



## R2-IBMOLS applied to a practical case of the multiobjective knapsack problem

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Résumé en anglais	<p>The social and medico-social sector is experiencing a fast evolution due to the continuing growth of older population. Yet, social and medico-social structures suffer from a real lack of computerized decision support tools. This work deals with the key issue of elaborating efficient action plans in these structures, which aims to improve the whole quality of these structures. An efficient action plan is a set of actions chosen among many candidate actions which optimize several conflicting objectives and satisfy some imperative constraints. To assist managers to optimize their action plans, we develop a multiobjective decision support system as part of a commercial software. According to the objectives and constraints defined by the decision maker and a set of feasible actions, the software is used to select the actions that optimize the given objectives while satisfying the constraints. After providing a description and a formal model of the action plan optimization problem, we present a solution method using the iterated local search based on quality indicators (IBMOLS). We assess the proposed approach on problem instances with 2-8 objectives and up to 500 candidate actions and demonstrate its usefulness as a key component of a decision support system for social and medico-social structures.</p>
URL de la notice	<a href="http://okina.univ-angers.fr/publications/ua15274">http://okina.univ-angers.fr/publications/ua15274</a> [8]
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## Liens

- [1] <http://okina.univ-angers.fr/publications?f%5Bauthor%5D=11649>
- [2] <http://okina.univ-angers.fr/matthieu.basseur/publications>
- [3] <http://okina.univ-angers.fr/jinkao.hao/publications>
- [4] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=22044>
- [5] <http://okina.univ-angers.fr/publications?f%5Bkeyword%5D=12705>
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- [8] <http://okina.univ-angers.fr/publications/ua15274>
- [9] <http://dx.doi.org/10.1016/j.eswa.2016.11.007>
- [10] <http://www.sciencedirect.com/science/article/pii/S0957417416306285>

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