

Chapter 15

Collaborative and Distributed Innovation and Research in Business Activity

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ABSTRACT

This chapter describes how Value Networks (VNs) can be applied in multi-stakeholder business and research environments to characterise different approaches to collaboration. In an attempt to highlight some of the issues, the authors compare a couple of communities that adopt different approaches to Knowledge Exchange (KE) and resource discovery. A collaboration framework is used by one of the communities for on-line discussion, chat, and Web conferencing to supplement KE between fairly regular in-person meetings. The other community applies more traditional collaboration tools such as e-mail to supplement face-to-face meetings. One of the research objectives was to establish the extent of multi-dimensional KE, i.e. from academic to business sector, business sector to business sector, and government to business sector. Conditional on successful e-facilitation, a quickening in KE was apparent in the community that used the collaboration framework. This was observed to a lesser or greater extent across all stakeholder groups. E-facilitators are those that engage stakeholders into making on-line submissions. The authors discuss the importance of satisfactory levels of support for collaboration frameworks in community projects. They compare the role of the e-facilitator with a more traditional “business broker” and compare the behaviour of the communities with and without particular collaboration tools. The authors conclude that VNs helped provide a useful characterisation of the roles that the various contributing community elements play and the types of interaction between them.

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INTRODUCTION

This chapter will describe how we used an approach based on Value Networks (VNs) to characterise two different communities, both of which try to join up research and business activity. A collaboration framework is used by one of the communities, but a mix of more traditional tools such as e-mail and face-to-face (F2F) meetings are used by the other. We also describe some of our experiences of adapting the tools designed for collaborative learning and research to meet the evolving needs of the community that used the collaboration framework.

Using ICT to manage and provide tools for a distributed community enables us to capture information about that community. There is nothing new in this, it is going on all around us and sometimes referred to as “Reality Mining.” Indeed the use of data to understand the world around us has been referred to as the “Fourth Paradigm” (e.g. by Bell, et al., 2009). Understanding and modelling such a community in the form of a Value Network (VN) can take us a step beyond the Enterprise and the Supply Chain. Much of the work on Value Network analysis has been done by Allee (2008). We describe the VN perspective, this is the approach we use to help us understand the complex sets of social and technical resources and relations that create business, economic and social value in our two communities. The VN literature says “Value networks are complex sets of social and technical resources that create business, economic and social value.” We use the VN concept to help us understand the role of the Sakai collaboration environment (technical resources) in knowledge exchange in a range of contexts. Sakai is a community source Collaboration and Learning Environment (CLE), see Sakai (2011) which is introduced later on as our preferred collaboration platform.

A Value Network is a business analysis perspective that describes social and technical resources within and between businesses. Its nodes, depend-

ing on the scale, can represent people, groups, companies or roles. Multi-level or layered value networks may be required to capture the salient features of the process of interest. The nodes are connected by interactions that represent tangible deliverables (e.g. contracts, payment) and intangible ones (e.g. benefits that build relationships, favours). Whilst more abstract in concept and by the way it is usually applied, we will attempt to show that Value Network Analysis can replace Enterprise Modelling as a way to represent a distributed community. Understanding the network can help us understand the role each partner is playing, how and where new partners might be added, and how to improve the efficiency of business processes to the mutual benefit of the whole. Value Networks also evolve over time (e.g. Allee & Schwabe, 2009). In a similar way we have found that the requirements of an on-line community also evolve over time as they work together and their understanding of the tools matures. Key to this is to provide a platform that allows multi-directional Knowledge Exchange (KE) and new *ad hoc* communities of interest to form and old ones to wither when they become inactive. The benefit to stakeholders is rapid generation of solutions to problems. A requirement of the groups we worked with is that the software tool set evolves with their need. A key discussion point of this research is that open source collaboration software provides this flexibility and can also be applied to develop ‘private Cloud’ access to shared resources. As we discuss, this provides research centres with the flexibility to develop software that solves communication problems for their research groups and remains in tune to local data protection legislation.

This chapter presents the case for developing new research collaborations involving business and academia where the functional activities are centred about e-research tools required by the users. We start by discussing some examples of commercial cloud based tools for business, before moving to discuss Sakai, a community/

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