

ISC11D031

Cover note for Mobile business case

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As part of the testing process UEA's web team installed the Mobile Learn building block onto the Blackboard test server. There were some technical issues to resolve to make the building block work with UEA's authentication.

Current status - Android devices are still not able to log onto UEA's Blackboard Mobile Learn service. As such there is further technical work needed by Blackboard and the web team to ensure it works appropriately on all the platforms Blackboard supports. This is significant because the Android platform has such a large market share.



## BUSINESS CASE FOR MOBILE ACCESS TO THE VLE AND CAMPUS SERVICES

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### INTRODUCTION

The growth in the adoption of mobile phones and more recently smart phones is well documented <sup>1</sup> as is the growth of other mobile devices such as the iPad <sup>2</sup> and the University is considering how to address the expectations and needs of its increasingly mobile community.

Such a Mobile Strategy for the University consists of several strands; some are technical infrastructural challenges whilst other strands translate to actual services delivered. This business case proposes two such services: taking learning and teaching mobile with Blackboard Mobile Learn and bringing the campus experience to the mobile device with Blackboard Mobile Central.

#### A Mobile VLE

One of ISD's most heavily used services, particularly amongst the student population, is the VLE, powered by Blackboard Learn. In the 2011 ISD survey, 80% of undergraduates listed access to teaching materials via Blackboard as essential, with a further 16% listing it as important. Blackboard has recently released an extension to Blackboard Learn, called Mobile Learn, which allows mobile devices to interact more easily with it. Mobilising Blackboard is a key element to the University providing services for mobile devices. Given UEA's current VLE architecture, Mobile VLE could be rolled out with little staff resource and a short lead time. This product has been demonstrated to ISD and a small number of academic and academic-related colleagues and was well received as a good solution to extend much of the functionality of the VLE to mobile devices. A significant factor for academics is that they don't have to change their Blackboard module for students to benefit from mobile access.

The following is a student request to a UEA Chemistry lecturer in February 2011 via Twitter

@CHE2C32 Could you please ask the IT Helpdesk to enable Blackboard Mobile Learn, have just acquired an app for it and would be amazing!

#### A Mobile Campus

Whilst the University offers many excellent services it is difficult to access them from one central location on a mobile device. Clearly with the world going "mobile" this is a concern. Across Higher Education, universities are finding it necessary to think about developing a "Mobile University Service" for their institution. At UEA, this work has already started, not least in ISD and ARM with a) the development of apps for the popular platforms e.g. the University prospectus, b) mobile web pages e.g. real-time PC availability and c) mobile web page templates within the new CMS, Liferay. Blackboard has a second product called Blackboard Mobile Central which could provide a single mobile springboard to deliver a wide variety to University services optimised for mobile delivery. Services could include the module catalogue, staff directory, events, images and videos, library catalogue, news and maps.

## BENEFITS OF BLACKBOARD MOBILE FOR LEARNING AND TEACHING

The specific features of both Mobile Learn for the VLE and Mobile Central for the campus are detailed in a later section (pages 4 & 5). This section focuses on the Learning Teaching benefits and thus largely Mobile Learn for the VLE.

Whilst providing easy and good quality mobile access to the VLE has synergy with many university objectives; it particularly blends well with the Student Experience, an area where it adds real quantifiable value. Today's students expect to be able to do everything via the mobile devices they are already carrying and to be able to manage their social, university and work lives from one mobile device.

The Blackboard Mobile Learn app, which is available on the most popular mobile platforms, extends and enriches the course experience of Blackboard.

- **Available wherever and whenever** - Mobile Learn allows students and academics to access learning and teaching wherever and whenever they want. Many UEA students are routinely off campus on placements, field trips, industry experience or travelling between University and home. Mobile Learn means that students can still access the VLE without arranging access to a computer that will allow them to log onto Blackboard, or wait until they get home. Indeed students when on campus may prefer to look something up or access information using their 'always-on' mobile device rather than find a computer or wait for their own computer to load.
- **Enhances knowledge** - Students can engage with a range of learning materials by both accessing and publishing content from their mobile device. The app offers a native environment for accessing Blackboard module content including announcements, documents and grades. Students can create also create content by adding new posts to blogs or journals. This might take the form of a private reflective learning log during a placement or contributing a post to a class blog about a given topic.
- **Enhances collaboration** - Students are able to engage with, and make contributions to discussion boards, blogs and journals. Discussion boards can be a key tool for engaging students and promoting learning. It's a place where students can ask and answer questions, and where academics can respond to one student for the benefit of all. Academics and students can review and post to discussions threads, as well as create new threads, all while on the go. Students can read blog posts and interact with other students by posting comments on their blogs or responding to their comments.
- **Improve Communications** – Communication with students via the VLE becomes much improved because the information can be accessed via their own 'always-on' 'always-with-them' mobile device. Students can more readily get up to date administrative information associated with their module.

