



## Differences in maintenance of bridges and real estate buildings

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## Summary

The paper considers the differently developed maintenance strategies and lifecycle considerations of federal bridges and industrial facilities. These differences are mostly caused by the interests and objectives of the stakeholders. The maintenance management of bridges can be defined more easily owing to objectives that stand firm. The type of use won't change in a bridges lifetime. By contrast the requirements of an industrial building can change rapidly and frequently. Other differences are on one hand the improvement of infrastructure and on the other hand the increase of facility output.

The different goals of facility management activities are discussed in the aspect of economy, of maintaining the value and substance respectively, and in terms of bound capital.

**Keywords:** Maintenance, Facility Management, BMS, Bridges, Industrial Facilities, Buildings management, Maintenance Strategy, Life cycle

## 1. Introduction

Historically maintenance strategies and life cycle considerations in infrastructure as roads, bridges and tunnels have been developed in a totally different pattern to those for typical real estate buildings as office buildings, industrial facilities and residential buildings. With the dynamic development of facility management methods these different areas should profit more intensively from each other.

Both areas differ in life cycles. The governing organisation forms, in which maintenance and refurbishment are realised, are also different in concepts and reality. Further differences are outlined concerning the benchmarks for investment planning.

The presentation aims to point out differences and commonalities as well as to reflect convergence and incompatibility with regard to possible know how transfer.

## 2. Maintenance concepts, strategies and standards

Maintenance concepts always depend on their environment. It will never stand alone for the very reason that maintenance is defined by the maintained facility and the requirements the building has to satisfy. For this reason the reflections of this paper depend very much on the considered constructions.

The research presented in this paper was developed from the question about differences between the facility management concept in an industrial facility (Schott Jenaer Glas) and the maintenance concept for bridges at the German federal highway association, namely accessed at the level of BMS (Bauwerks-Management-System), the German Buildings Management System, which is currently in the process of being implemented for federal highways.

In the following the maintenance concepts for federal bridges and industrial facilities will be epitomized, before characteristics will be examined.