# INFORMATION AND TECHNICAL SUPPORT FOR THE DECISION MAKING IN ENTERPRISE MANAGEMENT

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## Abstract

Successful performance of context of an ever-increasing service of production links and the acceleration of the process of restricting the economic mechanism to a large extent it is determined by the tameness and validity of the management decision taken.

Rationality and concreteness' depends primarily on quality and quantity of information which had a control apparatus.

Independently of the context of the decisional problems that the members face, in context of the logistical management of the chain, it is possible to identify common patterns. Generally, the persons in charge of making the decisions use their "memories" of their behavior in previous situations to create a new behavior that is tailored to the new conditions. We propose a general approach to decision making in enterprise management problem formulation and solution for theses problem to identify the common patterns previously mentioned, integrating the knowledge resulting and share it through Supply Chain. The decision about the relevance and irrelevance of information for decision-making has a solution in this approach.

**Keywords**: Information, Decision making, Support, Data flow, Processing, Administration.

**JEL Classification:** D80; M11; M15; Q55

## Introduction

From the organizational point of view, one of the main problems in the administration of the Supply Chains is the strategic alignment of all the members of the chain. This difficulty, in most of the cases, is determined by the ability of the partners to share strategies decisions in a logistical management environment.

Hence the need for detailed consideration of the technology and management work in conditions, when its subject is information, ensuring the adoption of management decisions and bringing it to the performers.

From this perspective, the problem of alignment of the strategic management of the organizations with its informative strategy seems to be an essential key element. However, is necessary to formulate the following question: what type of information is necessary to have available to reach these objectives? The use of the term of information is polysomic [6], in the context that it is being used, the patterns previously mentioned, constitute the nature and content of the information that should be shared among the members of the supply chain.

**Characteristics and types of information the enterprise management system**

Is known, that management – this is the information signal part of the production, defining purposeful and coding the flow of this process generally, and all its parts in isolation in time. In this way, the subject of work is information but product- is management solution, information by nature.

Any management provides:
Collect information about the state of mange;
Transfer of information and the items of its processing;
Analysis received information;
Decision making based on data analysis;
Development of appropriate instructions for control action;
Bringing management decision to the performers.

Consequently, between management objects and the management body carries out a constant exchange of information. Information is a collection of different generalization about changes accruing in the management system and its environment. This gives grants to conclude that management is the process of exchange of information between objects and subject of management and external environment. It is necessary to distinguish the concepts of information and messages. Message: representation, text telegram, tables.

The specific of the information determines what it is:

1. It is the object and the production of labor in managerial activity;
2. Possess consumer properties and with prolonged use losses its value;
3. Has the ability to accumulate i.e. characterized by some indicators of the volume of information;
4. Can be transported on special carries and for processing and storage.

Information flow: this is a directed sequence message about of managed object in moment of time, going from the source and contains some information in industrial about the validity of moral and material incentive for the flow of social processes, the state of the moral and psychological climate in the team [1, 2, 3].

This information passes through all stages of the management, based on analysis, a decision as made to eliminate deviations in production and economic activities.

All information about the company circulating in the enterprise can be classified according to the following characteristics: content attitude to the system (recipient), direction, frequency of occurrence and transitions (using), levels of management, ways of fixing, presentation, quality, degrees of impact on objects and saturation.

Information flows must meet certain requirements, the information should be:

- Full;
- Objective, reliable;
- Modern and operational;
- Single – valued in;
- Useful and economical.

Besides, information flows are characterized by the following specific parameters:

1. Source of / subdivision, being author of information.
2. Receiver of information/ subdivision – consumer of information;
3. Frequency of occurrence of receipt;
4. Degree of relationship;
5. Structure of flow;
6. Method of education;
7. Degree of use of information;
8. Degree of information redundancy;
9. Diversity.

Aggregate of information, used in production management, methods and means of transmission, processing and storage are: information system flow pattern and the degree of use of information is determined by the appointment of the management system. In complexity of information flows reflects the complexity of the system.

In the process of managing of object, as well as the management system, possesses some uncertainly, the quantitative measure of this the entropy of the control process. This uncertainly increases, if information from excessive and inaccurate information, what complicates the process of management and decision- making. Research show, that most of the information getting into the management system as propyl and failure, and in the field there are big problems because of the existing in the department difference in the formation of the technical economic indicators and their fixation in document of variety of function orientation.

