Chapter 4.8
Collaborative Knowledge Management in the Call Center

Debbie Richards
Macquarie University, Australia

ABSTRACT

Collaboration is fundamental to the goals and success of knowledge management (KM) initiatives aimed at supporting decision making and problem solving. Yet many KM approaches and systems do not provide explicit mechanisms which allow knowledge to be collaboratively built up, validated and reconciled so that the more general goals of knowledge sharing and reuse can be achieved. In domains such as the call center, problems and solutions need to be created, retrieved, reworked and reused by multiple individuals and typically involves the use of multiple knowledge management tools, knowledge scattered across disparate sources and implicit "know-how". Acquiring, accessing, maintaining, sharing, reconciling and reusing knowledge in its various forms are particular challenges in the call center domain where the knowledge needed is complex and constantly changing made worse by short-term knowledge workers. The approach suggested allows knowledge, in the form of rules, to be incrementally acquired as the problem arises, in the form of cases, as part of the daily routine. Using the approach, knowledge workers are able to collaboratively and incrementally capture and maintain the heuristics they use daily for trouble-shooting. Further the system is designed to integrate to a wide variety of information and knowledge sources including legacy systems, recognizing the investment and value of such sources and minimizing the need to duplicate existing resources. This paper reports experiences and issues with knowledge management systems in the call center environment. A case study conducted during 2003-2006 is presented which describes how users found the incumbent systems and a prototype knowledge management system embodying the above approach.

DOI: 10.4018/978-1-60960-783-8.ch4.8

INTRODUCING THE CALL CENTER

In the period 2003-2006 we[1] have been working with the Sydney-based call center in a large multinational Information and Communication Technology (ICT) organization, which will be referred to as ORG X. Trouble-shooting failures or reduced system performance on the client's equipment was difficult and time consuming due to the complex environments involving multiple vendors, machines, software products and topologies, in an infinite number of combinations. It was no longer possible to expect a single expert to quickly find and resolve such issues. A better approach was needed, to allow both the accumulation of knowledge with guided trouble-shooting techniques, along with interfaces to all other relevant knowledge bases and data sources. The call center of ORG X received around 5,000 customer problem tickets per day globally, 1000 were emailed automatically from faulty equipment to the support center's case tracking software and another 4,000 per day came from customers, taking on average 2 hours to solve. According to their 2004 Annual Report, ORG X's cost of services as a whole were in the order of $US1 billion per annum. Better (re)use of trouble-shooting knowledge could save time and result in improvements to the bottom line.

Timely retrieval of the pertinent knowledge is an issue for all call centers involved in problem-solving. Additionally, while not necessarily true of ORG X, opportunities for career advancement in call centers are typically limited and motivation tends to be low with levels of 'churn' (the percentage of staff that need replacing) for call centers averaging around 31 percent, and as high as 51 percent among outsourced centers (Batt, Doellgast and Kwon, 2005). A knowledge management system which would allow call center workers to handle the routine problems more quickly and solve more of the interesting problems that were commonly passed to higher, usually more technical, levels of customer support, could provide greater employee satisfaction and stability as well improve the company's reputation and customer satisfaction.

A number of research instruments and techniques were used during this project. We began with an exploratory approach in the form of an indepth case study at our host organization together with review of vendor offerings and the related literature. The case study involved interviews, observation and surveys but moved into action research (as defined by Gummesson 2000) as we participated in the life of the organization and sought to improve the current knowledge management solution through the design, development and testing of a prototype.

Next let us consider the call center further by looking at the systems currently in use and the issues related to knowledge management.

CALL CENTER KNOWLEDGE MANAGEMENT AND SUPPORTING SYSTEMS

Traditional call center knowledge management software has supported case tracking of information such as customer details and the problem description including the product affected, operating system, version number, relevant error codes and who has been assigned to solve the case. These systems can be seen as an extension to Customer Relationship Management (CRM) systems. Integrating concepts related to CRM and KM recognizes the value of customers, the value of knowledge relating to products and services and the value of managing knowledge for, about and from customers (Gebert et al. 2003). Traditionally clients call front-line personnel but facilities for clients to directly enter, and sometimes solve their problems are becoming more common. In our domain the problem cases/tickets may be machine generated and electronically forwarded. The Internet has opened up the possibility of "customer coaching" or "one to one marketing" via technolo-