

Introduction

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1.1 Background and Scope

The purpose of this book is to present current experiences from industry related to the organisational implementation and use of collaboration technologies. Collaboration technology is defined here as all types of information and communication technologies that enable collaboration at various levels, from two persons co-authoring a document to inter-organisational collaboration where several companies are engaged in common tasks. Examples of such technologies include video and desktop conferencing, knowledge repositories, workflow management systems, online meeting schedulers and electronic meeting support systems. The number of organisations currently adopting these technologies is increasing rapidly. Collaboration technology constitutes the enabling infrastructure for key elements in business strategy today, such as knowledge management, process improvement, virtual teamwork, global collaboration, and e-Learning. Business experts such as the Gartner Group argue that “collaborative commerce” (c-Commerce) will represent the next stage in the development of e-Business applications, expanding beyond mere transaction processing to also include dynamic collaboration among employees, business partners and customers (Bond et al., 1999).

The term “organisational implementation” incorporates all activities related to deployment and adoption of a new technology, namely requirements specification, acquisition and/or design and development, installation, training and internalisation of routines for effective utilisation. Despite increasing diffusion of different types of collaboration technology in organisations, little formalised knowledge exists on how to implement these technologies in organisations to realise the potential benefits. Empirical studies to date have illustrated the complexity involved in implementing collaboration technology, involving a dynamic interplay between technological, organisational and project management aspects. However, much of this research does not address the practical

implications from these findings. There is a gap in the literature for sources offering solutions and guidelines for practice based on solid empirical research, also taking into account the contextual contingencies characterising projects in the “real world”.

This book is a contribution to fill this gap, by giving a detailed presentation of the experiences from implementing different types of collaboration technology in selected organisations. The focus here is on the strategies applied in each case for overcoming the various obstacles in the implementation process, and the measures taken to enable effective use. Rather than presenting “quick fix” solutions, the studies give careful consideration to the various barriers in the process, and the possible solutions for overcoming them. The case studies presented reflect the variation in collaboration technologies, applications and organisational setting characterising practice today. By including contributions from industry practitioners, first-hand experience from this type of implementation project is presented, together with analyses from outside observers.

The book also includes a review of previous empirical research on implementation of collaboration technology. While previous reviews have focused mostly on one or a few types of collaboration technology, the review presented here covers implementation research related to the entire spectrum of collaboration technologies. Based on this review, a taxonomy of implementation factors is developed for categorising the empirical findings. This taxonomy is used to structure the analysis of the case studies presented in the book, and can also serve as the basis for further research on collaboration technology implementation. The book thus constitutes a valuable reference for both practitioners and academics. In addition to offering useful experience and insight for practitioners, the book can be seen as a response to the call for more practical research, aimed at increasing the sensitivity of academics to “what is going on in practice” by describing, evaluating and interpreting practice (Markus, 1997).

1.2 Structure of the Book

The book consists of three parts. Part 1 (Chapters 1–4) gives an introduction to the area of collaboration technologies and previous research on implementation of these technologies. Chapter 2 provides an overview of different collaboration technologies, introducing a framework for classifying these. Chapter 3 presents a comprehensive review of previous research on implementation of collaboration technologies, with main emphasis on the practical findings from field-based research. Based on these findings, Chapter 4 introduces a taxonomy of implementation factors for collaboration technologies.

Part 2 (Chapters 5–10) contains six case studies of organisational implementation and use of different collaboration technologies. Together, these cover a wide range of technologies, organisational contexts and practical experience. Several of these chapters are written by invited authors, who are leading researchers in the field and have a close affiliation to industry.

Chapter 5, co-authored with Bjørn Tvedte (Statoil IT), describes the organisational process related to implementation of a portfolio of collaboration technologies in Statoil. This case gives a unique insight into how implementation and use of different collaboration technologies is inter-related, calling for an integrated perspective on this implementation. The chapter also presents the on-going strategic process in Statoil for defining the next generation of collaborative infrastructure in the company.

Chapter 6 presents the experiences from implementation and use of collaboration technologies in Kværner, a multinational engineering group. The first part of the chapter discusses different barriers related to implementing a global network infrastructure in Kværner. The second part presents experiences from Kværner's current use of collaboration technologies, and further challenges in their process of becoming a global, virtual engineering company.

In Chapter 7, by Steven Poltrock (Boeing) and Gloria Mark (University of California, Irvine), an in-depth account is presented of the implementation of data conferencing services in the Boeing company. Over more than a decade, the company has gradually developed a robust data conferencing service that today is widely used within the company for supporting distributed meetings. The chapter presents various technical and organisational challenges in this process, and the strategies applied for meeting these challenges.

Chapter 8, by Leysia Palen (University of Colorado, Boulder) and Jonathan Grudin (Microsoft Research), analyses the adoption and current use of online calendar tools in two major companies in the IT industry, Sun and Microsoft. By contrasting these findings with similar studies conducted in the mid-1980s, the chapter identifies important factors leading to the universal adoption and use of this technology within these companies today.

Chapter 9, by Bente Evjemo, Sigmund Akselsen and Jan Grav (Telenor R&D), presents experiences accumulated by researchers in Telenor, a Norwegian telecommunications company, through their extensive field trials of developing collaborative services for different sectors. Unlike the other case studies, these trials have mainly been conducted within small and medium-sized enterprises, and in the public sector. The experiences are summarised as “ten commandments” for implementing sector-specific, collaborative tools.

The case study in Chapter 10, by Robert P. Bostrom, Chris Kadlec and Dominic Thomas (University of Georgia), represents yet another

application area and organisational context: a joint e-Learning project between the University of Georgia, Terry College of Business, and PricewaterhouseCoopers North American Consulting Group. The chapter describes the development and implementation of a MBA programme tailored for the PwC consultants. Through using an e-Learning infrastructure including various tools for virtual team support, the students are able to complete the programme in normal time while still working for their employer. The chapter presents important factors and guidelines leading to successful implementation of this type of e-Learning programme.

Part 3 (Chapters 11 and 12) integrates the findings from the case studies in Part 2. Chapter 11 presents a cross-case comparison and discussion, structured according to the taxonomy of implementation factors presented in Chapter 4. Based on this analysis, Chapter 12 finally presents practical implications and guidelines from this research, and some implications for further research on implementation of collaboration technologies.

Implementing Collaboration Technologies in Industry

Case Examples and Lessons Learned

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