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Tacit knowledge contained in construction enterprise documents

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Abstract

This paper deals with knowledge management in a construction enterprise. An IT model of the Knowledge Map has been developed. The model can be used to save, store and acquire knowledge and then to exploit it in enterprise management processes. This paper focuses on tacit knowledge resources contained in documents drawn up for the needs of construction projects. The documents were classified to different areas of enterprise activity. The more important and less important documents were identified. The quality of the documents has a bearing on such project process parameters such as implementation time and cost.

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Keywords: construction business; Knowledge Map; knowledge management; documents; tacit knowledge

1. Introduction

Knowledge is one of the most important resources of an enterprise. Skillful knowledge management can bring significant benefits including labour productivity growth, an increase of quality of provided services and also a strengthening of the competitive position of an enterprise. Knowledge resources of an enterprise can be divided into: explicit knowledge which is possessed from publications, law regulations and standards and also tacit knowledge which is not written anywhere, is kept in the minds of employees and results from their personal experience. Tacit knowledge is also contained in databases and documents prepared for ongoing construction projects and for the correct functioning of an enterprise. Acquisition of such a type of knowledge resource can greatly support management processes in a construction company [1,2, 3].

The paper presents the computer model of the Knowledge Map which supports the management in a construction enterprise. The model was developed based on the results of tests and analysis carried out in small and

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medium-sized construction enterprises in Poland. The proposed model uses the process approach for management and includes processes carried out at enterprise level and in the widely considered investment process in the construction industry and also the documents associated with these processes. Due to this assumption the proposed Knowledge Map has universal character and it is possible for it to be applied in construction enterprises conducting both design and executive activity. This model was implemented in construction enterprises.

The article also contains conclusions formulated during the practical use of the Knowledge Map, which are associated with the formation of documents for the purposes of carried out processes.

2. Methodology of research

The methodology of research conducted with regards to the formulation of the model is presented in Figure 1. Research was carried out in three stages.

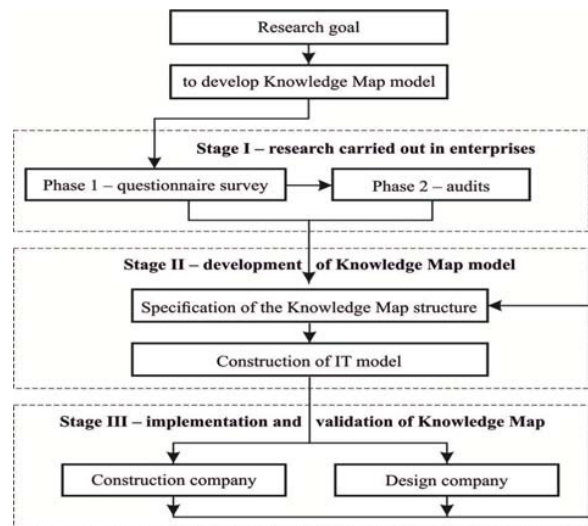


Fig.1. Scheme of research.

2.1. Stage 1 – Research carried out in enterprises

The objective of stage 1 was to obtain information which would allow assumptions to be made regarding the formulated computer tool. Research was conducted in two phases.

2.1.1. Phase 1

On the basis of preliminary studies which were carried out in several construction enterprises with the use of the direct interview method, a research questionnaire was formulated which included questions about four areas related to enterprise activity, such as: 1) general data e.g.: location, number of employees; 2) the scope of conducted activity; 3) computer programs used; 4) processes implemented in all spheres of enterprise activity.

On the basis of current laws and regulations and also requirements included in management standards of ISO 9000 series, a set of processes was defined. The task for respondents was to mark processes occurring in an enterprise and to add such processes which were not included in the questionnaire but still happen in an enterprise. The questionnaire survey was carried out in about 280 construction enterprises. Based on preliminary research, it was found that:

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