

# KXI223 – Software Acquisition & Implementation Management

## Assignment 2 – Research Essay

Topic: Managing Mobile Software

Due: Thursday 16 September 2010 @ 11:55p.m.

Marks: 20% of the total marks for the unit

## Background

Corporations, government agencies and non-profit organisations must all manage their software investments as efficiently as possible, despite radical changes in hardware, software and communications technology which are reflected at both corporate and individual ends of the computing spectrum.

*Corporate changes* are, to a large extent, associated with the virtualisation of infrastructure, platforms and software. O'Reilly (2006) noted some years ago that: "the capital cost of a server when spread over its lifetime is small compared to the cost of power consumption and associated cooling. Google, which makes more money than God it seems, does so by being smart enough to notice things like that. It turns out that in building their own servers, they actually pay a premium for power units that run cheap and cool". Cloud providers obtain economies of scale in running banks of efficient servers and can offer cheaper, faster, global access to secure, backed-up data and software packages – including the added attraction of a 'Green IT' label for their client companies (Linthicum 2009).

Software, platforms and data storage are, in fact, becoming ever more virtual – even when these assets are kept within the firm's own physical IT environment. Although the move to virtualisation is often initiated by a desire to swap fixed capital expenditure for variable operating expenses which are cheaper and easier to manage (St Arnaud 2010), other benefits (including global access, reliable backup and the convenience of having all data in a single virtual location), also play a role in a company's desire to move to hosted services, platforms and infrastructure. A useful discussion of the investment implications of cloud computing can be found in Gogia (2010).

Although Vellante (2010) is concerned that clouds may not offer customers sufficient integration among storage, backup, networking, security and management functions, Linthicum (2010) believes the problem is rather a "lack of clear understanding of data integration in the context of cloud computing ... [which] means you need to consider all of the source and target schemas and how you're going to securely and reliably move data between those points, accounting for the differences on the fly". All in all, then, it would appear that we can manage our data, programs and platforms (such as social networking environments) more effectively and more consistently by handing them over to a virtual provider – whether in a public (hosted) cloud or, for truly large organisations and government, in a private cloud.

The cloud, however, is also a major contributor to the *personal changes* happening in computing: "whether you actually want an iPad or not, there is no doubt that it is a harbinger of things to come. The iPad relies upon cloud-based computing to stream video, download music and books, and fetch email. Already, millions access the 'cloud' to make use of online social networks, watch streaming video, check email and create documents, and store thousands of digital photos online on popular web-hosted sites like Flickr and Picasa" says a report from Greenpeace (2010).

Hamm (2009) believe that "this combination of mobile and cloud technologies is shaping up to be one of the most significant advances in the computing universe in decades ... cloud computing means that information is not stranded on individual machines; it is combined into one digital 'cloud' available at the touch of a finger from many different devices". But is this entirely good news for companies and government agencies?

Today's smartphones are effectively an extension of the enterprise and Mellor (2010) warns that: "workers are using smartphones, netbooks and now tablets and want to access corporate networks using these devices and not necessarily a business-provided and secured Blackberry, notebook or desktop". Lohman (2010) adds that where employee communication devices are used for both personal and business purposes, it is entirely up to the company to protect any organisational data held on that device; and Bradley (2010) says IT administrators are now tasked with "provisioning, inventory tracking, configuration management, messaging, archiving, and maintaining the security of smartphones connected to the network". This sounds like a frightening prospect for the average CIO ...

It's clear that the cloud now provides opportunities and threats well beyond those originally envisaged by companies seeking to offer cheaper offsite storage. Grayson & Kennedy (2010) is an edited transcript of a roundtable discussion on mobile technology hosted by The Australian IT, one of whose participants says: "I look at [a mobile platform rollout] with a lot of trepidation. It's complex. With all of the enterprise applications and different software we run on our desktop, it's a fraught exercise. It's not something you do in a week. It's not easy at all".

In a unit focusing on the management of software acquisition and implementation, it is important to consider the implications of mobile deployment of that software – from the perspectives (among others) of corporate data security, integrity and management. How does the average CIO go about managing access to the flood of smart handsets his/her staff bring in to work and want to use for their day-to-day activities – as well as for connecting with friends on Facebook, posting updates and opinions on Twitter, commenting on news articles or blogs around the world, or uploading videos to YouTube?

I have provided a substantial number of up-to-date references in this assignment handout, to get you started on analysing this topic. Like many 'hot' topics, you'll find that opinions vary widely on all sides of the issue of mobile corporate access. The references I've given you are intended to highlight a variety of concerns and opinions related to this topic – but now it's up to you to identify the relevant issues and start finding your own references to support your arguments. If you were a CIO today, what would you be doing to ensure that staff members were able to do their jobs as efficiently and individually as possible, while also managing your company's software assets in the most effective way possible?

