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# Planning for the mobile library: a strategy for managing innovation and transformation at the University of Glasgow Library

Modern mobile devices have powerful features that are transforming access to information. Lippincott<sup>1</sup> argues that as mobile devices such as smartphones become ‘key information devices’ for our users, libraries will want to have a significant presence in offering content and services that are suitable for this medium. This article outlines the process of development and implementation of a mobile strategy at the University of Glasgow Library. What began as an investigation into a mobile interface to the library catalogue evolved into a comprehensive strategic review of how we deliver services now and in the future in this rapidly changing mobile environment.



Clockwise from bottom left: **KAREN STEVENSON**, Library Manager System Co-ordinator; **ROSEMARY STENSON**, Head of Cataloguing; **WENDY WALKER**, Electronic Resources Manager (Books); **KAY MUNRO**, College Support Librarian; (not pictured) **CATRIONA FISHER**, Customer Services Manager, all at University of Glasgow Library

## Beginnings and early decisions

In 2010, a small group of library staff formed a Mobile Technologies Group to conduct a broad-level investigation into how the Library could best support access to information and services through mobile devices. We began to collect data using Google Analytics about mobile device traffic to our website and to our search services. The data showed that this traffic was already significant and was steadily increasing. The most popular devices our users had were smartphones such as the iPhone, BlackBerry and those with the Android operating system, and also the iPad.

An initial report (in response to this data) which was informed by some preliminary reading of the academic literature on the use of mobiles in higher education was presented to the Library Senior Management Team in June 2010. That report made four recommendations: firstly, that a mobile interface

to the library catalogue be developed; secondly, that mobile access to user account information be provided. Finally, it recommended that the team investigate two things: how to exploit developments in SMS (text messaging) for circulation notices, e.g. overdues and courtesy notices; and also the potential of instant messaging functionality on mobile devices for reference and enquiry services.

An important factor in this initial report was the decision to follow a vendor-supported approach to the provision of a mobile catalogue rather than creating device-specific apps at this time. While the attraction of an app is its visibility to users via routes such as iTunes, and that the app is particular to the mobile device being used, we concluded that the development of device-specific apps for mobile access to University of Glasgow Library services would be expensive, both in terms of initial set-up

costs and of ongoing maintenance. In addition, the necessary expertise was not immediately available in the Library and it would be necessary to contract out the development of such applications.

Senior Management endorsed the proposals put forward in the report, including the purchase of the AirPAC software from our LMS provider, Innovative Interfaces. AirPAC provides a mobile search interface and access to the most commonly used user account functions.

### Gathering pace

Planning for the implementation of the AirPAC software began in earnest in October 2010. However, at this point, data from Google Analytics indicated that the numbers of users accessing the website and search services on mobiles was increasing even more dramatically than we could have predicted only a few months earlier. It was clear that we needed to think more widely and more imaginatively about the introduction of mobile Library services, identifying areas where we could use mobile technology to provide not only new services, but to enhance or expand existing ones. A decision was made to take a more strategic approach to the implementation of mobile services than had been explored in our initial paper.

The JISC Strategy infoKit sets out what are believed to be 'the most important tasks and processes required to successfully articulate, coordinate and manage strategic activity'<sup>2</sup> and defines certain key stages in strategy development and implementation. We identified eight key stages in our strategic planning: to evaluate and monitor developments in mobile technology; to evaluate user requirements; to form and define our objectives; to formulate a strategy; to identify the resources required; to gain approval from senior management; to consult and obtain buy-in from other library groups; and to manage effectively implementation.

A vital element identified in the infoKit is that those responsible for the strategic planning and activity have 'all relevant facts at their disposal'. A systematic review of the academic literature was undertaken and a decision was made to survey our own users and ask them what Library services they would like to be able to access on their mobiles (Figure 1). More engagement with colleagues in other departments within the institution who



Figure 1. Example of fact-finding survey targeting Library users

were also developing mobile services was also explored.

