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“Visual characteristics of management controls in new product development: How codifying supports collective creativity”

Abstract

The purpose of this paper is to investigate how visual characteristics of management controls (MCs) support actors in their conversational practices of collective sense-making to develop new products. By drawing on a knowledge codification perspective, the results of this study evidence that actors develop and rely on different MCs with diverging visual qualities during the knowledge creation process. Firstly, they develop a “core” MC that reflects the shared language and builds common ground for intensive debates. It outlines the entire process and serves as infrastructure to reorient actions towards organizational goals and ensure efficiency. Later in the sense-making process, the actors add a set of “supplementary” MCs which serve as a repository of function-specific knowledge and ensure this is accessible across functional boundaries. As a consequence, the physical qualities of the supplementary MCs allow individual actors and groups to extend their capacity to process cognitive content, which transforms the MC into a “creativity resource”. These are easier to manipulate, combine and share with others than in a disembodied form which fosters the creation of new knowledge. However, the core and supplementary MCs are mutually interrelated, forming a MC system that helps actors to become orientated towards flexibility while at the same time reoriented towards the efficiency required for new product development.