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Grayson I. & Kennedy S. (2010) 'Opportunities and threats in the mobile revolution', *Australian IT*, 29 June, Available online: <http://www.theaustralian.com.au/australian-it/opportunities-and-threats-in-the-mobile-revolution/story-e6frgax-1225885409785> [Accessed July 6 2010]

## Your Task

You, as a prospective IS manager or CIO, may well be forced to deal with this problem for yourself one day – and, as with any other tricky issue, knowledge is power. In this research essay I want you to read widely around the topic of enterprise mobile access and use (you'll find this topic under a number of different headings in the references) and put together a reasoned analysis and discussion of this topic.

You'll have no difficulty finding material, but it's important to realise that most of the people writing on the topics of the cloud, mobile computing, or corporate mobile software access have an opinion to 'push'. Even those commentators claiming to be 'neutral' are often really trying to convince their readers of a particular point of view ...

In structuring your essay you should ensure you have covered the following issues:

1. What is enterprise mobile access? Explain the concept of individual mobile handset access to corporate data and software, ensuring that you show how the various components which make up this topic fit together
2. Where did enterprise mobile access come from? Analyse and discuss the technologies and management structures which have made it possible for this issue to arise in the first place

3. The personal cloud. How has a combination of the cloud and social networking platform developments transformed the way(s) we communicate and share our experiences?
4. Software management in the age of mobile data access. What are the management implications of this explosion of smart mobile devices employees increasingly expect to be able to use for both personal and business activities? Make sure you take technical, as well as organisational/political, issues into account in dealing with this aspect of the topic and make recommendations a CIO might find helpful

Make sure you include an Introduction which showcases your arguments + a Conclusion section which not only summarises your points, but also draws 'lessons learned' from your analysis.

## Requirements for the Essay

Your essay should be between 2,500-5,000 words in length (excluding title page, table of contents and references) and must be submitted via MyLO by 11:55 p.m. on Thursday September 16. **Late submission will result in loss of marks – 10% for each 24 hour delay.** Marked assignments will be returned to students via MyLO by Thursday 7 October.

You must include a cover sheet, available from MyLO, to ensure your tutor can identify the author of the assignment and return it to you on time. **Essays submitted without cover sheets will not be marked!**

You should expect to spend at least 20 hours on the research and writing. Comments and marking guidelines follow.

### Report Organisation and Presentation (15%)

Marks will be allocated for the general organisation and flow of the essay, including use of appropriate headings and sub-headings, effective use of diagrams, bullet points, tables etc. Grammar, spelling and writing style are also significant.

You will lose marks for: omitting the table of contents; for not structuring the essay logically; for poor or inconsistent formatting and layout of the essay and, above all, for incorrect use of referencing.

### Error! Reference source not found. (10%)

Introduce your essay, and state its purpose and focus. Highlight why the topic is important. Give an outline of the content / organisation of the remainder of the essay, and summarise your recommendations.

### Analysis and Discussion (50%)

This is the 'heart' of your essay and should provide evidence of careful and thorough research. You need to show that you have: read widely around the issues identified in 'Your Task' (together with any other issues you uncover during your literature review); analysed your reading effectively; identified the major factors associated with your topic; and drawn logical and useful conclusions from your analysis.

You need to show that you have not simply followed one author's ideas (no matter how convincing, there are always several sides to any argument), understood the historical significance of the trends you identify; and thought through the technical, political and managerial implications of your findings.

## Conclusion (10%)

In your conclusion section you have two tasks: to summarise your arguments and to identify interesting, worrying or critical lessons learned from your analysis and discussion. I sometimes refer to this as the 'so what?' section of an essay, because it allows you to show the reader why it's been worth your while to undertake the analysis. **I'm prepared to give up to 5 bonus marks to students who do a particularly good job of drawing interesting and valid conclusions ...**

## Referencing (15%)

Detailed information on how to use referencing properly is available on the UTAS website at:

<http://www.learningsupport.utas.edu.au/Resources/referencing.htm>.

Remember – while I will be expecting a complete Reference List formatted according to the UTAS Harvard standards, it is NOT sufficient simply to list all your sources at the end of your essay – you MUST cite them as you go (as I have done in the Background to this assignment handout). As you can see, marks for referencing properly are a significant component of the available marks for this essay.

You must support all assertions in your essay with citations and ensure you include **all** the material you use: not to do so is plagiarism. If you are treating any reference as an 'authority', you need to use a different citation format from the one you use when simply adding a citation to an assertion, e.g.

1. Jones (2010) believes that mobile data access means ...
2. Many authors discuss the issue of mobile data access (Jones 2010; Smith & Williams 2009), but ...

When you actually quote from a source, you must use quotation marks + a page number (if one exists – page numbers are not available with Web references, of course). Try to limit the amount of direct quotation and close paraphrasing to 5% of your report.

If you do not properly follow the guidelines for referencing, you are liable to lose 15% of the marks for this assignment. More serious cases will be dealt with under the University's academic integrity policy.

You might care to take this opportunity to find out how to use a referencing database and tool – e.g. EndNote, which is available from the UTAS library at <http://www.utas.edu.au/library/assist/apps/endnote/index.html>.

**Prof. Paula Swatman: 6 July 2010**