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# Computer-aided lifecycle costs prediction in concrete bridges

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**SUMMARY**

Concrete bridge management has evolved from a quasi-empirical work to a highly specialised job, relying heavily on knowledge-based algorithms and computer tools. In fact, even though a great deal of human intuition is still very impor-tant in the task of inspecting and detecting the functional and structural anomalies of each bridge, the whole management process tends to be based on standardised pro-cedures and a set of well defined criteria.

For the implementation of an expert knowledge-based computer tool aimed at predicting the lifecycle costs of con-crete road bridges, every type of cost concerning the design, construction and use of such facilities during its whole life has been modelled according to pre-defined criteria. This software, named COSTS, is described in detail in this paper, as well as the costs prediction models implemented within it.