PLANNING PROCEDURE BASED ON AN ALGORITHM FOR OPTIMAL TASK DIVISION

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ABSTRACT

NOVELTY - The method involves performing work tasks for various project types, taking into account the mutual influence that work tasks have upon one another and the priorities set in accordance with the clients' requests. The clients' needs are taken over, the clients' requests are determined, the work tasks corresponding to clients' requests are determined, the interdependence between the work tasks is established and the work tasks are prioritized using an algorithm based on an indicator quantifying the clients' requests meeting degree.

KEYWORDS

Quality function deployment,
Task distribution,
Offset,
Risk estimation

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INTRODUCTION

The invention refers to the development of an algorithm that allows the automatic distribution of work tasks in stages of development using an indicator called Offset, and is based on an iterative development cycle.

The Offset indicator allows the measurement of customer satisfaction taking into account the following aspects: the extent to which a work load covers a customer requirement, the interdependence relationships between workloads, the degree of difficulty of workloads, etc.

On the basis of this information, the algorithm proposes the most viable outcome for the development period and its workloads.

RESULTS

Why an algorithm for sharing and prioritizing work tasks?

Prioritizing work tasks represents an important step in the development process, regardless of the project management approach chosen by the development team. Currently, the prioritization of work tasks is done using several methods, including:
• Cumulative Vote,
• MoSCoW Analysis,
• Eisenhower Matrix and
• HiPPO Method
    (Highest Paid Person's Opinion)