"This (Blackboard Mobile Learn) matters because it moves learning ever further into the digital domain that students have real ownership of. It keeps it at the forefront of their lives and digital routines – they check Facebook on their phones every few minutes and now it is just as convenient to check for announcements about their class too."

(Hannah Whaley, Assistant Director in the University of Dundee's Library and Learning Centre)<sup>3</sup>

## WHAT ARE UEA'S COMPETITORS DOING?

The following lists some UK Universities that are known to have a mobile campus, a mobile application or a mobile VLE (it is not an exhaustive list). In addition, there will be many others currently considering their position. It is worth noting that many Russell Group universities and 1994 Group universities are included in the list.

|   |  |
|---|--|
| University of Birmingham                      | University of Exeter                   |
| University of Bristol                         | Lancaster University                   |
| University of Cambridge                       | University of Reading                  |
| Cardiff University                            | University of St Andrews               |
| University of Edinburgh                       | University of Sussex                   |
| University of Glasgow                         | Sheffield Hallam University            |
| Imperial College London                       | Liverpool John Moores University       |
| University of Leeds                           | The University of Plymouth             |
| University of Liverpool                       | The Manchester Metropolitan University |
| London School of Economic & Political Science | The University of Central Lancashire   |
| University of Manchester                      | City University London                 |
| University of Nottingham                      | Birmingham City University             |
| University of Oxford                          | Coventry University                    |
| University of Sheffield                       | University of Bradford                 |
| University of Southampton                     | The University of Leeds                |
| University College London                     | University of Westminster              |
| University of Warwick                         | Staffordshire University               |
| University of Dundee                          |  |

## FEATURES OF THE BLACKBOARD MOBILE SOLUTIONS

### Blackboard Mobile Learn

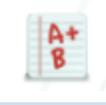
Blackboard Mobile Learn takes interactive teaching and learning mobile, giving students and academics access to their courses on a variety of mobile devices. Blackboard Mobile Learn extends the functionality of UEA's VLE by making many areas of the core Blackboard Learn implementation available on mobile devices.

Students and staff will see the same features as on the VLE, enhanced for use on their device. However, it is important to acknowledge that the underlying technology of whichever mobile device is being used may limit the Blackboard features than can be accessed e.g. Flash files are not supported on devices using the Apple iOS.

As well as being able to view content (documents, PowerPoints etc) provided in their module, the following features are available:



**Announcements.** Students have instant, on-the-go access to the latest announcements, and instructors can post announcements from anywhere, anytime.



**Grades.** Students can view their own grades.



**Blogs.** Read blog posts and interact with other students by posting comments on their blogs or responding to comments on your own blog.



**Roster.** Quickly see your full class list, making organising study groups a whole lot easier.



**Discussions.** Instructors and students can review and post to threaded discussions, as well as create new threads, all while on the go.



**Journals.** Read and reflect on your journal posts and those of your fellow students. Both students and instructors can comment on journals.



**Tasks.** Help students track and manage the progress of various tasks. Tasks allow students to mark when they have started a project, when the project is in progress and when it is complete.



**Media.** Students can access music, videos, and images uploaded by their instructors and experience directly from their mobile devices using the appropriate software specific to the media type.