To improve the quality of information it is necessary to strive to ensure that the document is contained:

Intelligence, sufficient or systematic analysis of this production;
Information in the dynamics for the reporting period;
Information about the mapping with indicators of similar industrials.

Organization of purposeful arrays if information and information flows as well as a set of works performed on the information for training, rational and made management decisions constitute the essence of information support control system of industrial enterprise [5, 6].

**Information carries and technical means of management information processing**:

Information theory the subject of study is the process of receiving transformation, accumulation, and display and transfer information in various kinds of systems for the production systems, the process of obtaining information and for management purposes is depicted in figure (1).

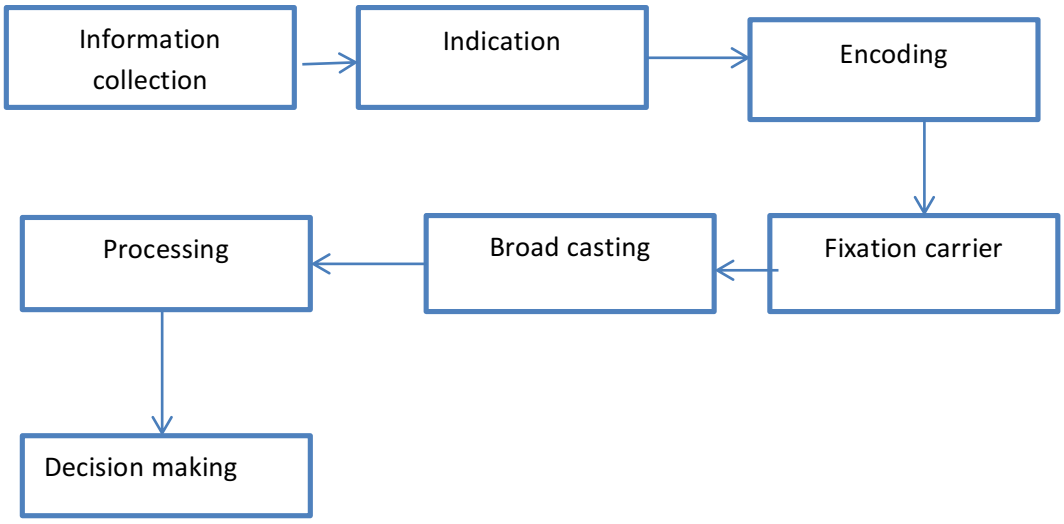


Figure (1) - the process of information obtaining for the purpose of enterprise management.

Receiving information occurs at a partial or full of uncertainty of the state the position of the object in space and time in the process of cognition.

Collection of information in phase of information in phase information transfer at a distance it is produced manually or with the help of automatic device, through signals of a different physical nature. For fixing information after transmission through communication channels media are accepted for this purpose the information is preliminary coded i.e. it appears in the form suitable for subsequent processing, and for which special information language are used. Usually, ordinal serial, positional codes are accepted.

Pre – for convenience of perception on information human bodies made it is indication is carried out. Data processing – this is serial planned actions with the information that has come in order to obtain the necessary results. Thus, process involves calculating, analysis, sorting, search tableting, translation form one form to another, synthesis, i.e. combining heterogeneous data into one, estimation of the degree of data reliability and destruction of necessary information.

During the processing of information, various means of mechanization and computerized are used, on the basis of which the corresponding information system is constructed.

There are simple, mixed and computerized information systems to ensure managerial work. In simple information systems the person processes the information manually; in mixed system information processing is conducted with the help of organizational management tools.