The activities of prioritizing and distributing work tasks in stages of the development process require time and human resources to be carried out, but are at the same time a vital step in the life of any project. These activities may be affected by factors such as the subjectivity of the development team or its lack of experience, in which case the end result will be adversely affected. The proposed procedure aims to eliminate these aspects taking into account the objectivity of the inputelements of the algorithm. This allows both optimizing resource consumption and providing a customer-oriented solution.
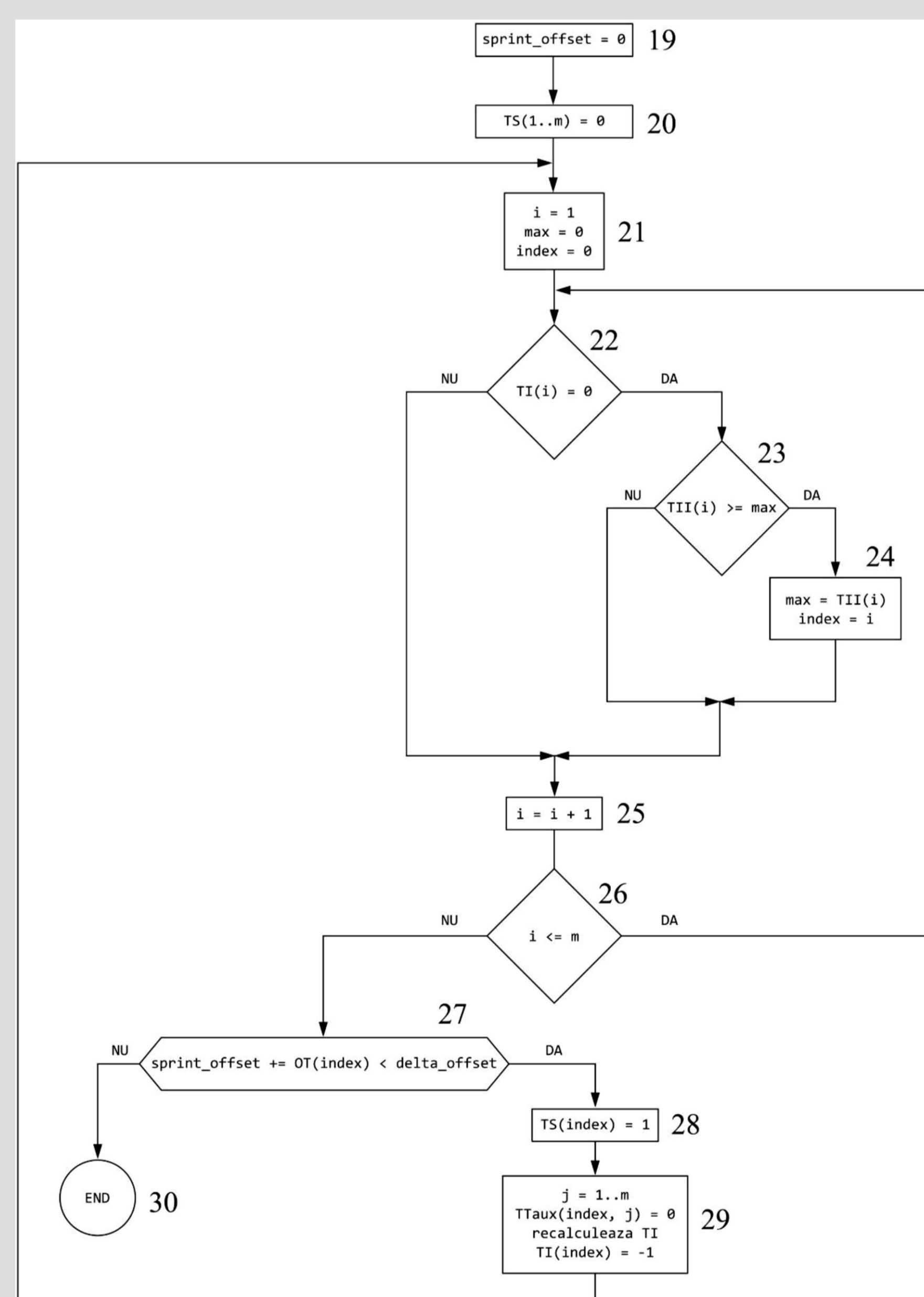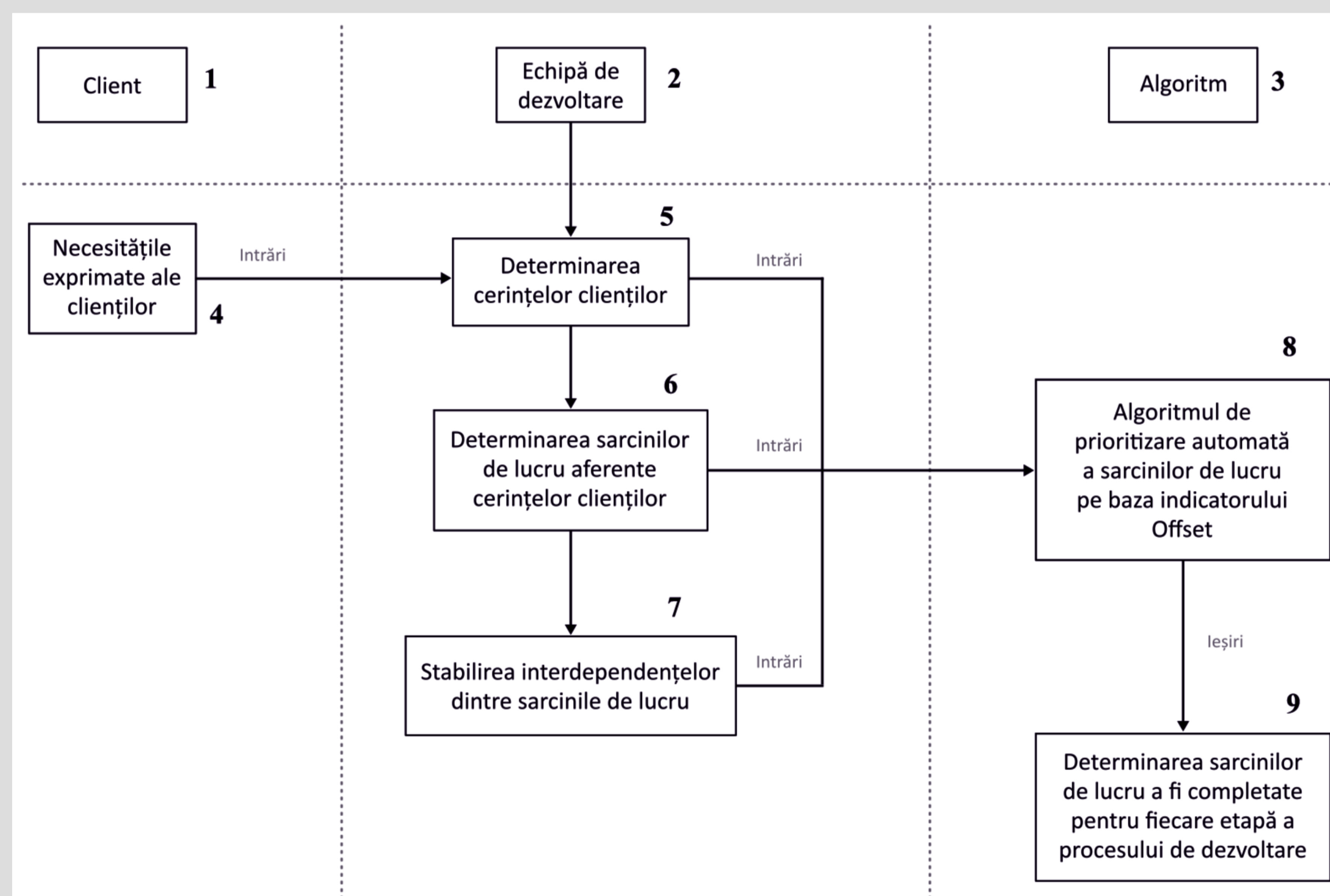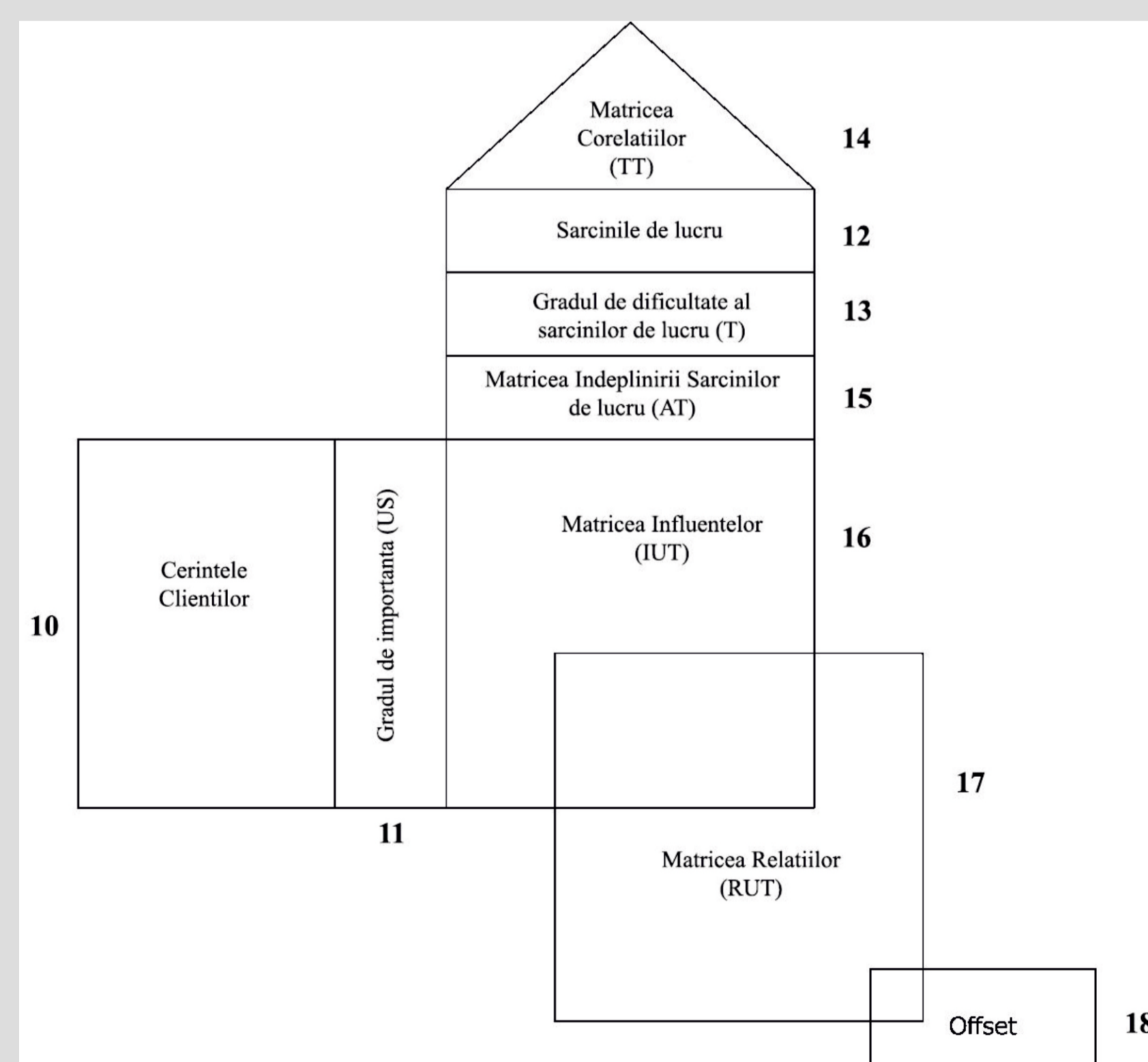

Figure 1. Algorithm

Figure 2. Modified QFD

Figure 3. Principal scheme

CONCLUSIONS

In the current economic context in which, on the one hand, a multitude of small companies contribute significantly to the economic results obtained, and, on the other hand, large companies face projects with a high degree of complexity, it is necessary to analyze the way in which they carry out their activity and to provide innovative solutions to the problems they face.

In this respect, the proposed invention aims to meet the needs of small and large firms alike, regarding the activities of prioritization of work tasks in development stages with the help of an algorithm of their automatic distribution, which allows to optimize the consumption of resources affected by these activities and to eliminate subjectivity from the planning process.