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TIME TO ADOPT KNOWLEDGE MANAGEMENT APPLICATIONS: INFLUENCES THAT AFFECT INDIVIDUAL DECISIONS WITHIN A LARGE INFORMATION TECHNOLOGY SERVICES ORGANISATION

Submitted to the Macquarie Graduate School of Management

in fulfilment of the requirements of the

Degree of Doctor of Philosophy, Management.

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ABSTRACT

There is growing consensus in business research and practice that knowledge is increasingly the driver of competitive advantage. This thesis focuses on one aspect of the issue by identifying factors that affect the adoption of Knowledge Management (KM) applications by individuals in an IT Services organisation. The study considers the adoption decision by individuals once senior management have decided to invest in IT enabled KM applications (KMA) and KM systems (KMS).

In the thesis, a framework, the KM Spectrum, is developed that differentiates between the varying characteristics of KMAs and frames the research. The thesis identifies 32 potential success factors for KM adoption proposed in the reviewed literature. These factors are related to the disciplines of organisational science, diffusion theory and adoption models.

The methods used in the research: secondary data study, interviews and the electronic survey, combined with the representativeness of the survey sample, triangulate to provide confidence in the empirical understanding of the factors that influenced the adoption of KM within the specific knowledge-based organisation.

In developing the theoretically-informed view of the factors that affect individual adoption of KMAs the research concludes that studying KM adoption at an individual level and across multiple KMAs identifies influences on adoption masked by adoption research conducted at a KM system and/or organisational level. By studying KM adoption at an individual level this thesis finds that the adoption by individuals of KMAs is primarily a diffusion phenomenon and that the factors that influence KMA adoption vary with the type of KMA being adopted. The empirically identified factors that affect adoption at an

individual level build to a staged model of KM adoption, called the enhanced KM adoption (EKMA) model. The EKMA model represents four phases of KM adoption and differential influences that apply across the adoption lifecycle. Additionally, the study provides some indications of further research topics and proposes a checklist to assist practitioners with the deployment of KMAs and KM systems.

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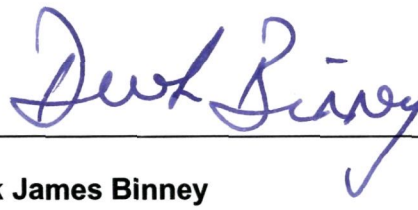
ABBREVIATIONS

The following abbreviations are used in this report. A selection of these terms are defined in section 1.6 with further definitions in Appendix A.

BPM	Business Process Management
BPMS	Business Process Management Systems
CI	Confidence Interval
CIO	Chief Information Officer
CKO	Chief Knowledge Officer
CSC	Computer Sciences Corporation
DF	Demographic Factors
DOI	Diffusion of Innovation Theory
EKMA Model	Extended KM Adoption Model
HR	Human Resource
ICT	Information and Communication Technology
IP	Intellectual Property
IT	Information Technology
JIT	Just in Time
KE	Knowledge Environment
KM	Knowledge Management
KMA	KM Applications
KMAC	KMA Consolidated
KME	Knowledge Management Environment
KMS	KM System
KMT	KM Technology
KWIC	Key Words in Context
LRSF	Literature Review Success Factor
OB	Organisational Behaviour
OC	Organisational Change
OS	Organisational Science
OD	Organisational Development
OECD	Organisation for Economic Co-operation and Development
SE	Standard Error
SF	Success Factor
TAM	Technology Acceptance Model
TQM	Total Quality Management
UNESCO	United Nations Educational, Scientific and Cultural Organisation

DECLARATION

I, Derek Binney, hereby declare that this thesis is substantially my own work and has not been submitted for a higher degree to any other university or institution. I have indicated in the thesis the sources of information used and the extent to which the work of others has been utilised.



Derek James Binney

8th March, 2005

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The motivation for this thesis came from my long involvement in applied Knowledge Management, which started in 1992 before the term Knowledge Management came into common use. The completion of this research has been a personal goal to learn more about the factors that lead to successful investments in KM applications and systems and contribute to the emerging body of KM adoption knowledge. The exercise has proved one of the most enriching experiences of my life. In the process of this research I have had the opportunity to read widely, learn more than I could possibly have imagined and most importantly meet and interact with a broad range of special people. It's the people who have supported me and helped guide my thinking that I'd like to acknowledge and thank.

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There are so many people who helped me along the way. If I've missed someone — apologies and thanks in absentia. On the CSC front, the research would not have been possible without the support and encouragement of Matthew Doucy, Carol Bothwell and Dr Sami Albanna. Special thanks to Matthew for staying with me during the years of interaction regarding the CSC-UK study and survey. Jo "the Welsh thistle" Sabin will always be an "English rose" to me for her support conducting the survey. Geoff Brehaut watched my progress with some bemusement and has always been willing to read a draft paper or three.

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