Innovative KM Tools and Methods: new way of visualising and disclosing information

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Summary: This paper investigates KM tools and models depending on the certain knowledge domain. The links described between knowledge domains, KM methods and tools may help knowledge managers to select an appropriate method/tool either for the whole company or for its certain functional areas to support visualizing and disclosing information for reporting. Special focus in the paper is made on several management domains: customer knowledge, operations management knowledge and strategic management knowledge.

Keywords: knowledge management, knowledge typology, KM tool, domain-specific KM.

Abstract: 1. Introduction

Knowledge management (KM) in different domains may have some specifics. There are universal KM tools more suitable for certain subject domain and corresponding knowledge types. On the other hand, every subject domain has its own tools and methods, which support knowledge capture, codification and transfer. Besides, the issue of integration of different tools into a system is also considered to be important. All these topics have been studied within INNOVARRA project (Innovations in Company Knowledge Management: Typology, Methodology and Recommendations) (Gavrilova et al, 2015) with a special focus on several subject domains within a company: customer knowledge, operations management knowledge, strategic management and organizational development knowledge. In the project design science research methodology was used giving a chance to provide some innovative methods, frameworks, classifications, which were further supported by empirical research.

2. “Universal” KM tools and methods

Identification and systematization of KM methods and tools was carried out on the basis of literature review (Wiig et al, 1997; Young, 2010), as well as through interviews with KM experts from the companies: Gazpromneft, Lukoil, Yandex and analysis of company documents. The taxonomy of “universal” KM tools and methods was suggested in (Kudryavtsev, Menshikova, 2016).

3. Domain-specific methods and tools for KM

Domain-specific KM methods and tools are applicable for certain domains and types of knowledge. General overview of domain-specific methods and tools for KM was created using structured literature review for several knowledge domains proposed in the generalized (reference) enterprise knowledge map (Kudryavtsev et al, 2017).

Within INNOVARRA project our team studied and developed KM tools for customer knowledge, for operations management knowledge and for strategic management knowledge.

For customer knowledge management (CKM) conceptual framework was developed (Golovacheva, Smirnova, 2017). It provides guidelines on the choice of CKM solutions depending on firms’ strategic objectives and customer characteristics under consideration.

For operations management knowledge information technologies provide knowledge representation methods and intelligent tools for Internet of things, socio-cyber-physical systems and production networks (Sandkuhl, 2016); knowledge-based planning systems (Huang, Lin, 2010). Quality and process improvement offer various management tools: 5S for structuring things (including knowledge), knowledge codification within Standardization of

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work, knowledge structuring using Ishikawa diagram, Quality Function Deployment (QFD), value stream and process maps, knowledge creation and capture using 5 Whys technique and other KM-related techniques embedded in Kanban, Lean etc. (Liu et al, 2013).

Strategic management decision making is significantly influenced by new properties of the world – VUCA (Volatility, Uncertainty, Complexity, Ambiguity) (Bennett, Lemoine, 2014). It needs special strategy for the right choice of methods and tools in decision making (Snowden, Boone, 2007). Visual strategizing (Eppler, Platts, 2009) enables to deal with many challenges of modern world. As part of the project visual methods for knowledge structuring in strategic management and organizational development were reviewed (Kudryavtsev et al, 2016; Kudryavtsev, Gavrilova, 2017). Enterprise architecture methods and technologies were also offered for knowledge structuring in strategic management (Kudryavtsev, Kubelskiy, 2017).

4. Integration of universal and domain-specific KM methods and tools

Companies have to develop such an effective management system that combines all the necessary KM tools in order to avoid the risk of duplication. Integration of the tools may require to align procedures for universal and domain-specific tools; structures of documents and electronic forms, glossaries presenting the information; educational/training programs, motivation systems etc.; and to embed KM services into existing IT infrastructure.

5. Conclusions

The suggested research supports selection of methods and tools for KM in several domains of a company knowledge: customer knowledge, operations management knowledge, strategic management and organizational development knowledge. The research stimulates cooperation of “universal” and domain-specific tools for KM and suggests recommendations for proper integration of different tools.

References


