vendor Development:

It is the experience of most Banks that the IT industry does not have any existing solutions to offer, but the systems have to be designed afresh for banking problems. This leads to time being spent by professionals in first trying to understand the Cooperative Bank system, a valuable time that the Bank system can ill afford. It has been found desirable to split the development effort amongst various vendors, so that time crashing on this account covers up for the learning curve of vendors.\textsuperscript{15}

A soured relationship resulted between SBI and IBM, when the benefits were not found forthcoming in an acceptable time frame. SBI had retained IBM for handling its complete data requirements, and though parts of the system were developed, the overall system benefits could not be assured. SBI managers then felt that it would have been better to split the work between vendors.

Indian Banking (IB) Labor Intensive:

IB traditionally is a labor intensive organization. Whenever the justification of IT projects is based on replacement of staff, it is likely to run into rough weather with labor unions, and other interest groups.

On IB, it is extremely important to determine those areas where manual methods are performing well, and strictly leave them alone. It is necessary to identify those areas where productivity of labor itself can be increased by IT implementation, and it is here that we can notch up notable success.

Strategic Information in Cooperative Banking Networks:

Unlike in other industries, data management of Co-op Banking systems cannot be handed over to outside vendors. The nature of data is
nationally strategic, and it becomes essential to keep memory devices and transmission channels under control, and secure. While out-sourcing, special arrangements will have to be worked out to ensure that these vital security interest are not compromised.\textsuperscript{16}

\textit{IT should not Decrease Human Interface:}

The SBI/RBI has one of the largest officers – staff ratios, with 6000 officers controlling 1.5 million line staff. Since officer-staff interaction is already curtailed on account of this composition, new system should not cut it down further. It is usually seen that office staff start communicating across the room also on e-mail systems, and human interaction suffers. In an organization like the Bank, systems will essentially need to encourage human interface. This may be done by taking on repetitive tasks by the system in a fashion that leaves more time for sectional inspections.

\textit{Focus of IT: Staff, not Officers:}

The above discussion clearly establishes that the focus of IT intervention in MSCB/DCCBs will essentially have to be at the level of staff. In most DCCBs, the level of computerization usually begins at corporate HQ, but for a DCCB system, the focus will have to be the field units: i.e. Seva Society Office, Branches, Recovery section & so on.

\textit{Levels of Information Handling:-}

Management Information System (MIS) can be defined, according to Joel E. Ross, as a communication process wherein information (input) is recorded, stored, processed and retrieved for decision (output) regarding the managerial process of planning, organizing and controlling. If we now
define decision-making as the process of selecting from among alternatives a course of action to achieve an objective, the link between information and decision becomes clear. Indeed, decision-making and information processing are so inter-dependent that they become inseparable, if not identical, in practice.

Computerized MIS cannot technically make a decision but it can yield processed data and follow instructions to the extent of its capacity. For example, the computer can be properly instructed to compare NPA levels with programmed decision-rules and generate loan installment requisition, Bad debt enquiry and legal actions. This can reassemble an automatic control of advances documents, as being done for RBI over a long period.

The modern role of MIS for managerial decision-making in a complex organization has been compared to that of a military commander. Commanders often adopt a strategy built by direct observation of partial situations. This is the style used by the managers who track operations by periodic communications with remote branches, borrowers, recovery divisions and other offices. For instance, the RBI to keep track of banks spread all over India for decision-making.

In a modern complex organization, the levels of information handling can be divided as decision support system, management information system, transaction processing system, and office (and other) automation system.

At the apex, the top level managers may need decision support system (DSS). This would be an inter-active system that provides the user-manager with easy access to decision models and data in order to support
semi-structured and non-structured decision-making task. Inputs for DSS can be some processed data, and mostly management-originated data along with some unique models. The DSS would involve queries and responses, operations research models, and simulation. The output from DSS would be special reports to resolve difficult questions and replies to management queries.

At the middle management level (if there exists one), MIS would deal with an organized set of procedures to provide information for middle managers to support their operations and decision-making within the organization. At this level, inputs for MIS would be both processed and raw-data and some management-originated data, along with preprogrammed models. The MIS process would involve report generation data management, simple models and statistical methods. The outputs from MIS would be filtered and screened for semi-routine decisions and replies to simple management queries.

At the shop-floor management level, transaction processing system (TPS) is a computer-based system that would capture, classify, store, maintain, update and retrieve simple transaction data for record keeping and for feeding MIS and DSS. The TPS would have transaction data as inputs. The processing for TPS would involve classification, codification, sorting, merging, adding, deleting and updating. Outputs for TPS would be detailed reports relating to routine decisions and processed data.\textsuperscript{18}

At the clerical level, office and other automation control system can be in operation. Office automation system (OAS) is simple in an automated office having multiple functions, where the integrated an computer-aided system allows many office activities to be performed with
electronic equipment. The OAS would have inputs such as appointments, documents, addresses, etc. The OAS processing would be scheduling word-processor, data storage and retrieval. Outputs from OAS would be schedules, memoranda, bulk mail and administrative reports.

