

**Knowledge exchange in innovation networks: How networks support open innovation in food SMEs**

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**Abstract:** Knowledge exchange is a prerequisite for learning and consequently for innovation. Through open innovation, the innovating firms establish ties with other organizations, in order to innovate. At the baseline, open innovation is thus the exchange of knowledge through in- and out-flows of the knowledge at a company. Formal networks can provide access to other organizations and otherwise unavailable knowledge and resources and are seen as the locus of innovation. Four main categories of knowledge exchange can be distinguished: socialization, combination, articulation, and internalization. Within these categories, distinct but interdependent processes of knowledge exchange take place as described in the innovation production process (IPP) which consists of three main steps, knowledge accumulation, knowledge transformation, and knowledge exploitation (Roper et al., 2008). The objective of this paper is to explore how formal networks contribute to the categories of knowledge exchange and to each of the three steps of the IPP in order to conclude on how networks can facilitate open innovation among their members.

Data are collected by means of three case-studies conducted in three Flemish formal networks which focus on enhancing the innovativeness and learning capabilities of micro, small and medium sized enterprises (SMEs).

Our findings confirm the importance of networks in the process of knowledge exchange and innovation for SMEs in the food sector. The most important role of the networks is to create the appropriate environment according to the type of knowledge and the step(s) in the innovation production process focused on. Furthermore, it appears to be a very important task of the network to stimulate actively knowledge transformation into innovation outputs such as new or improved technology or product prototypes. Thereby, not only short-term effects should be aimed at, but also long-term effects e.g. for organizational innovation, should be taken into account.

In conclusion, all three networks follow very different approaches in order to facilitate, stimulate and support knowledge exchange and innovation among their members. Based on the results, managerial as well as policy implications are posed towards network members, i.e. the SMEs, network coordinators and researchers.