I. BAKRY, O. MOSELHI. **Optimized acceleration of repetitive construction projects.** *Gerontechnology 2012;11(2):397;* doi:10.4017/gt.2012.11.02.090.00 **Purpose** The purpose of this paper is to present an improved algorithm for optimized acceleration of repetitive construction projects. **Method** Through a set of iterative steps this algorithm identifies the least costly method that would put a project back on track, while maintaining crew work continuity. The algorithm divides each activity into segments and identifies the segments that would shorten project duration if accelerated. For these identified segments, the ones with the lowest cost slope are selected and cued for acceleration. Through the proposed segmentation of activities this algorithm provides better focusing of allocated additional resources, thus resulting in more cost-efficient acceleration plans. The algorithm is implemented in a spreadsheet application, which helps automate calculations, yet allows users to fine-tune the algorithm to fit the project conditions at hand. The algorithm allows users to select among different acceleration strategies such as working overtime, working double shifts, working weekends, employing more productive crews, work stoppage for converging activities and intentional work breaks. **Results & Discussion** The developed algorithm is applied to a case study drawn from literature in order to illustrate its basic features and demonstrate its accuracy. The results obtained, when compared to those reported for the case considered, demonstrate the ability to accelerate this project in while utilising fewer resources.
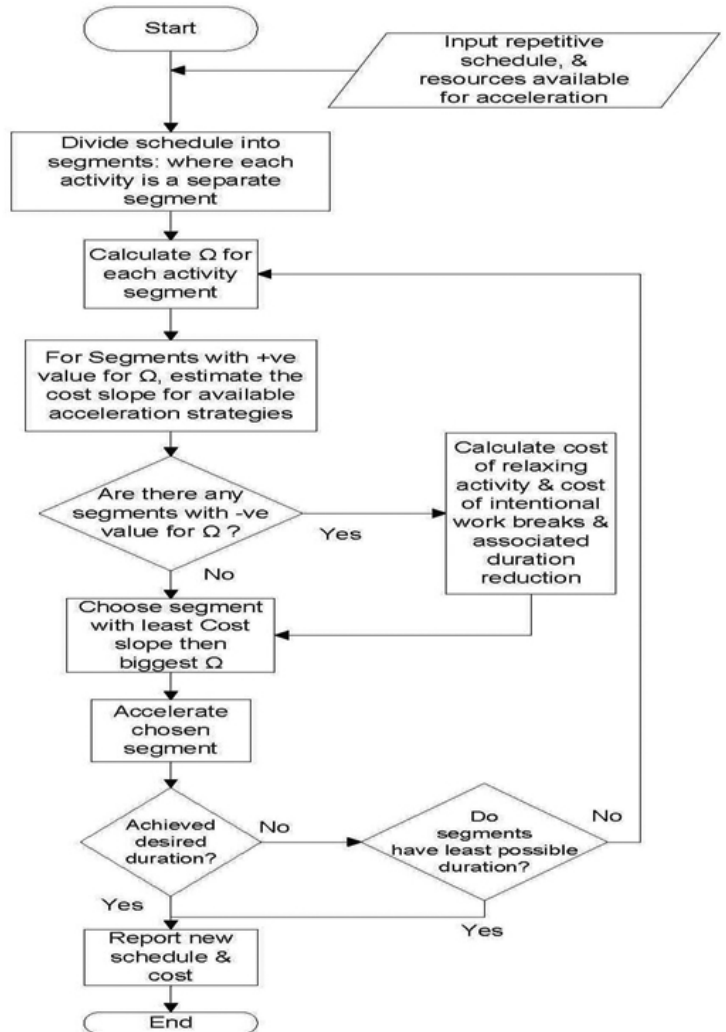
Figure 1. Methodology flowchart