### Innovation and transformation

From the potential initiatives and developments that were identified during this period of information gathering, it was evident that modern mobile devices have powerful features that are transforming access to information in innovative ways. Clearly, the successful implementation of an innovative project was going to require a comprehensive, organized, systematic and user-centred strategy. The strategy that emerged attempted to manage the innovation process by embracing each of the three critical arenas of innovation: product, process and strategic<sup>3</sup>. Product innovation is the process of developing new products and services which improve the user experience; process innovation involves measuring and structuring institutional activities and achieving improvements in service performance; strategic innovation is about challenging existing models of achieving customer value in order to meet newly emerging customer needs. The ten target areas

identified in the Library mobile strategy included a number in each innovation arena:

- development of a mobile search interface
- adoption of QR codes
- investigation of an instant messaging enquiry service
- investigation of SMS/text messaging Library notices and Enquiry Service
- mobile e-book strategy
- evaluation of Bluetooth technology
- mobile infrastructure within Library buildings
- development of a mobile user education strategy
- development of a mobile promotion and evaluation strategy
- development of Live Lab concept for device and service testing.

Product innovation elements of the strategy include the creation of the mobile library search interface, the adoption of QR codes and the introduction of an instant messaging service. The development of the Live Lab and a user education strategy are examples of the strategic innovation element as both concepts challenge our existing models of staff training and user education. Lastly, Bluetooth and mobile infrastructure targets are examples of process innovation, where a failure to measure, evaluate and improve the existing infrastructure could mean that product and strategic innovation prove impossible to implement.

In December 2010, a comprehensive Library strategy for mobile service delivery, which included a full literature review and a ten-strand project plan with a phased implementation schedule and future service development opportunities, was presented to the Library Senior Management Team for further consideration.

### Phase I: implementation

The strategy was fully endorsed by the Library's Senior Management Team. This included the authorization for the purchase of an extensive list of mobile devices including phones, tablets and e-book readers for the Live Lab concept and an agreement on the proposed targets and project management structure for the delivery of phase 1 of the strategy.

Phase 1 implementation began in January 2011. Priorities for each of the ten target areas were developed by the Mobile Technologies Group, and

these were given to eight Working Groups to deliver by 31 May 2011 (Figure 2). The priorities for phase 1 across all target areas were modest but deliverable, and would allow us to launch a number of services over the summer vacation period that could be fully tested and evaluated before the start of Semester 2011–12.

Where possible, responsibility for implementation of the phase 1 remits was given to existing groups already working on service enhancement and delivery in related areas. For example, the Web 2.0 group was given responsibility for the instant messaging service pilot; the Marketing Group for the promotion strategy; and the Information Literacy Group for the development of a mobile user education strategy. Where an existing group did not exist, working groups were established. For example, an Infrastructure Group was established to look at existing WiFi and Bluetooth provision in the Library building and to advise on signage, and the QR Codes and E-books Groups were established to deliver phase 1 remits in these areas. The Mobile Technologies Group took responsibility for the implementation of the mobile search interface and the development of the Live Lab concept as well as maintaining overall responsibility for managing the project as a whole. The next section provides detail on each of the ten target areas and the phase 1 remits for each subgroup with responsibility for implementation

### Strategy detail and phase I remits

#### *Target – library search interface for mobile devices*

The Library should develop a new library search interface, specifically designed for mobile device users, using AirPAC.

*Phase 1 implementation remit:* The launch of a service, specifically designed for mobile device users, using the AirPAC software. The service will be characterized by catalogue search functionality, including access to 'My Library Account', allowing users to view their current checkouts, renew books, etc. and access to commonly requested information such as opening hours, location, and contacts. (See Figure 3.)

#### *Target – QR codes*

QR codes should be introduced to enhance library services.

