Proposition de recherche doctorale

Exploration of organisational appropriation or rejection of cloud computing solutions

Mots clés :

- **Directeur de thèse** : valérie FERNANDEZ
- **Co-encadrant(s)**: Divers
- **Unité de recherche** : Laboratoire Traitement et Communication de l'Information
- **Ecole doctorale** : École Doctorale Informatique, Télécommunications, Electronique de Paris
- **Domaine scientifique principal**: Divers

Résumé du projet de recherche (Langue 1)

This thesis project will investigate organizational issues related to the adoption of Cloud Computing solutions. Cloud Computing solutions fall within the virtualization and “servicization” trends in Informations Systems, thereby leading organizations to manage and operate their IT as a utility. As such, their adoption by organizations represents a new form of information systems outsourcing, which raises a broad range of issues. Although practitioners’ literature focuses on technical, performance, costs, reversibility, security and legal aspects as the main ones, the introduction of such disruptive innovations also results in organizational transformations that need to be taken into account. As opposed to a pure rational-actor decision perspective, we therefore choose a more sociological approach. We thus consider Cloud Computing technologies adoption processes as a social construction in which different stakeholders are involved in the legitimation of innovations, through sensemaking and the production of shared discourses, symbols and values (Yang and Hsu, 2011). Such stakeholders encompass technologies promoters, organization’s CEOs, CIOs and heads of departments, as well as employees. Cloud Computing services are therefore supported by an “organizing vision” (Swanson and Ramiller,1997) developed by their promoters in order to be conducive to their adoption. But they also induce organizational mutations that arise through the transformation of employees’ functions, and especially those of CIOs and heads of functional departments that may support or impede their adoption. Such transformations of functions and roles need to be analyzed, as well as attitudes and discourses of CEOs, CIOs and Heads of functional departments towards Cloud Computing solutions. Cloud Computing solutions may therefore create tensions between CIOs and heads of functional departments. Given their underlying outsourcing and “servicing” logic, they may represent threats for the former, whereas they constitute opportunities for the latter (Fimbel, 2003, Bahl and Rivard, 2004; Dibbern et al., 2004; Lacity et al., 2011). As a form of externalization strategy, the adoption of Cloud Computing solutions may be viewed as a threat by CIOs, afraid of having their prerogatives undermined regarding the choices of equipments and services, for the benefit of heads of functional departments. They may also lose control on IS urbanization. Conversely, Cloud computing solutions can provide heads of functional departments access to opportunities to perform activities in a more efficient and effective way. Big data is an example of resources that can be better leveraged. For example, thanks to possibilities offered by Cloud Computing solutions, marketing departments can benefit from accrued opportunities of improving their performance through the use and outsourcing of big data-type studies. Lastly, adoption of Cloud Computing services is also driven by employees’ new practices that are imported into organizations through “Bring Your Own Device”, teleworking or “working mobile”. Therefore, there is a growing phenomenon whereby employees use their own private devices and data in their workplace, be it for work or private purposes (Gens et al., 2011; Harris et al., 2011). Called “consumerisation”, it provides them with a new role of prescriptors regarding organizations’ technological choices (Broussel, 2012). Personal practices and uses of individuals embedded in their political, economic and social spheres thus tend to impact organizational practices. Such interaction between individual users’ practices developed in the context of private use, and those developed in the context of their professional activities within the organization needs to be further investigated, as well as the process whereby such polymorphous private-professional practices may be imported within the organization and eventually impact IS-related decisions (Crowston et al., 2010). To do so, we will study how the adoption of ICT tools by individuals in the context of their private activities will change their practices in a professional context (be they onsite or remote, such as teleworking and working or managing mobile), and their IS-related needs and expectations towards their company (Baskerville, 2011). Individuals are driven by motivations related to their consumer status. They have developed a variety of practices including the use of “friendship” networks (such as Facebook) and professional networks (such as LinkedIn), remote data storage (such as files and pictures, using Dropbox and Picasa), or the publication and sharing of information posted on blogs and forums. Such ICT tools have been introduced over time in the private sphere by solution providers through an “organizing discourse” now shared by many actors. Such behaviors may change individuals’ relationship to existing tools offered by organizations and their choices, guided by their own motivations, may interact - and retroact - with organizational choices. As a result individuals would tend to take a highly prescriptive character for the “cloud” and virtualized services. Cloud Computing solutions may therefore raise radically different new issues for respectively CEOs, CIOs, departments managers and employees. Consideration of these different stakeholders and their interactions will provide us with the holistic vision which is necessary to develop further the understanding of the process of adoption, implementation and use of Cloud Computing solutions within organizations. It will also help to define more precisely barriers to Cloud Computing technologies adoption (Repslagheerand et al., 2013; Trigueros-Preciado et al., 2013).

Résumé du projet de recherche (Langue 2)
In spite of the growing adoption of cloud computing by organizations, no in-depth IS research on how individual practices interact with cloud-based organizational designs has been carried out so far. Cloud-based Information System research mainly focuses on technological fields in terms of architecture, data security issues (Weiss, 2007; Cigref, 2013, Kshetry, 2013) or business effects and neglects users' practices and motivations for adoption. This research aims to fill this gap in order to improve internal organization and management of Information System. In doing so, it contemplates to go beyond purerational-actor decision perspectives that emphasize technical and performance aspects as the main drivers of Cloud Computing solutions adoption. It introduces socio-technical and organizational aspects such as IS governance as central elements of this process. From a practitioner point of view, this study may contribute to better understand the process of adoption and appropriation of cloud computing technologies. Such information will help solutions providers and manufacturers to better determine users' expectations, so as to shape and tailor appropriate solutions and build their market. Furthermore, it may help organizations that seek to transition to a cloud-based type to adopt appropriate change management principles, as such transformation may prove to be tricky and needs to be carried out carefully.