INTRODUCTION

The building of decision support system (DSS) for integrated workgroups sets out problems related to the nature of the decision process as well as its operative implementation.

The multiparticipative decision systems (MDM) abound in the management of companies and public/private institutions. In these companies, the partial decisions of a group of people in their responsibility field reciprocally influence and determine the operation of the system. The achievement of the strategic goals requires unit of vision and interpretation of those objectives.

The balanced scorecard (BSC) is a tool for unifying the vision and allows a common element to interpret reality, and the environment changes for a heterogeneous group that has to decide among the multiple possible alternatives of a strategic plan.

It is necessary to have at one’s disposal the knowledge and the integration of information and decisions through models of collaboration and integration.

This research work analyzes the usage of BSC as a link element between many decision makers, having different responsibilities and perspectives, who share strategic goals.

This usage requires becoming efficient in an accurate integration of:

a. Collaborative-task environment
b. Shared access to databases
c. Techniques to get new information (relationships, indicators, ratios) such as OLAP, datawarehouse, and data mining
d. Decision makers constant learning (from the obtained results)

In these models, it is possible to play down the interpretative divergence of the personal differences of the decision makers.

To integrate the functions of a company into a unified strategy, work models facilitate the spread of knowledge. BSC is much more than an information system; it is a knowledge management system which allows adapting, in a coordinate way, those decisions leading to the achievement of strategic goals. Thus, integrated techniques, tools, and working methodologies will also make possible:

a. A rise in shared models
b. A rise in learning speed
c. Improvement in the quality of decisions
d. Major action coordination

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BACKGROUND

Multiparticipant Decision Making

We can define it as “an activity conducted by a collective entity composed of two or more individuals and characterized in terms of both the properties of the collective entity and of its individual members”. Each of the MDM types has a specific structure of interaction among the decision makers and the participants (Marakas, 1997).

The MDM is a common and growing reality. Diverse modern business structures such as virtual companies, the strategic alliances, the “cooperation-competence” relations, and the new philosophies and management modes require forms, methodologies, and techniques applied to the decisions that surpass space and time limitations.

This growing development of management concepts significantly collaborates informatics. The aforementioned limitations imply others which are the ones that harm the quality, swiftness, and comprehension of decisions such as:

a. Shared mission
b. Unified vision
c. Availability of information
The different types and classes of support technologies show the different alternatives and possibilities of improving quantitative tools and informatics. Those decisions should be shared by many people.

BSC offers the possibility of joining them according to their application opportunities without detriment to the utilities of those techniques and tools, in a cause-effect analysis relative to the tangible and intangible components of the strategic decisions.

Scheme of Decision Processes

Simon (1960) elaborated a model about the problem-solving characteristics, which represents a permanent scheme of the decision-maker’s activity (Figure 1).

Decisions Based on Strategy

These decisions are of particular interest in our case since we can consider the strategy as Byrnes and Chesterton (1978) and Mintzberg (1993) did:

- Plan
- Action rules
- Behavior pattern
- Position
- Perspective

Since these are strategies useful to make decisions on tactic plans and to establish actions consistent with those ones, it is of particular importance that their comprehension, alignment, and participation of those who are responsible for carrying it out (Davenport & Prusak, 1997; Steiner, 1997).

Comprehension and involvement need an “integrated knowledge environment” to elaborate and apply the chosen strategies. (Tissen, Andriessen & Lakanne, 2000)

Factors, Conditions, and Perspectives Affecting Decisions in Organizations

Factors

Decisions in an organization are affected by factors characteristic of the relationships established within the organization and with its environment, such as in Marakas (1999) and Holsapple and Joshi (2001):

- Group structure
- Roles
- Processes
- Decision styles
- Norm and decision rules

These characteristics have non-quantitative main components; then it is necessary to get a hold of the right conceptions for their coordination and treatment, orientated to optimize team work decisions and to improve those relationships which help to encourage group synergy (Fleischer & Mahaffy, 1997).

Group Decision-Making Conditions

Group decisions are taken under conditions of limited knowledge, uncertainty, poor communication, option unawareness, and diverse goals (and sometimes contradictory) of the decision makers.

The difficulties which generate the conditions previously mentioned tend to increase considering the different levels (operative, tactic, and strategic) in which they have to be implemented (DeSanctis & Gallupe, 1987).

Modern knowledge management systems are supposed to meet different decision makers abilities as they face common problems and shared decisions. BSC comes out as a model gathering different techniques, perceptions, and approaches through perspectives shared by all the group members in strategic planning adaptable to the changing conditions of the environment and the organization itself (Pigott, 2000). These models represent a sort of “virtual community”, qualified by knowledge of the reality towards a specific strategic goal (Tissen et al., 2000).