A computerized system, the processing on management information is built using computer technology, which are divided into the following groups:

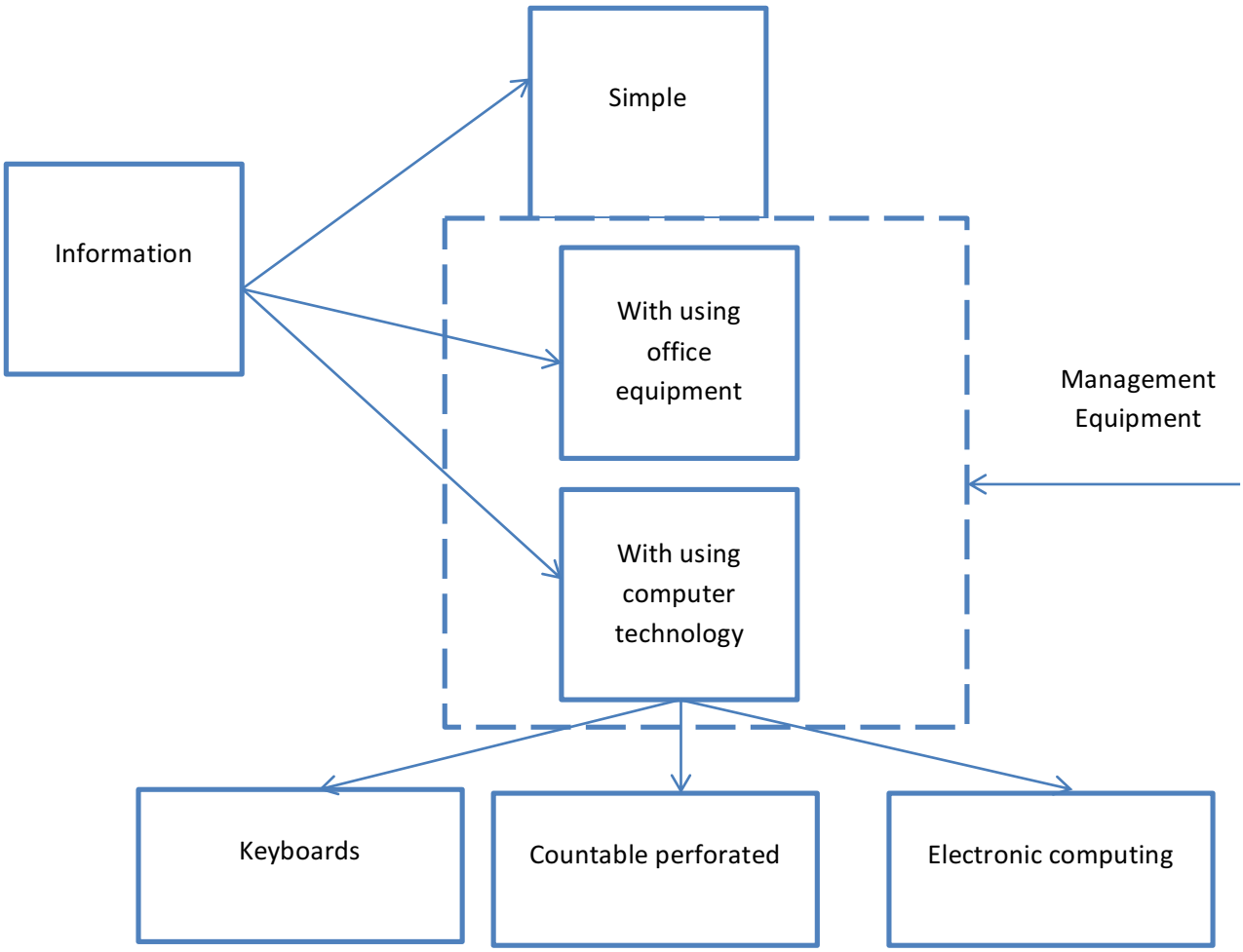


Figure (2): classification of information systems by the level of mechanization and computerized of information processing.

Keyboards: the different of summarizing, computing and countable tabular machine with manually or electrified transfer, semiautomatic and automatic machine;

Countable – perforated machine – interconnected system is intended for mechanization and computerized of process of logic processing of the information, computers of different explanations.

The most effective is the integrated use of technical controls, which is possible on the basis a thorough analysis of information flows in the enterprise, and development codes, and algorithm of information processing, training of specialists of certain profile [7, 8, 9].

**Technology of decision making and guidance to their implementation**:

Decision making: the most important link in the work of the administrative apparatus, they represent a set action to develop control actions in response to situation, emerging in a control process.

