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Knowledge management in the digital transformation (2)

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KM FOR INNOVATION: DESIGNING INNOVATIVE CONCEPTS FROM DATA

Abstract

We have entered a new innovation regime: that of acceleration and intensification. These situations of intensive innovation and disruption question the identity of the objects. The space ecosystem does not escape this observation. Can Knowledge Management serve this purpose? One would naturally tend to answer 'yes', provided that the conception of knowledge can always be referred to a design activity in the broad sense or to an interaction of viewpoints. Innovation is fed by questions and knowledge. The questions result from a knowledge of trends that requires the implementation of a technological watch and more broadly of economic intelligence. The questions call for answers, which, if available, are in the form of information, but when this is not the case, are simply designated by a concept. As far as knowledge in the strict sense is concerned, it is this knowledge that will enable us to move from a concept whose existence is only hypothetical to a meaningful set of mutually compatible objective knowledge. This schema is congruent with innovative design theory initiated by A. Hatchuel and B. Weil: the C-K theory. In this paper, we will examine how KM can produce innovative concepts when implemented on data. In a previous paper we showed how the notion of data presupposed that of knowledge. Here we will show how we can mobilize data to implement an innovative concept but also to produce the initial concept at the start of this implementation. To do so, we will use a multi-viewpoints knowledge engineering methodology that proves to be particularly suitable for the description of complex systems involving different viewpoints. The notion of complex system or ecosystem, in turn, proves to be well adapted to consider the development of innovation and more particularly of disruptive innovation. This is because it allows us to connect fields of knowledge that do not initially belong to the same universe of knowledge. When a connection is made between distant domains – at least one of which is the spatial domain for what interests us here – a breakthrough innovation is likely to emerge. Thus posed in terms of emergence within an ecosystem, a disruptive innovation avoids having to be classified either as a market-pull innovation or as a technology push innovation. It obeys a dynamic of interaction of viewpoints that can be indifferently related to technology, usages, environmental values, human values, etc. What we prefer to refer to as an ecosystemic innovation. We will show how the usual notions of KM are defined in this methodology and we will give examples. In particular, we will present an example of an innovation produced on this basis.