Identifying Knowledge Assets in an Organisation

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INTRODUCTION

The Internet has revolutionised the way that business is conducted by customers and organisations that serve them. Texts are now being devoted to explaining how e-business can be practically undertaken, for example see Lawrence et al. (2003). There is a rapidly emerging trend of organisations using Intranet portals for internal business processes and communication between employees and their organisation. This is well documented in this and other books, for example see Tatnall (2004).

Systems that deploy Intranet portals with intelligent agents and e-processes have replaced routine procedural knowledge used by clerical and lower level management levels. These portals facilitate self-service as a first step toward developing more knowledge-intensive knowledge management (KM) portal applications. However, the greatest value to be derived from well-designed intranet portals is probably their potential as a KM tool (Lloyd-Walker & Soutar, 2005). Portals must be convenient to use and represent an advantage to users over more traditional means (Peansupap & Walker, 2005a). Also, appropriate change management practices should be adopted when planning, deploying, and applying portals as a tool for KM in an organisation to ensure that an appropriate knowledge sharing culture exists where both the organisation and its staff values and rewards knowledge-sharing (Fernie, Green, Weller, & Newcombe, 2003; Gupta & Govindarajan, 2000; Lloyd-Walker et al., 2005).

We will now focus on our main theme of describing a prototype KM portal developed for a major Australian construction contractor. We set aside further detailed discussion of the important diffusion and adoption issues. These are addressed in depth elsewhere (Attewell, 1992; Peansupap & Walker, 2005b; Rogers, 1995).

This article is structured as follows. We have provided a brief introduction to knowledge portals in this section and highlighted further references for ICT diffusion. In the next section, we provide background to the prototype KM portal tool to enable readers to understand its scope and limitations. In that section we also briefly explain how a soft systems methodology (SSM) approach facilitated the development of our ideas. We then focus our next section on describing the prototype. This is followed by a brief discussion of future trends and concluding comments. The value of this work lies in its novel approach to designing a knowledge portal and the conceptual work that supports this prototype KM system.

BACKGROUND: THE SSM PROCESS

The KM tool described in this article evolved from a PhD research project of KM as applied by a major Australian construction contractor (Maqsood, 2006). More specifically, it focussed on investigating how knowledge in the pre-tender process of prospective construction projects is identified, shared, and used. This knowledge is related to establishing and maintaining contact with clients and design teams associated with these projects and potential members of the supply chain that would be involved in tendering for the project. The research applied a SSM approach for gathering data, this yielded unexpected insights, and sources of rich tacit knowledge that had been hitherto poorly explicated, shared, and understood by many participants in the process. The development of rich pictures (a technique of representing a complex situation as a kind of cartoon that highlighted salient issues through dialogue balloons and symbols) was used as part of this SSM approach. SSM, in its idealised form, is described as a seven-step process as illustrated in Figure 1 (Checkland, 1999, p. 162-183). This yielded a potentially powerful means whereby participants could visualise knowledge assets and make sense of complex situations. We decided that rich pictures could provide a stimulating visual representation of a knowledge intranet portal, which could serve as a tool for managing knowledge

about a process including mapping knowledge assets that could be rapidly accessed via that portal.

The portal is currently a prototype tool developed from the PhD work that was tested by potential users for their reaction (which was generally favourable). While it is yet to be developed to a production stage, it nevertheless provides an intriguing approach to developing knowledge portals, not only for the pre-tendering management process but also for a range of other processes. This could also deliver a widely linked process map for an organisation that could enable KM to be developed through a business process redesign and renewal.

A soft system thinking approach seeks to explore "messy" problematic situations that arise in human activity. However, rather than reducing the complexity of the "mess" so that it can be modelled mathematically (hard systems), soft systems strive to learn from the different perceptions that exist in the minds of the different people involved in the situation (Andrews, 2000). SSM may be used to analyse any problem or situation, but it is most appropriate where the problem "cannot be formulated as a search for an efficient means of achieving a defined end; a problem in which ends, goals, purposes are themselves problematic" (Checkland, 1999, p. 316). More detail on this approach is explained in Walker, Maqsood, and Finegan (2005) and is briefly summarised as follows.

SSM Stages 1 and 2

The *problematic situation* was first identified in its unstructured form. The situation revolved around problems involving the pre-tendering decision and the way that it was often handled. Knowledge was poorly transferred and all the participants we interviewed felt that the pre-tendering decision could have been accomplished much more effectively. In Stage 2, knowledge was unearthed to explicitly express the problem. This involved interviewing as many participants in the situation as was practicable who could explicate their tacit knowledge about that situation. Tacit knowledge, feelings, and perceptions were made explicit through developing *rich pictures* that represent a connective human communication channel expressing the situation through an elicitation process from interviews and possible surveys. Respondents were also encouraged to graphically express their unease.

SSM Stage 3 and 4

This comprised the interpretation of the rich picture (refer to Figure 7) into a root definition to take the rich picture and offer a more systemic and formulaic summary that

Figure 1. SSM approach as a seven-stage process