Management decision: this is the result of the logic of thought and the emotionality psychological activities of the team leader, focused on achieving a specific management goal. The solution is a specific product of management work and they are accepted by the manager at all levels, from the foreman and master to the shop manager, director and so on.

Management solutions must meet the following requirements: scientific c features, unity of purpose non – resistance to previously planned goals, competence, clarity of the wording, providing the direction to a particular performer, brevity, increasing concreteness, and the reality of efficiency.

To develop an effective management technology, the classification of solutions based on the most recurring characteristics is carried out. (Figure 3):

Any solution must ensure the planned, unity of action of individual counteraction of cell, justification of the production ratio, moral and material interest in its execution. The main here is the well from the reverse decision – making process.

Decision making this is primary an information signal process, implemented to select one of the many possible alternatives. The structure of the decision - making process can be represented as collection of logical order levels, getting the source information, formulation of the problem, development of criteria, generating alternatives. In the decision- making process, only three management functions are implemented - goal setting, planning and control actions, the others: accounting, control, analysis, and forecasting - not demanding a decision.

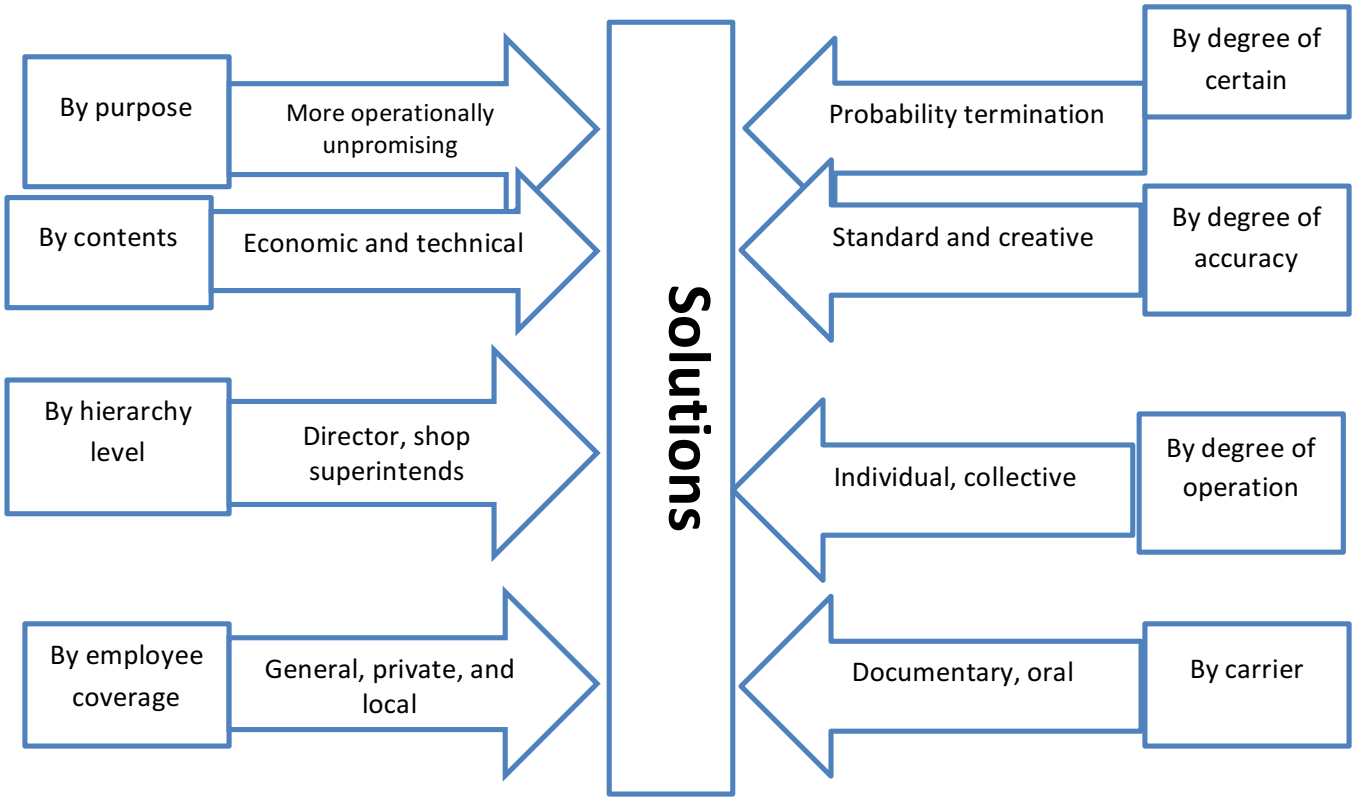


Figure (3): classification management decision

The methods and sequence of the work stages for preparing solutions are shown in fig. (4).

