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#### Abstract

#### **Socio-technical Transitions to Environmental Sustainability:**

#### **A 3D Perspective at Organizational Level**

**Keywords:** Actor-network theory, sustainability transition, technological product innovation, translation process, information technology

The increasing scale of environmental externalities related to firms' activities shows the limits of today's economic system and development path. It forces firms to integrate environmental sustainability concerns, not only in their operations but also strategically in their business processes, to ensure legitimacy and the protection of their competitive advantage. More specifically, the development of energy efficient technological product innovations - i.e. the integration of energy efficiency requirements in the innovation process of technological products, has recently received a growing deal of attention both from the business and academic worlds.

However, if a change toward a more environmental-friendly behavior is acknowledged, strategic implementation of energy efficiency considerations remains difficult. This is partly due to the poor understanding of human and technology's mutual influence in this regard.

In this paper, we draw from the actor-network theory (ANT) to bring light on socio-technical sustainability transitions in the information technology (IT) sector<sup>1</sup>. First, we show the co-evolution of society and technology, and its implication for sustainable development<sup>2</sup>.

Second, following qualitative methods we examine if and how internal actors in the firm perceive and mobilize energy efficiency concerns into IT products. We illustrate this point with a preliminary analysis on a series of semi-structured interviews conducted at US and European research sites of a multinational IT company.

ANT proposes a sociology of science<sup>3, 4</sup>. Callon and Latour<sup>5</sup> assert that technology is not to be seen as a mere autonomous artifact. There is a social shaping of technology, an established process of co-evolution and co-production of human and non-human actors. Therefore, the integration of energy efficiency issues in the technological product innovation process is understood as a co-constitution and transformation of artifacts, actors and practices within the firm.

People and objects interact with each other and create actor-networks. ANT focuses on how these socio-technical actor-networks are created through a process of translation(s) -i.e. interpretation(s) that every actor makes of other actors present in the network. We will examine the translation(s) taking place in the company when it comes to strategically integrate energy efficiency requirements and conduct an analysis of the micro-dynamics of stakeholder collaborations when building more sustainable business processes.

- (1) Rice, L. (2011) "Black-Boxing Sustainability", *Journal of Sustainable Development*, Vol 4, N°. 4, pp 32-37.
- (2) Paredis, E. (2011) "Sustainability transitions and the nature of technology", *Foundations of Science*, Vol 16, N°. 2-3, pp 195-225.
- (3) Callon, M. (1986) "Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay", in Law, J., *Power, action and belief: a new sociology of knowledge?* London Routledge, pp 196-223.
- (4) Law, J. (1992) "Notes of the Theory of the Actor-Network: Ordering, Strategy, and Heterogeneity", *Systems Practice*, Vol 5, N°. 4, pp 379-393.
- (5) Callon, M. and Latour, B. (1981) "Unscrewing the Big Leviathan: How Actors Macro-Structure Reality and How Sociologist Help Them to Do So?" in Cicouvel, A.V. Ed., *Advances in Social Theory and Methodology: Towards an Integration of Micro and Macro-Sociology*, Routledge, Boston, MA, London, pp 277-303.