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KNOWLEDGE METAMODEL FOR CROWDSOURCING INNOVATION INTERMEDIARIES

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Open innovation is a hot topic in innovation management. Its basic premise is open up the innovation process. The innovation process, in general sense, may be seen as the process of designing, developing and implementing a novel product or service to improve the value added of a company.

Open innovation is thought to bring a number of benefits such as faster time to market for products, access to unique knowledge external to the organization, less cost of innovation, better adaptation of products and services to customer needs, commercial utilization of knowledge or technology that otherwise would have been wasted, shared risk in product and service development, and enhanced company image and reputation. The ideas and expertise can be found outside a company's boundaries and exported from within, and can create significant value for the company (Wallin & Von Krogh, 2010).

Chesbrough, (2006), in his book, showed the open innovation paradigm in two ways: introducing external ideas in the internal innovation process; and putting their R&D findings in the market. There are identified three archetypes of the core processes in companies following an open innovation approach: the outside-in process, inside-out process and coupled process. Gassmann & Enkel, (2004) study shows that each company implements one of the three open innovation strategies (inside-out, outside-in or coupled), and also there are company that chooses one primary process but also integrates some elements of the others.

The term crowdsourcing was introduced by Jeff Howe and Mark Robinson as a way of using the Web 2.0 tools to generate new ideas through the heterogeneous knowledge available in the global network of individuals highly qualified and with easy access to information and technology (Howe, 2008).

Innovation intermediaries, in general sense, are organizations that work to enable innovation, that just act as broker or agent between two or more parties. Usually, they are also engaged in other activities like inter-organizational networking and technology development and related activities (Daziel, 2010).

A crowdsourcing innovation intermediary is an organization that mediates the communication and relationship between the seekers – companies that aspire to solve some problems or to take advantage of any business opportunity – and a crowd that is prone to give ideas based on their knowledge, experience and wisdom. The crowd is composed by groups of specialists in different areas, such as individual researchers, research teams, labs, post-graduate students and highly qualified individuals.

Based on Ramos, Cardoso, Carvalho, & Graça, (2009) crowdsourcing innovation brokering model, on the literature review on open innovation models and intermediaries, we propose a knowledge metamodel for crowdsourcing innovation that integrates three main modules – knowledge transfer, mediation and community building – composed with eight main functions: diagnostics, brokering, scanning and information processing, network access, evaluation, project management, IP management, and commercialization. These three modules have activities that include all the open innovation strategies: bringing ideas from the crowd to the company (outside-in), taking internal technology to the market (inside-out), and potentiating collaborative developments between companies and the crowd (coupled). It also comprises activities that cover all the main phases of innovation process idea generation and evaluation, product development and commercialization.

This knowledge metamodel will facilitate the development of a structured and integrated knowledge repository (KR) that allows managing information and knowledge created by the three value creation processes and will also be a facilitator for the emergence of such intermediaries.

This research project will be developed following Design Science methodology and it was planned to be undertaken in two main phases: the first phase to conceive a conceptual framework of the crowdsourcing innovation intermediary ontology, and a second phase to develop the conceptual architecture of the knowledge repository.



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We will use the Proof of Concept technique, with the definition of predefined scenarios, to demonstrate the usefulness of the KR architecture prototype.

The next steps of this research project will be to evaluate the knowledge metamodel with a panel of expert in open innovation. This task will be made using semi-structured interviews conducted to national and international specialists in the area. Then the knowledge metamodel will be revised through the data resulting of the analysis of the interviews. This data analysis will also be used to develop a taxonomy for crowdsourcing innovation intermediaries. Moreover it will be made a literature review on standards for repository architectures with interoperability' abilities and designed the architecture of the KR. Finally, it will be developed a prototype of the KR and designed scenarios to demonstrate its full functionality.

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