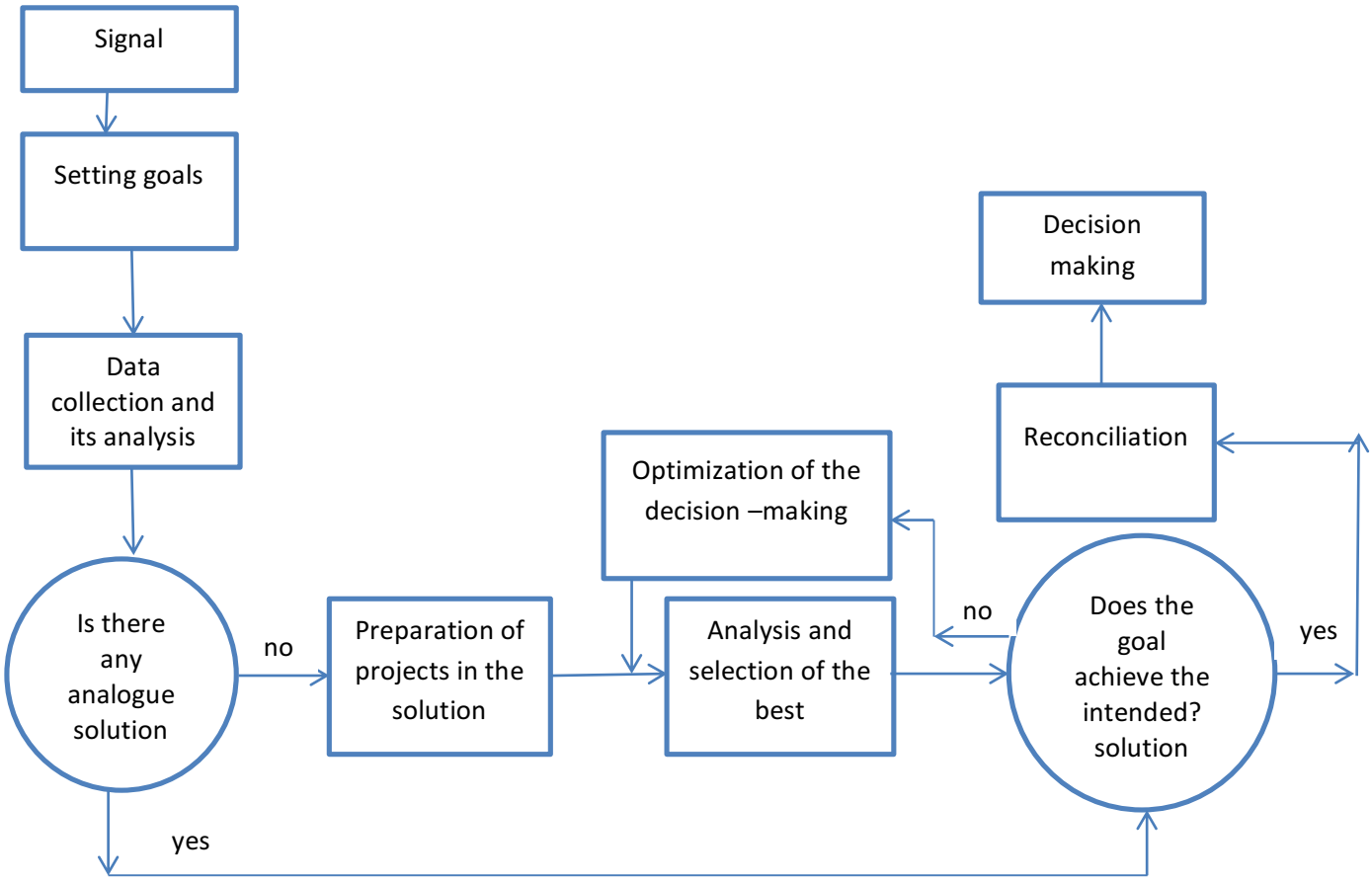


Figure (4). Methods and sequence of stages of work on preparation of decision.