## Blackboard Mobile Central

Blackboard Mobile Central would allow UEA to meet expectations of current and prospective students, parents, alumni, and lecturers by delivering a rich set of campus life services and content to mobile devices, uniquely branded for UEA. The applications available 'out of the box' for deployment by UEA are:

|   |   |
|---|---|
|    | <b>Courses.</b> Browse the entire course catalogue, search for a specific course by name, view class times with a tap. Additionally, contact academics via the Directory directly from the course details and view the course location in Maps. |
|    | <b>Directory.</b> Search the campus directory to connect with virtually anyone on campus. Find a contact's email address, phone number, title and any other publicly available information.   |
|    | <b>Events.</b> Access the entire events calendar, search for events and add them directly to your personal calendar.  |
|    | <b>Images.</b> Browse the University photo archive or search for any specific photo by key word. Send photos to a friend or download as wallpaper for the mobile device.  |
|    | <b>Videos.</b> Stream iTunesU, YouTube, or custom video content directly from within the application, including course lectures.  |
|   | <b>Library.</b> Search the online catalogues, check the availability of books and other resources, and find their exact location in the library stacks.   |
|  | <b>News.</b> Stay up to date with the latest campus news, organised by topic or resource, including the student newspaper and any other on campus publications  |
|  | <b>Maps.</b> Pinpoint your exact location on campus using your phone's GPS, and search for any building by name or address, see a photo of the building plus any other useful information.  |
|  | <b>Help.</b> Provide the UEA community with easy access to important phone numbers and websites.  |
|  | <b>Links.</b> This feature allows custom icons to be placed on the Blackboard Mobile Central springboard that link to a desired mobile web page (e.g. PC Availability) or other destination (e.g. iTunesU page).                                |

Mobile Central provides the advantage of getting off to a fast start with the 'out of the box' mobile central, but also, via the Blackboard SDK (software development kit) that is part of the core product, UEA can develop its own in-house Apps too as well as link out to mobile web pages. For example, UEA could look at extending the functionality of the Library feature to view records, reserve and renew books. Other areas could be providing personalised timetables and integrating the already developed PC availability service.

The in-house developed Apps can sit alongside those of mobile central, within the same springboard. Any such developments would incur additional costs whether produced in-house or purchased from another company.

## WHY BLACKBOARD?

### **Combining products – a single mobile springboard**

If UEA decides that mobilising the VLE would be a sound investment for the benefit of students, the only pathway at the current time is to purchase Blackboard Mobile Learn as it extends Blackboard Learn the VLE platform.

Blackboard Mobile Central, on the other hand, does have competitors. There are two elements that make combining the purchase of both the Blackboard products more attractive than using a second supplier for mobilising the campus or not purchasing a campus solution at all:

1. the considerable discount of buying both products together (having the effect that Mobile Central is purchased at only a few thousand pounds).
2. the advantage of having one platform out of which the University's mobile needs can be met.

### **Speed to market**

Blackboard Mobile Learn can be turned on by simply enabling it in Blackboard (via a building block) immediately allowing students and academics to access Blackboard Mobile Learn from their mobile devices. According to their documentation, Blackboard's Mobile Central app suite can be tested and delivered in as little as 8-12 weeks. However, the Blackboard Mobile team will work with UEA to rollout the application on UEA's schedule.

### **Support for native interfaces**

Both Blackboard Mobile Learn and Blackboard Mobile Central are built to support native device interfaces, which means maximized device performance and a look and feel with which the user is already comfortable. Both Learn and Central are built natively for the Apple iPhone, iPod touch, Blackberry and Android powered devices. Blackboard Mobile Central is also accessible via Mobile Web, which provides access to anyone with an Internet-enabled mobile device, ensuring that the UEA mobile platform is accessible as possible.

### **The ability to create a custom, branded solution**

Blackboard Mobile Central will give us the tools to allow us to develop our mobile presence how we see fit rather than being limited to Blackboard's view of mobile.

### **Developed for students, by students**

Blackboard Mobile was born from a group of students at Stanford University who started thinking about ways to engage fellow students and academics on their mobile devices. Those students head up the Blackboard Mobile division. As this team continues to innovate, UEA benefits from new app releases, new platform rollouts, and any other innovations, all as part of the annual licence.

## COSTS

ISD have negotiated a three year agreement with Blackboard for both products at reduced cost, outlined in Table 2. If UEA do not wish to commit to a three year contract then the costs of renewing on an annual basis are outlined in Table 1.

