

# Chapter XL

## A Methodology for M–Transformation of Small and Medium Enterprises (SMEs) and its Application in Practice Using CBEADS©

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### ABSTRACT

*Organisation worldwide come to realise that in the ever changing business world, survival and success is closely linked to adopting information and communication technologies (ICTs). Along with the technology however, organisations have to also adjust their processes to take full advantage of the potential ICTs have to offer. This process, of technology adoption, linked with with process adjustment and re-engineering is called e-transformation. For organisations that have successfully e-transformed, it is now necessary to become more agile through the adoption of mobile technologies. This adoption leads to the need m-transformation which is the next logical step from e-transformation. In this chapter we define m-transformation and present a methodology that SMEs can adopt in order to m-transform. The methodology takes into account the special characteristics SMEs have and allows them to leverage their strengths towards a smoother m-transformation process. Furthermore, we show how m-transformation can be practically applied, and in doing so we introduce our technology platform called CBEADS. Finally, we present some of the lessons learnt and demonstrate how SMEs may progress through the adoption of mobile technologies into their operation into gaining increased competitiveness and a global reach.*

### INTRODUCTION

Mobile technologies are a key influence in any attempt at globalization of business (Unhelkar,

2004). Therefore, what was once understood under the banner of “e-transformations” (or electronic transformations of organisations) now needs to be understood within the context of

mobility. This leads to the idea of mobile-transformation or “m-transformation.” M-transformation is the process of transitioning an existing organisation into the mobile business world. The earlier e-transformations capitalized on the connectivity accorded by the ubiquitous Internet (Arunatileka & Ginige, 2003; Ginige, 2002). M-transformation is the next logical step for these organisations.

However, the many diverse benefits as well as the challenges of m-transformation are not well known, especially in the SME sector. As a result, there is uncertainty and trepidation. Furthermore, the mobile technology itself is in the process of development and is not fully matured. Based on our spot interviews with some of the SMEs that we had earlier e-transformed, we discovered that the aforementioned reasons were contributing to their reluctance to take up m-transformation. This has led to our interests and desire to investigate further this challenge and discover a set of simple yet consistent requirements leading to a methodology that can be applied in m-transformation. The scope of our study is mainly focused right now on SMEs, given their unique characteristics as well as our knowledge base of working with them in the past (Arunatileka & Ginige, 2003; Ginige et al., 2001; Marmaridis, Ginige, & Ginige, 2004a; Marmaridis, Ginige, Ginige, & Arunatilaka, 2004b; Kazanis, 2003).

This chapter starts with our working definition of m-transformation. It then explores some of the benefits that are due as a result of m-transformation. This is followed by a discussion on how SMEs perceive m-transformation—this section is meant to help us uncover and investigate potential disconnects between our understanding of mobile benefits and that of SME users. Next, we almost exclusively put the focus on the unique characteristics SMEs present and how they affect the uptake of m-transformation in the context of currently available mobile technologies and corresponding

business process mainstream thinking. With a solid understanding of the unique SME characteristics, we then proceed to describe the requirements for each aspect of m-transformation, namely ICT infrastructure, business process adoption, and m-transformation methodology. Finally, we describe the methodology in detail and provide insight from our experiences in applying this methodology to a number of SMEs wishing to m-transform their business.

## **BACKGROUND TO THIS WORK**

Before diving further into the details of SME m-transformation as they are expressed via requirements for IT systems and technologies, it would be wise to offer some background information about the projects that we have so far undertaken and some of the technology used in those, namely CBEADS©. A number of years we identified the need for SME organisations in the greater Western Sydney region of NSW, Australia, to increase their uptake of technology in order to become competitive in the global economy and survive. A vehicle for us achieving this was through the process of e-transformation, where SMEs are encouraged and assisted in their uptake of computers and other information and communication technologies (ICTs) to better their business overall.

In order for us to facilitate the uptake of ICTs, we have also developed a framework known as CBEADS©, which stands for Component-Based E-Application Development (and deployment) Shell and provides a low overhead, low-cost infrastructure for e-business applications development and deployment. Along with the technology we also developed a comprehensive methodology for e-transformation, a concise map of which is our e-transformation roadmap that offers step-by-step guidance to organisations embracing e-transformation.

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