Solution option can simulate with a way of using graphical, mathematical, logical, and other models, they estimate the primitive economic analysis of a complex of technical and economic social political and other characteristics. Clear their strengths and weakness.

The development of an optimal solution largely depend on how fully take into account the prosperity of component people, and specially future performers, an important form of preparation of optimal solution can serve as various production councils, and meeting, where is the common leadership of manager combined with collegiality. Taking into account opinion of public bodies of the enterprise.

The production meeting on the subject of the issues under consideration is divided into administrative, technical, personnel and others, by the form dictators, autocratic, segregation, debatable, free, on the main task of discussion problematic, instructive, more operatively fig (5).

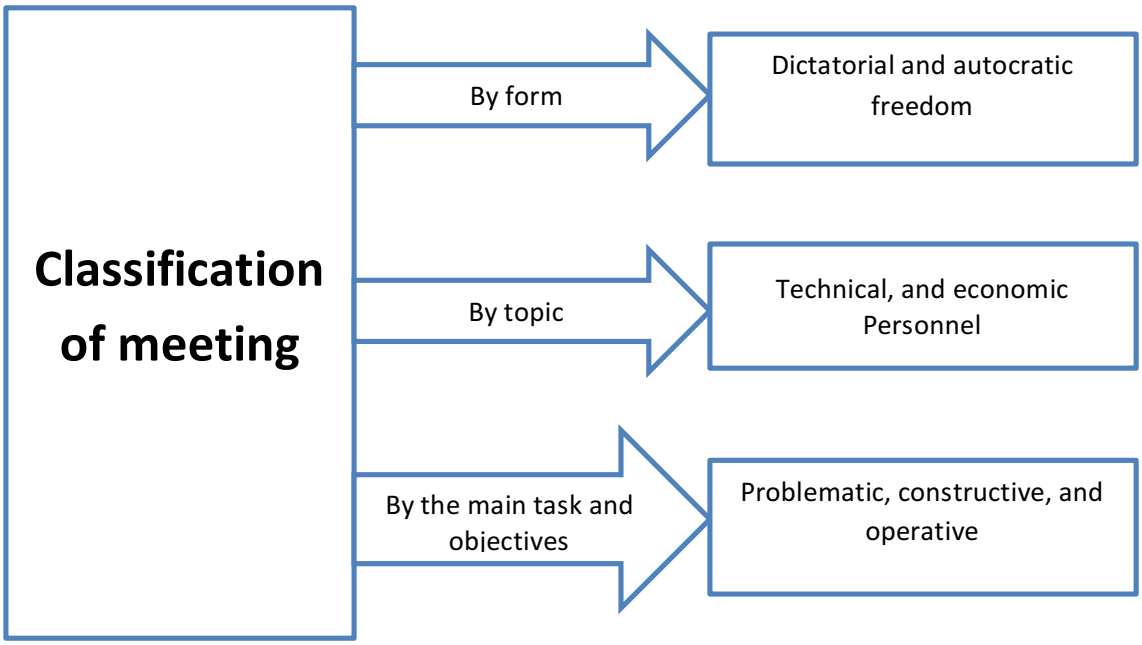


Figure (5) – classification of objective meeting.

All the variety of existing solutions can be divided into main the most frequently repeated signs: by the purpose of unpromising and quicker; in content: economic, technical, and organizational and so on. By hierarchy level: directors, heads of workshops, and masters, and other. By employee coverage: common, and local; by the degree of certainty: determinism, probabilities; by degree of complexity: simple and standard; by way of preparing: individual and collective.

As a result of the analysis of options for proposals and their collective discussion the head take the final decision and draw up the documentation in the form of an order, disposal and approval of the plan or oral instruction; time, and actors.

The final stage of preparation and decision-making organization and implementation and the actual implementation. The order of organization of work on the implementation of solution is show in the figure (6).