*Lack of Good Management System*:

It is imperative for successful corporate MIS on computer that there is good planning and control within framework of an efficient organizational structure. No degree of sophistication with computers can cure the basic ill of chaotic data management.

There have been many organizations where computerization has not brought any tangible improvements because there has been no systematic handling of data or attention paid to the data management. In such cases, there would have been considerable gain by first conducting a good Organization and Method (O & M) study. MIS has to be built on top by a management system which should include the organizational arrangements, the structure and procedures for adequate planning and control, the clear establishments of objective, and all other manifestations of good organization in management.¹⁹

It is interesting to note that good computer professionals know their craft but are simply not oriented to managerial jobs. In other words, the broad-based skills, which are necessary to function both in the computer room and in meeting with user-manager for the MIS, are conspicuous by their absence. This phenomenon has been known globally and that is why compute professionals are often called ‘machine-mesmerized’, where they are more loyal to their profession than to their organization!
Managerial Participation:-

The single most critical problem in effective computer utilization is the need for understanding and support from top management. In Maharashtra Chief Minister's or Minister for cooperation encouragement has not paved the way to bring computerized MIS gradually to all the DCCBs, on the scenario of wide-spread use in the commercial banking.

Even after top management support is ensured, it is necessary that there is user participation in the design phase on Bank MIS so as to avoid subsequent extensive and time-consuming re-work. This can be called "overnight syndrome" where users spell out their needs and expect the computer professionals to deliver the outputs immediately thereafter. Converting jobs eventually for computerization needs a stabilization period, which is all too easily forgotten.20

An example of the above is the case of Nanded District Central Cooperative Bank which wet for computerized interest billing for the districts. In the design phase, the Board authorities dictated that only two branches should have a pilot project before its extension to all other branches. Also, manual financial ledgers would continue as a parallel run along with the computerized financial ledgers for at least two billing cycles so as to generate enough confidence in the computerized ledgers. The result was a smooth introduction of computerization. On the other hand, another DCCB follow a similar computerization process without the benefit of any pilot project or parallel run on the grounds that the results were needed fast and they were spending money on computers in any case. The consequence was a disaster when many erroneous bills came
and in some cases none at all. There were questions in the board meeting and an enquiry committee under the executive committee had to investigate the mistakes. The result was to cancel the existing computerization, to start de novo, after having spent several lakhs of rupees which went waste.

It makes good sense, as has been experienced in the Sangali District Central Cooperative Bank, when the user-manager picks up a minimum familiarity with the MIS at the beginning. From the point of view of the organization, corporate MIS is as much a vital part of the operation as marketing operations and finance are today. RBI duly discovered that managers had to be involved in order to get better and more effective information systems by virtue of their participation. A similar approach is being followed in SBI.

*Failure to Identify Information Needs:*

A clear identification of information needs is fundamental and necessary to go for design of MIS for DCCB. Recently, a Pune and Kolhapur District Central Cooperative Bank spent lavish sums on hardware and software to perpetuate the existing MIS reports and to build a sophisticated data-bank without first determining the real information needs of management. It is often forgotten that only that information should go into the Bank MIS which can increase the perception of managers in critical areas such as problems, alternatives, opportunities and plans.

At least there has been above two DCCBs which built up comprehensive finance record, data-banks without examining what the
user needed from these data-banks. The enormous costs for building their
data-banks were later found to be unjustified and both of these Banks
have since discontinued their efforts in this area. On the other hand,
another i.e. Sangali District Central Cooperative Bank has begun on a
limited basis to build up corporate MIS for 200 parameters for a couple of
branches and, after ascertaining the user-needs, it is proposed to extend
the MIS further to all the branches.

It is the user-manager who is to provide the specification for what
he wants out of his corporate MIS. If the manager fails to do so, the
computer professionals by default would provide his own objectives and
his own information needs. These would seldom meet the needs of the
user-manager.

Poor Systems Prior to Computerization:-

It has been observed that computerizations in cooperative banks of
with a poor system will merely increase inefficiency at an accelerating
rate. The user-manager gets irrelevant or bad information faster and the
bad decisions are made sooner!

Pune District Central Cooperative bank, planned to upgrade and
improve its transaction-processing system in a methodical manner. Such
clerical systems as ledger accounting were to be upgraded to financial
planning; Deposits analysis; NPA accounting for recovery management;
and advances follow up reports to advances planning and control. Well
established procedures helped it to make a smooth transition.21

Overlooking Human Acceptance:-
A new MIS quite often meets resistance from the user-organization because people do not accept what they do not understand. Such reasons for resistance have to be analyzed and a new attitude brought into overcomes it. Ross identified the reasons as threat to the status of the Junior assistants; threat to the ego of the managers; economic threat to the clerical persons (fear of job loss), insecurity for the managers having personal powers and political base; loss of autonomy and control for the recovery managers and Inspectors; and frayed and inter-personal relations for all others.

A few cooperative banks started a process of systematic programme of training and user-education. It is imperative that such education begins at the top level for computer appreciation, at the middle management for specific computer applications in their own domains, and at the working level for direct involvement in input and output quality control. It is good to see the bulk of cooperatives going through such an elaborate process of computer initiation as there is no short-cut to it.