### Pricing listed was only valid for purchases before 31 December 2011 and excludes VAT

Each product has an annual licence fee of £20,800, Blackboard Mobile Central also requires a £4,785 set up fee. Procuring both projects at the same time achieves a discount of £11,210. Agreeing to a three year contract (three annual payments) saves an additional £6,280 in year 1, £5,142 in year 2 and £3,948 in year 3.

**OPTION1:** Licence Mobile Learn only: £20,800

**OPTION2:** Licence Mobile Central only: £20,800 & £4,785 setup fee

**OPTION3:** Licence Mobile Learn **and** Mobile Central: See Table 1

**OPTION4:** Licence Mobile Learn **and** Mobile Central with a **3 year** commitment: See Table 2

**Table 1:** costs over three years for Mobile Central and Mobile Learn without a three year agreement

| Year 1                                       | Year 2  | Year 3  |
|--|---------|---------|
| £33,905 (includes set up fee and a discount) | £29,120 | £29,120 |

**Table 2:** Costs over three years for Mobile Central and Mobile Learn with a 3 year commitment

| Year 1                                       | Year 2  | Year 3  |
|--|---------|---------|
| £27,625 (includes set up fee and a discount) | £23,888 | £25,082 |

## POTENTIAL RISKS

There are risks associated with this proposal, however ISD believes these to be manageable and the potential value that this proposal creates is significant to students and all members of staff. The main risks considered are;

1. **UEA commit to a three year licence for the mobile solutions and then replaces Blackboard as the VLE provider.** This would render Mobile Learn obsolete but would not impact on Mobile Central. As the University has just undergone a significant migration to a new version of Blackboard, there are no immediate plans to make another change. However, if the future strategy of the University meant there was a change of VLE supplier, it would probably take 3 years (i.e. the duration of proposed contract) to specify, develop and migrate all content to a new VLE platform.
2. **UEA enter into a three year agreement and Mobile Central doesn't deliver.** Both the realistic deliverables of Mobile Central and the expectations of the UEA community need to be clear and well managed. Mobile Central is gaining popularity with Universities in the UK, but as it is a relatively new development there can be no guarantees. However, there is only a relatively small additional investment (£6825 in year 1) in buying Mobile Central over and above purchasing Mobile Learn.
3. **UEA enter into a three year agreement and there is no University wide commitment to deliver campus services to mobile devices via Mobile Central.** The combination of Central and Learn gives UEA a single point of distribution on mobile platforms and therefore the stakeholders for delivering Mobile Central in particular include a range of administrative and academic departments. As such, it is recommended that a Mobile strategy group is created to oversee the Mobile Central implementation and future development ensuring join up between all the University functions.
4. **UEA enter into a three year agreement and development time within ISD cannot be secured to develop and deliver Mobile Central.** Development time will be required by the web team and potentially other teams in ISD. The Assistant Director of Corporate Systems has stated that currently, those teams are working on delivering the new CMS Liferay and people may not be able to be released for to work on Mobile Central for up to 18 months. There is a need to understand more explicitly how much development work would be required and whether it could be factored into existing workloads. It is also worth remembering that the purchase of Mobile Central is only a relatively small additional investment.
5. **UEA's internal data architecture is not sufficiently developed to populate Mobile Central with information.** This is not likely due to the measures that ISD have been implementing over several years. However, were this to be the case, the purchase of Mobile Central may have a positive impact in acting as a catalyst for the continuing development of UEA's data architecture.

## RECOMMENDATION

### The recommendations are;

1. ISD implement its proposal to mobilise the VLE and Campus services using Blackboard Mobile Learn and Mobile Central. We sign a three year contract with Blackboard as per Option 4 and Table 2.
2. UEA takes forward the notion of Mobilising the University by developing a university wide Mobile Strategy to include Mobilising the VLE and Mobilising the Campus.
3. Following on from that strategy, a university wide, cross-division mobile group is created to oversee the Mobile Central implementation and future development.
4. The Learning Technology Team carry out a student survey to identify, gauge and prioritise student expectations of how mobile technology should be used to support their learning to inform University Mobile developments. The survey would seek to clarify:
  - What phones do students use?
  - How do they use them?
  - What University applications, information and data do students think should be accessible on mobiles?
  - What are student attitudes towards the use of mobiles to support their learning?

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