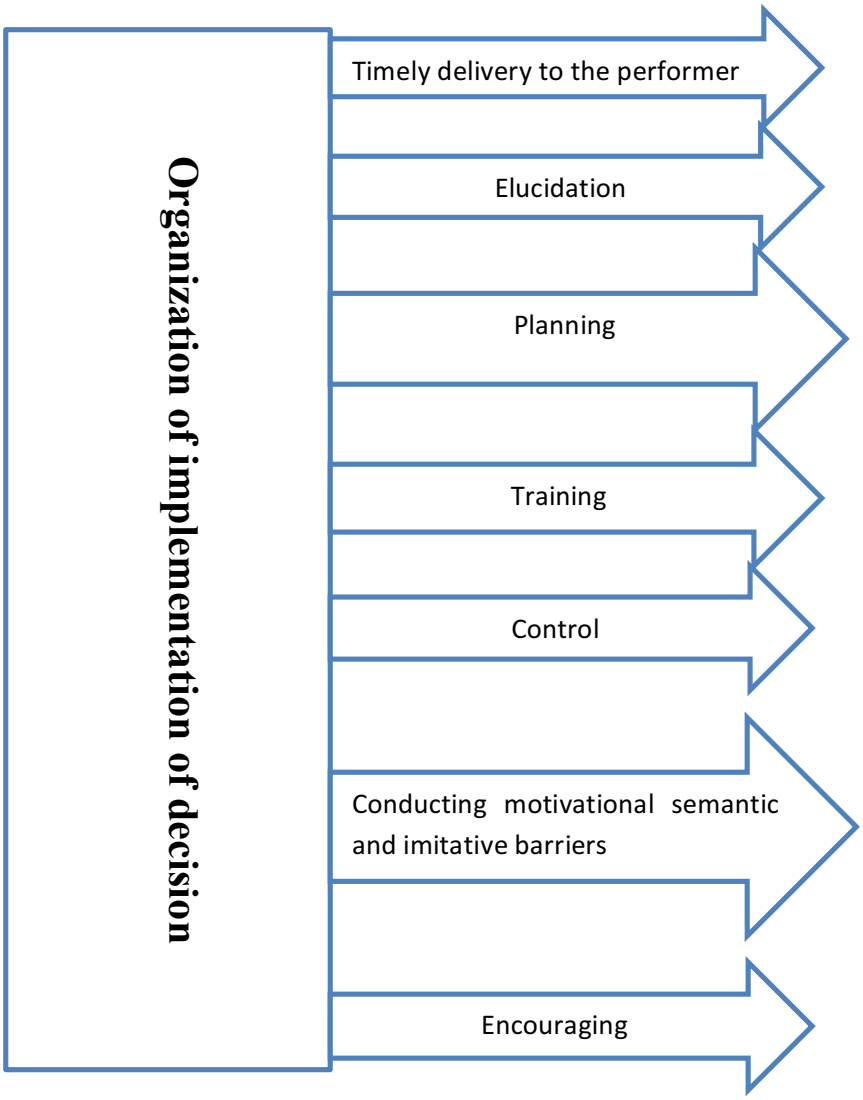


Figure (6): the order of organization of work on the implementation of decision

**Conclusion**

The course of implementation of decision must be constantly monitored, and in case of deviation from predictable result are necessary to adjust the decisions and to implementation the adopted program. to this end, organized a system from monitoring the implementation of decisions, at the enterprise create separated groups control department, applied technical means of control, turns control cards, create computerized performance monitoring systems. Each managerial decision in the final stage should be evaluated based on the results of its implementation.

The decision about the relevance and irrelevance of information for decision-making has a solution in this approach. Cause-effect relationships are the relevant information in decision-making context and by means of the analysis of these relationships, managers could learn.

Sharing information now means sharing knowledge within organization and with other organization in the supply chain.. Besides this helps to reduce the problem associated with new interpretations for other managers in different decision levels inside and through organization in the supply chain.

Based on the cause-effect relationship it is possible to create a computational procedure to aids decision making process. This computational procedure could be combined with artificial intelligence to derive a methodology to create the inference mechanism to describe the structure of problem and solution in decision-making process.

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