

EVALUATION OF DOMESTIC-WASTE COLLECTION SYSTEM OF NIKAIA MUNICIPALITY. IMPROVEMENT PROPOSALS

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EXTENDED ABSTRACT

In the majority of Greek large-cities, the collection and transportation process of domestic-waste is based on empirical information and personal standpoints, thus leading to a significant loss of time and resources. In this context, the present work initially evaluates the existing domestic-waste collection system of Nikaia municipality. For this purpose, several recently gathered data are analysed concerning the available domestic-waste collection equipment (e.g. existing pails, trucks, personnel etc.) and the corresponding routing.

Accordingly, the present waste-collection plan for every town sector is investigated and revised, on the basis of current population and economic activities. In this way significant waste time reduction may be realized, contributing to the deterioration of related operational cost and improving the quality of services offered to the local citizens.

On top of that, the replacement of existing waste-pails by new and larger ones is also examined, along with the reinforcement of the outdated waste collection trucks. The capital needed is not prohibitive, while additional savings may be possible by disposing the old-fashioned equipment.

Finally, a cost-benefit analysis takes place in order to weigh the financial gains of such a revised system in comparison with the necessary amount invested. The calculation results clearly support the proposed modifications, while one should also consider the remarkable social benefits, resulting from the new management plan.

Recapitulating, a thorough analysis of the existing domestic-waste collection process in Nikaia town leads to several interesting amelioration ideas. These proposals -if adopted and properly applied- should shortly payback the necessary investment capital, leaving remarkable gains and improving the services offered by the local authorities. Several additional urban municipalities may equally use this promising house-waste collection management plan, after certain minor modifications.

Key words: domestic waste collection, economic activity, waste-pail, payback period, cost-benefit analysis, management plan, routing