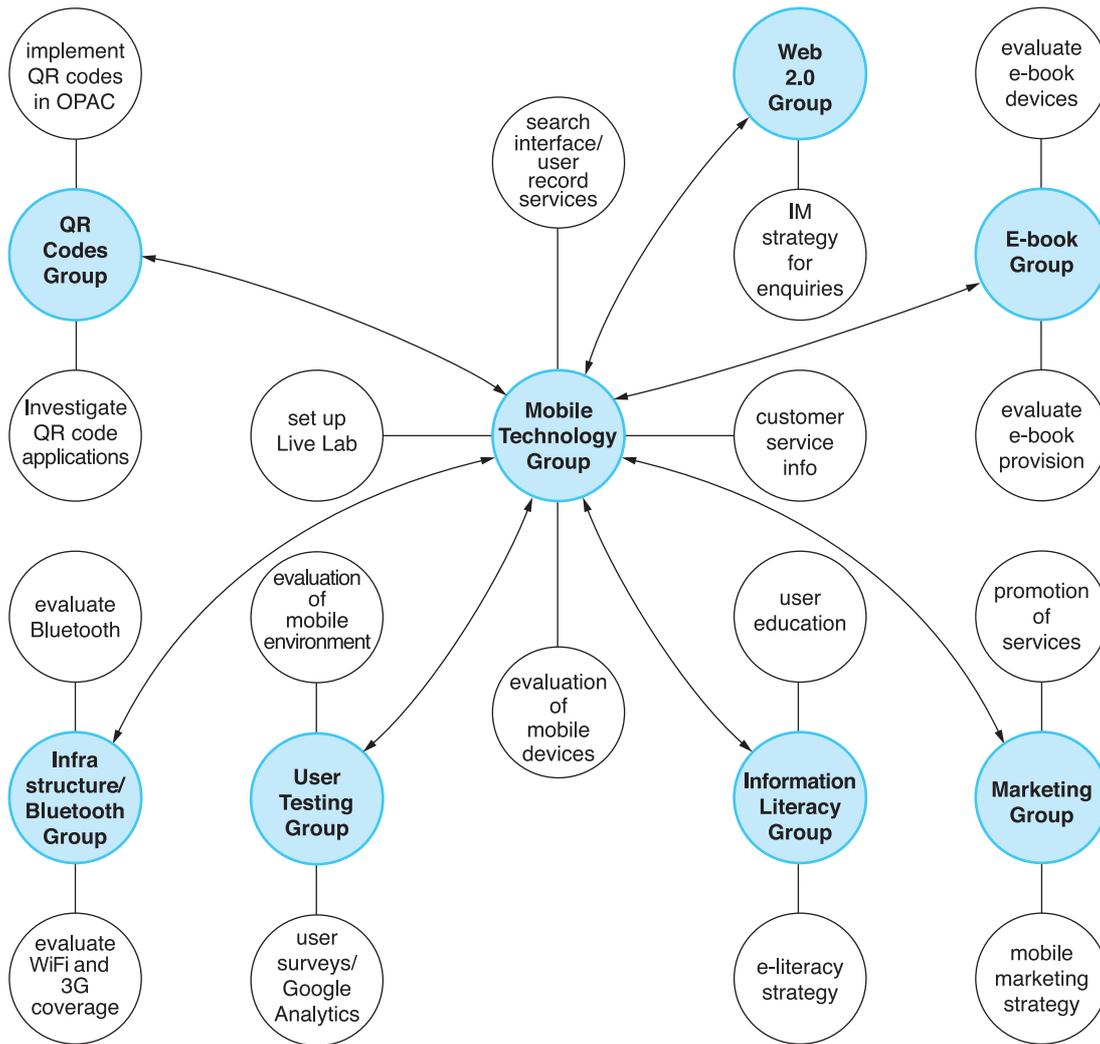


Figure 2. Mobile strategy phase 1

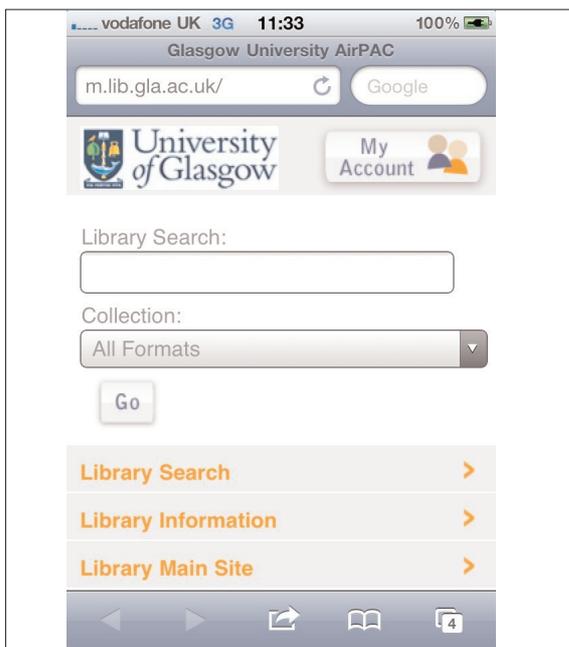


Figure 3. Library search interface using AirPAC

*Phase 1 implementation remit:* Investigate and implement, where possible, the use of QR codes to enhance library services. QR codes should be added to all catalogue records so that users can simply scan the barcode using their mobile device to save basic bibliographic information, location and shelf-mark to their mobile. Investigate and implement QR codes in other service areas. Identify and prioritize other applications for future phases.

*Target – instant messaging and SMS (text)*

The Library should develop a pilot instant messaging service for user enquiries, using a University-approved, free instant messaging service to drive this development. Investigate the potential of SMS for Library notices and for Library enquiries.

