

The Multi-Criteria Assessment Expert Method used in the Ideas Management Intellectual System “GeoIdeametriK”

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Certain mechanism of assessment, ranging and selection of innovation ideas for the purpose of formation of effective portfolio of ideas are offered in the paper.

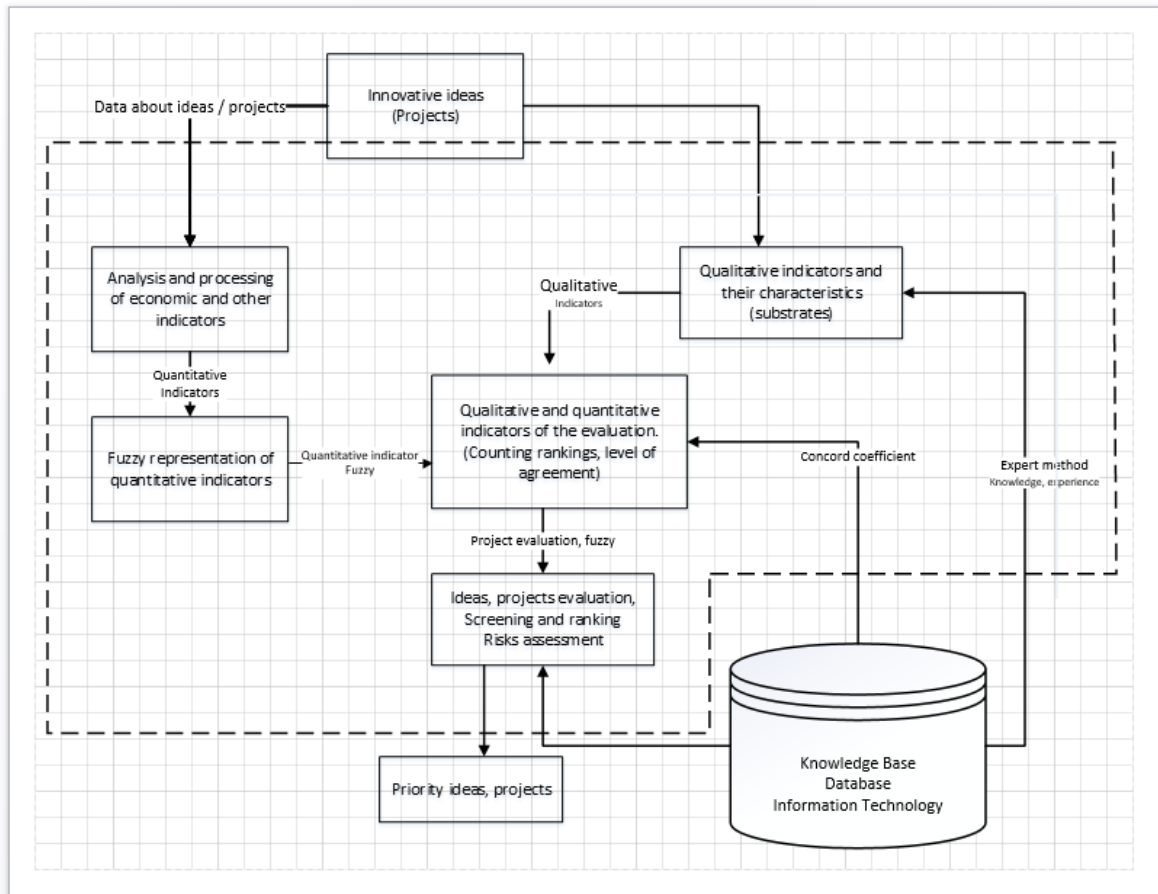
Innovation process in the mentioned model is presented as the sequence of certain stages with direct and reverse connections, the necessity of tight, open relation with environment is outlined. If the closed innovation process was based on the principle – that the innovation shall be developed only inside the company, the process of research, development and realization is defined by open innovation theory as the open system. It means transfer from utilization of closed knowledge and researches only internally (within one company) to efficient utilization of ideas, knowledge, studies existing in internal as well external environment.

For the purpose of optimization of the initial stage of open innovation process (idea generation stage), the tasks of screening (selection) of ideas and their further ranging are set.

Multi-criteria expert methods, based on the principles of the theory of fuzzy sets are used for solution of the set tasks. Multiple criteria imply the existence of qualitative and quantitative indicators, and simultaneous use of such indicators is possible with consideration of the properties of fuzzy numbers.

For the purpose of solution of the set tasks, all stages of expert method are realized, in particular: qualitative indicators of assessment are formed; in the case of existence of quantitative indicators, special approach is used; fuzzy scale of assessment is determined; the level of experts' agreement - concordance coefficient is calculated, weights of indicators are calculated, as well as integral fuzzy assessment of each idea based on them; using Chang method, fuzzy indicators are adjusted to distinct (natural) numbers, and further ranging of the selected ideas is performed.

Quantitative values of risk in certain conditions is also calculated, making the idea ranging process efficient.



The above-described approach towards solution of the set tasks conditions: selection of ideas, oriented towards effective goal and strategies, their arrangement according to importance and then – realization of priority ideas.

Key words: „GeoIdeametriik“, Intellectual System, Management of Innovation Ideas, Idea management technology, Group Decision Making System