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Organizational culture as a knowledge repository for increased innovative capacity

M. Lemon*, P.S. Sahota

International Ecotechnology Research Centre, School of Industrial and Manufacturing Science, Cranfield University, Cranfield, Bedfordshire MK43 0AL, UK

Abstract

Just as 'innovate or die' is one of the mantras of today's economy, knowledge is increasingly recognized as the key underpinning resource. Effective innovation that improves the ability of an organization to remain competitive within an uncertain environment requires the creation, capture, harvest, sharing and application of knowledge and expertise. The ability of an organization to 'learn' means that knowledge must be utilized on problems and opportunities as they emerge and is generated through an ongoing evaluation of how those responses have impacted on the organization and its operating environment. Much has been written about the process of innovation from idea generation through downstreaming and operationalization to commercialization. Organizational culture has been recognized as a primary determinant within innovation and the need to better understand this relationship or process is a necessary prerequisite to nurturing it in a more structured and systematic manner. Innovation is holistic in nature and is inseparable from the culture that facilitates or constrains the ability to 'add value'.

This paper explores and presents organizational culture as a 'bundle' of knowledge repositories with storing and information processing capabilities. Drawing upon the knowledge management and innovation literature the location, attributes and characteristics of these repositories are provisionally identified and mapped. Primary data drawn from an R&D environment within telecommunications is then used to develop a tool for auditing, intervening, changing and maintaining knowledge repositories. This is a three-stage process comprising an *audit tool* that identifies various cultural archetypes and their respective audited knowledge layers; an *intervention tool* that suggests various interventions and strategies for targeted change to the audited knowledge layers and an *innovation maintenance tool* that proposes strategies for 'maintenance' of the desired organizational culture archetype. It will be argued that organizational learning plays an important part in ensuring that knowledge repositories are continually replenished and updated to enable efficient responses to changes in its competitive environment.
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1. Introduction

The key role of innovation in managing the uncertainty facing organizations and creating added value is becoming recognized as increasingly important as are the dynamic knowledge capabilities underpinning it (Tidd et al., 2001). Innovations are, in part, the result of a group's knowledge of new markets and or new technical possibilities leading to improved product development. Efficient operations emerge from ensuring that both tacit and explicit knowledge is shared and contrib-

ute to a collective understanding about how things work and how they could work. This is close to the definition of culture as the 'way we do things around here'. This is what inspired Hewlett-Packard's Lew Platt to say: "If only HP knew what HP knows, we could be three times more productive!" This is especially true in a globalized world of constantly changing and challenging competitive markets. To remain competitive, organizations must, therefore, efficiently and effectively create, capture, harvest, share, and apply their knowledge and expertise. They must also have the dynamic capability not only to bring that knowledge to bear on problems and opportunities as they emerge, but also to develop a dynamic capability to continually replenish it.

Rapid change means quicker knowledge obsolescence and entails constant internal adaptation including new

* Corresponding author. Tel.: +44-1234-754981; fax: +44-1234-750163.

E-mail addresses: m.lemon@cranfield.ac.uk (M. Lemon); p.sahota@btinternet.com (P.S. Sahota).

strategies, structures, processes and tools and most importantly a need for people and organizations to learn quickly (Prusak, 1997). Because knowledge is not simply data or information, but is rooted in human experience and social context, its management demands that close attention is paid to the people and culture as well as to organizational structure, and information technology (Havens and Knapp, 1999). Earl (1994) suggests that knowledge management requires a combination of technological and social action while Davenport et al. (1998) stress the need to successfully navigate the political, organizational, and technical challenges, as well as appreciating the depth of the cultural change required. Organizations must develop ways of ensuring that the culture is conducive to knowledge sharing (Wharton, 1998). Wah (1999) puts forward the idea that the key issue is to 'instill a corporate-wide culture that encourages knowledge sharing', while Martiny (1998) stresses the human side of managing knowledge as the most difficult. All this points towards the importance of the softer, social aspects of organizational culture and knowledge sharing.

Individuals acquire the information to facilitate problem solving and decision making and individual cognition is a central element in how and what data are acquired, how they are organized (information) and subsequently assimilated and used (knowledge) within an organizational context. What constitutes a problem and potential solution inevitably varies with individuals. In other words behavior is tied to the world as it is perceived (Green and Lemon, 1996). The latter point is important in a cultural sense because the 'world view' that underpins organizational behavior may not coincide with that of the individuals or groups carrying out that behavior. It is only through the process of sharing and assimilating information, often determined in large part by high levels of reciprocal trust, that organizations can move from collections of individuals to a more collective culture. This culture may, for example, retain knowledge of the past even when key organizational members leave (Weick and Gilfillian, 1971).

The information used for decision making is stored in various physical locations (Simon, 1976). It is collected, stored and accessed through a range of standard procedures (Cyret and March, 1963) and can be influenced by protocols in dress and social interaction and the physical environment within which that interaction takes place e.g. office layout, status attached to office space and fittings (Smith and Steadman, 1981).

This paper presents a conceptual model of organizational culture as a multilayered knowledge repository. Drawing upon a range of literatures (e.g. knowledge management, organizational learning and innovation) culture is conceptualized as a 'bundle' of knowledge repositories with knowledge storing and information processing capabilities. The location, attributes and the characteristics of these repositories are then identified and mapped onto a knowledge matrix. Primary data, collected from interviews with R&D personnel in the telecommunications industry, is then used alongside this model to develop a tool for auditing, intervening, changing and maintaining knowledge repositories. This is a three-stage process comprising an *audit tool* that identifies various cultural archetypes and their respective knowledge layers; an *intervention tool* that proposes a range of interventions and strategies for targeted change in the knowledge layers and an *innovation maintenance tool* that suggests strategies for 'maintaining' the desired archetype.

2. Towards a conceptual model of organizational culture

The following section uses existing organizational literature to identify a set of layered knowledge repositories, each containing distinctive forms of knowledge, which collectively contribute to a conceptual model of organizational culture.

2.1. The environment

In systems terms the environment is that which resides outside of a system of interest (Fortune and Peters, 1990) and, perhaps more relevant to this paper, that which can influence, but is not influenced by that system. In other words, much of the uncertainty that an organization encounters is grounded in its environment. Global economics, lifestyle changes, the educational competence of potential employees etc. will all affect how an organization operates, but as a rule that organization will only have a limited influence on the processes themselves. It is, however, a key feature of a learning culture to scan that environment, formally and or informally, to access information and insight about it and to introduce adaptive capability into the organization to respond to it. The term redundancy is often perceived as pejorative, as are slack and fat. They can also indicate the ability to respond to the unforeseen in ways that are not covered by existing procedures and mind-sets, however effective they are in meeting clearly defined objectives with limited short-term uncertainty attached to them.

2.2. Mission, vision and values

An organization's values can be communicated partly through the abstract 'cultural stamp' of a mission statement. These are often dismissed as meaningless or disreputable (Eden and Ackerman, 1998) because they appear ambiguous and fail to translate into a framework for action. They appear like proverbs for general consumption, the motherhood and apple pie of management.