Solutions for customers -

It would be good to emphasis that information technology can have many beneficial effects on people using banking facilities. We can use information technology to solve customer problems such as transfer of money from bank to vendors against purchases, credit diagnosis, computer-assisted instruction, and supervision over loan utilization, planning, environmental quality control and law enforcement. For example, computers can be used to help to remit the money at the time of
emergency, pass on necessary credit information and monitor the progress of loan utilization by farmers.²²

Information technology is an important tool in making this transformation and in designing the Cooperative Banking in the real spirit. One can expect to see Bank’s rapidly moving operations to different parts of the state to take an advantage of special competencies. Even a one-person Bank branch can have worldwide operations through the Internet. All the information technology design variables that focus on communications are available to help, manage and co-ordinate the business of cooperative banks.

A state co-operation needs information to co-ordinate and controls its diverse co-operative businesses. Reporting and early warning systems are very important in this environment. Systems that summaries loans/deposit data and process accounting information are necessary but they only reflect what has happened in the past. These systems represent traditional uses of information technology for reporting and control.

Technology offers many more active tools to help and manage the business. Co-ordination is a major problem for the apex cooperative bank. However the Information technology provides a number of approaches for improving communications and co-ordination.

The high level committee of Apex Cooperative Bank on 27th December, 2006 focused on the following for managing information technology in a global environment. They are as follows:
1) **Concentrate on inter DCCB linkages:**
The strategy of creating linkages with financiers (lenders, depositors) and customers can be extremely effective to cooperative banks and societies. It can also be very difficult to set up these linkages because of differing telecommunications' capabilities in different areas. In some district, phone systems do not work well and transmitting data over them is probably not viable. Other regions like Mumbai have an extremely well developed infrastructure for business communication. The Internet is one solution for quickly establishing these linkages.

2) **Establish systems development skills in DCCBs/MSCB:-**
There are problems managing information development projects. Lack of personnel skills can be a major impediment in developing state level IT systems. So also the by and large, the DCCBs do not have educational programmes to prepare individuals for system analysis for programming jobs.

3) **Build an Infrastructure:-**
Justifying expenditure on infrastructure can also be extremely difficult. Infrastructure is the part of technology that does not have an immediate benefit. The economic criteria have suggested not undertaking the development of the network. However, the MSCB went ahead and found that the new information technology provided a number of benefits that were hard to quantity. Basically, with existing network, the MSCB could not plug in any application to the network and offer it any place in the world it did business.
4) **Take advantage of liberalized electronic communications:-**

The trend towards deregulation in the India is also replacing monopoly. Government has split its Telecom from the PTT and established it as a quasi public organization. In the past two decades, Indian Telecom has replaced an outmoded phone system and added a mass-market communications network called the Minitab System. It is also a leader in providing packet-switched data communications through transact. Such changes facilitate the development of the MSCB communications' networks, which is essential for managing DCCB throughout the states by MSCB.

5) **Strive for uniform data:-**

One of the major problems in sharing data is to identity it has. It is said that a large computer vendor once looked at its logistic systems and found that “ship date” meant six or seven different things depending on the system involved. In one system, it might be the promised ship date and in another date, the item left the loading dock. To obtain economies of scale from sharing data and systems, the DCCBs must have a common vocabulary of terms and definitions.

6) **Develop guidelines for shared versus local systems:-**

MSCB needs to develop guidelines for when a system should be shared and when a local autonomous system is more appropriate. The advantages of shared systems are economies of scale and the ability to share data. The problem with shared systems is that they tend to become very large and complex. Individual locations and users have special needs that must be incorporated into the system. As the number of exceptions increase, the system becomes more cumbersome and difficult to programme.
The advantage of a local system is that it can be developed quickly in response to a local condition. If it later becomes necessary to coordinate this system with other applications, special interfaces will have to be created.

There are no firm guidelines for making this kind of decision. Firms have success and failure with both approaches. Systems development in an international environment leads to this problem. Management has to recognize that the problem exists and compare the alternative of local versus global or shared systems.23

Conclusions:-

In an increasingly complex world, sound IT intervention can help bring about optimal decision making. This presumes that both practicing managers, as end users, and IT industry, as developers, are working towards addressing head-on some of the difficult issues involved.

Just about every restaurant nowadays offers ‘extra value meals’, which give the customer greater choice at a lesser cost. For large organizations like the MSCB/DCCBs, IT industry will have to serve these options as a necessity, since there are no off-the-shelf solutions for tackling specialized Bank situations.

System designers think logically to design solutions in a linear world, but real life is non-linear, and demands innovative solutions. What appears systematic in the lab might be chaotic in the field. Managers at SBI were in for a surprise when their new IT head sent them into branches to interact with field personnel, and actually see working conditions for
themselves. The software solutions that they had been churning out from Montreal HQ were summarily rejected by the managers themselves upon returning to the designing labs. These lessons are rudimentary, but have always surprised researchers for their repetitive nature in system development.

In large systems, the basic issues involved become all the more important because of the magnitude of the endeavor. Their appreciation, and timely action, could mean all the difference between success and failure.
References:


