

## Sustainable development of sports stadiums

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### Abstract

Sports stadiums have a considerable impact on the urban, environmental and social context. Therefore, the requirements for operation of each stadium after the mega-event are of great importance to ensure sustainability and maximised daily utilization on a long-term basis. Case studies of three different stadium types used for the Olympic Summer Games 2000, 2004 and 2008 are analysed based on literature research, field surveys and interviews with operators. The comparative assessment is conducted in the categories: urban, environmental and social based on a five-point score system. It concludes that long-term utilization of sports stadiums built or modified for the Olympic Games (refer to fig. 1) correlates with the level of urban integration, urban context, building type and usage mix.

**Keywords:** sustainable; stadiums; long-term utilization; urban integration; usage mix.



Figure 1, Existing Athens Stadium without roof in 1982 (left picture) and with new roof structure in 2004

### 1 Introduction

Sports stadiums have a considerable impact on the urban, environmental and social context. In particular, where several new stadiums are built within the same city for a single mega-event like the Olympic Games, the implications are significantly higher. Therefore, the requirements for operation of each stadium after the mega-event

are of great importance in order to ensure sustainable integration into the urban, environmental and social context with a maximized utilization of each sports stadium on a long-term basis.

### 2 Literature review

In 2007 the research was selected for a scholarship in the Postgraduate Research Grant Programme