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DECISION SUPPORT SYSTEMS AND THEIR POSSIBLE USE FOR FOOD PRODUCTS' ISSUES

General definition of Decision Support Systems, their possible application as well as the most common structure have been considered. The possibility of use such kind of systems in the food products sector has been described. The four specific issues for their operation in this area have been defined.

Decision Support Systems (DSS) represent a concept of the role of computers within the decision making process. Even though DSS has become an area of research in the middle of the 1970s [1], the concrete definition of it still doesn't exist. The thing is the definition and scope of DSS has been migrating over the years. What's more, different kinds of specialists (researchers from different areas of science, practitioners, managers, etc.) have different points of view on this question [1, 2].

As one of the most common definition of DSS could be given the following: DSS are interactive computer-based systems and subsystems intended to help decision makers use communications technologies, data, documents, knowledge and/or models to complete decision process tasks. Here at once should be precise types of problems which DSS help to solve. It comes mostly about problems that may be rapidly changing and not easily specified in advance – i.e., unstructured and semi-structured decision problems [3].

Given that DSS has as the criterion the relationship with the user, they could be separated on: passive, active, and cooperative. A passive DSS is a system that aids the process of decision making, but that cannot bring out explicit decision suggestions or solutions. An active DSS can bring out such decision suggestions or solutions. And a cooperative one allows the decision maker (or its advisor) to modify, complete, or refine the decision suggestions provided by the system, before sending them back to the system for validation [4].

There are three fundamental components of DSS architecture are [4-8]: the database (or knowledge base), the model (i.e., the decision context and user criteria), the user interface. The users themselves are also important components of the architecture [4, 8].

Nowadays DSS are extensively used in business, management and transportation, applied in medical clinics, jurisprudence, forest management, agricultural production, etc. Basically, there are theoretical possibilities of building such systems in any knowledge domain. Therefore, the choice of DSS implementation in the food products sector has been made.

The idea is to use this kind of systems as a tool that could help to make decisions, based on the database of experts' marks of wide range of food products in accordance to the specific criterions. Model of the decision process depends on what are we going to achieve. There are 4 specific problems that have to be solved:

- 1) analysis of a final product in order to improve the technology of its production and further suggestions for it;
- 2) analysis of a final product in order to decrease costs and further suggestions for it;
- 3) analysis of different products of one kind in order to choose the best one according to the specific criterions;
- 4) analysis of products in order to create the innovative one.

This project is going to be elaborated in the frames of Laboratory of Sensory Analysis, ONAFТ. Planned stages of this research include elaboration of database, models for decision making process and software for user interface organization.

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