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Analysing the Eco-Innovation Process in a UK Food Processing Firm.

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The eco-innovation process can be defined as deliberate shifts undertaken by firms to move away from unsustainable practice (Ehrenfeld, 2008). Such shifts might include changes in technologies, and ways of thinking about these to improve ecological performance e.g. resource productivity. The Literature on innovation provides rich accounts of the factors which might stimulate the development of eco-innovations e.g. environmental regulation or competitiveness, and the consequences of implementing new technologies. However, there is relatively little literature which considers the eco-innovation process. This paper reports results from a study on eco-innovation in the context of food and sustainability. Although much of the research on this particular topic has concentrated on farming and the behaviour of consumers, little is known about the intermediate actors e.g. food processors and manufacturers who provide a critical link in the food supply chain. This paper presents research from a firm in the UK food processing sector to help address these two gaps in knowledge.

The paper draws on innovation and organization literatures to frame a concept of 'eco-innovation journey' as a socio-technical, messy and non-linear learning process. The framework developed in the research describes eco-innovations as a process of temporal sequence of events that might explain how practice changes in a firm over time. These events include, among other things, changes in ideas, people interactions and selective attention of participants. Hence, eco-innovations encompass a messy process in terms of twists and turns, leaps and dead-ends that are inherent with the eco-innovation journey.

The method identified to explore the construction of eco-innovation process within a UK food processing firm was a longitudinal case study undertaken through action research (AR). The relationship with the firm made AR possible for the researcher to participate in the learning of, and action around eco-innovations. Moreover, an ethnographic approach was adopted to explicate events of eco-innovation activities over time, involving participant observation. Qualitative data were collected via reflective diary and semi-structured interviews. Findings were analysed using coding and clustering methods.

Results from this longitudinal case study suggest that learning of, and actions around eco-innovations can be described as an iterative process, which includes three critical elements: information, knowledge and measures. Information includes motivating factors, internal and external to the firm, articulated by participants, e.g. cost of factor input and environmental regulation. Knowledge resulting from the learning processes in the firm can be described as cyclic, and involves experimentation and success indicators e.g. ecological performance. Finally, measures developing as results of learning processes describe eco-innovations in terms of management, technical or marketing solutions. Moreover, the interplay of many actors that engage and disengage in the eco-innovation journey over time makes it a messy and dynamic process in terms of power struggles and negotiations. Overall, this study identifies that the dynamics of many variables and fluid participation of actors that forms the conditions determining the nature and direction of eco-innovations in the firm.