*Phase 1 implementation remit:* Investigate the development of a co-ordinated instant messaging service for user enquiries, integrating with the existing e-mail, phone and face-to-face support service, and using Facebook and Twitter accounts. Investigate the suitability of a service such as Meebo for this purpose.

#### **Target – e-book readers**

The Library should investigate issues surrounding the use of e-book readers in an academic environment. The Library should evaluate whether library purchased e-book content can be used effectively on e-book readers and other mobile devices.

*Phase 1 implementation remit:* Evaluate publisher content on a variety of specialist e-book readers and other mobile devices for suitability of use for the Library and its users.

#### **Target – Bluetooth and infrastructure**

The Library should investigate current provision of WiFi and Bluetooth services in Library buildings and evaluate products currently on the market that could enhance service provision.

*Phase 1 implementation remit:* Survey existing Library Wi-Fi service coverage and investigate extension of service to all staffed areas. Engage with the University of Glasgow Computing Service to investigate the possibility of some Library web services being available via Wi-Fi without the need for the VPN client. Investigate the range of Bluetooth service products currently on the market and report on their potential application within the Library building.

#### **Target – user education**

The Library should develop a mobile e-literacy plan for library and information skills training that is appropriate for both Library staff and Library users.

*Phase 1 implementation remit:* Develop a mobile e-literacy plan for library and information skills training.

#### **Target – development of a promotion and evaluation strategy for mobile services**

The Library should develop a marketing and promotional strategy for the new mobile services. Establish a programme of regular surveys of

University of Glasgow Library users to establish mobile device ownership and use. Develop mechanism to track use of Library services by mobile devices. Design a programme of regular user testing of the new mobile services.

*Phase 1 implementation remit:* Develop a marketing and promotional plan for the new mobile services. Conduct analysis of first survey of mobile users to establish mobile device ownership and usage. Establish, through Google Analytics, regular data collection about mobile devices accessing our various websites, and the most viewed content.

#### **Target – creation of a Live Lab**

The Library should acquire a selection of the most popular devices so that services introduced can be tested on a range of mobile operating systems and provide an opportunity for Library staff to become familiar with them.

*Phase 1 implementation remit:* Purchase of a number of mobile devices, including phones, tablets and e-book readers. Develop, implement and administer the Live Lab concept.

### **Just the beginning**

Phase 1 of the strategy has now been completed. All working groups successfully delivered on remits and a number of new services have been introduced. Following its trial launch in April 2011, our instant messaging pilot, using Meebo, has become a permanent service. On 6 July 2011, AirPAC, now branded as Mobile QuickSearch, was launched and QR codes were added to the Web OPAC. The engagement with Library staff via the Live Lab has not only introduced them to these new services but has also prompted many to consider how mobile technology could positively impact on many aspects of current operational processes within their own areas of responsibility.

### **Conclusion**

The development of a mobile strategy that would transform access to information in innovative ways was vital to the successful launch of our first venture into mobile service delivery. We identified eight key stages of strategic planning which embraced each of the three critical arenas of

innovation – product, process and strategic. Our new mobile services will be marketed, evaluated and expanded over the coming months as we prepare to develop and implement the next phase of the mobile strategy. Future strategic development will be guided by the following principles:

- assessment and evaluation of services launched
- development and expansion of these services
- engagement with Library staff
- listening to our users
- continual monitoring of mobile technological developments.

(See Figure 4.)

We see the initial implementation of the mobile strategy as the first step in the ongoing development of the delivery of mobile services to our users and, somewhat unexpectedly, in applying this technology to improve and enhance internal working processes. The strategy formulated is flexible enough to allow for constant review and change as we evaluate our existing service and practice, as new innovations in this area are introduced, and as expectations grow in respect of this type of technology.

## References

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## Look out for QR Codes

coming soon around the library



**What is a QR Code?**

A QR or Quick Response Code is a type of barcode.

You use your smart phone to take a picture of the code which will allow your phone to launch a webpage, document or allow you to send an email or SMS message.

The QR Code above contains a link to the University Library's mobile version of QuickSearch. Most modern phones with a camera are capable of reading these codes. Your phone must have a QR Reader app to allow you to take a picture of the code. If your camera does not already have an app installed you can easily download one and they are usually free of charge.

**Why use a QR Code?**

Scanning a QR Code may be more convenient than writing down long and complicated URLs or contact details on scraps of paper.

Figure 4. Library users are kept informed of mobile technological developments

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