

# Outsourcing Email and Data Storage

## Implications and opportunities

Briefing Paper

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## Introduction

The provision of email and data storage to students within further and higher education institutions has long been a core part of many an institution's IT strategy.

As the use of the internet and the web has expanded and grown, the free services now on offer to learners from a range of external providers often have a variety of features and capacity that institutional services cannot hope to match. As a result, many students are voting with their feet, ignoring their institutionally provided email address and using one of the many free services available.

Can institutions hope to provide a service themselves that matches the experience students are obtaining from these free services? Many institutions believe that they can't and are either outsourcing email already or in the process of developing and implementing an outsourced solution. Other institutions have investigated the potential but for various institutional reasons they have decided not to outsource.

This briefing paper covers what it means to outsource email and data storage and the issues that institutions should consider if they wish to travel down this road.

## What is outsourcing email and data storage?

Today many institutions already outsource services and support to third-party providers, including web hosting, management information systems and email. However, the big shift that is happening now is the outsourcing of systems such as email to free services such as Hotmail or Google Mail.

In 2007, following success in the USA, both Microsoft and Google started actively courting the HE sector to provide free student email. Glasgow Caledonian had already successfully gone down this road in the UK and demonstrated that it was possible for a large university to outsource their student email to a third-party free service.

To put it succinctly: outsourcing email to a free service such as Gmail results in the institution no longer providing or hosting an email service. Depending on the service chosen and how it is configured, an outsourced service may allow students to:

- Have an email account with an .ac.uk address
- Retain that email account beyond graduation (sometimes referred to as 'email for life')
- Be allocated storage for email and files, which is measured in GB rather than MB
- Be able to access calendaring services
- Work through collaborative tools with other students and with these services accessible through a web interface, a mobile interface or through a traditional software office-based application

Some services, such as those provided by Google, also provide access to online office applications, blogging services and photo hosting within a single account.

These services are provided to the students for free and the institution generally only needs to consider setup and support costs. However, there are some key issues that an institution needs to consider when outsourcing email and data storage, and these are covered in this briefing paper.

## Disclaimer

This paper is for information only. No particular proprietary product or service is recommended. Reference to named products and services is for illustration only. Other products and services exist. Every institution's circumstances are different and specific advice and guidance should be sought before implementing any project.

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## Staff and students

For many institutions a critical first question to resolve is whether you are going to outsource all your email or just email for students.

For some institutions it can be quite simple to separate staff from students; whilst in others the differences are not simply identified in terms of either or, and some email users fall into a grey area. These users, for example, could be graduate students who are also employed by a university in a teaching or supervisory capacity.

If an institution is considering outsourcing staff email, there are privacy and confidentiality issues that need to be considered. The issue of privacy and confidentiality became the biggest factor why the Oxford University Computing Services (OUCS) did not outsource the provision of email at Oxford University. Without the guarantee that the hosting of data (specifically email) would be held in the UK, it was considered challenging, if not politically impossible, for OUCS to recommend the service to the university.

One of the main reasons for this is that email services such as Google, Windows Live and others, rely on using servers across the world for their service to ensure resilience and robustness. Spreading the load allows the services to provide email to millions of users. However, this very advantage is one of the key reasons why an institution may not be able to recommend outsourcing email as the emails would be held on servers under the jurisdiction of foreign countries. In such circumstances third-party providers may not be able to guarantee that, if they provide an email service to an institution, the data would be held on servers only in the UK or even only in the EU.

There are also other legal, regulatory, governance-based and archival reasons why an institution may need to hold staff email on institution-held servers. E-mails can represent potentially important records containing vital corporate information. As such their management represents an integral element of the institution's management, governance and corporate accountability under the Freedom of Information (FoIA) and Data Protection (DPA) Acts.

Institutions should be aware that outsourcing their email services could have implications for their ability to manage email in a way commensurate with these obligations and to be assured that such ability is not compromised. Though these factors are most likely to be relevant in relation to the contents of staff email, there may be similar implications for student email and institutions should reassure themselves in this regard.

## Student experience

Across the case studies one key factor common to all of the institutions that took the outsourcing route was the importance of the student experience.

- What were the needs of the students in relation to email?
- What were the needs of the institution in relation to the provision of student email?

At Leeds Metropolitan, the previous student email system was not being fully utilised by students for a number of reasons, including limited storage, proprietary interface and lack of 'user-friendliness'. By replacing the system with Google's Gmail service, Leeds Metropolitan's plan was to provide a superior student experience with greater storage capability and a friendlier and more usable interface. Google, in addition to email, offered much more for the user, including calendars, chat and collaborative tools. Google was also constantly improving their offering, which would result in a further enhanced and enriched experience for the students studying at Leeds Metropolitan.

## Comparing costs

Often when comparing the costs between running a service in-house and outsourcing, comparisons are made on providing identical services. This may often not be a fair process and any such comparisons should take into account what the average student would be using. Just because an external provider allows each user to have 6GB of data storage, this may not be a storage level required by the majority of students.

When you compare the cost of providing an identical or similar service to those provided by third parties, you can find that the cost of outsourcing can be as low as 5% of the in-house cost, though for many institutions the costs will be in the region of 10–30%. The cost of running an in-house service will mainly be the cost of servers, data storage, back-up and archiving. These costs can be very high if you try and match a similar level of service to the current providers of free email.

However, there may be additional hidden costs once the service is operational in terms of support for users, though from the experience of institutions that have gone down this road these appear comparable to the support costs of an in-house service. However, users and support staff may find it hard to adapt to a system where the only response to an outage or fault is to wait for it to be fixed by someone else.



## Beta services

One common theme across many Web 2.0 services is the beta moniker. Most Web 2.0 services are in what is referred to as perpetual beta. What this means is that the service will not (and has not been designed to) leave the development stage. For some stakeholders this can be a difficult concept to understand, especially if they are used to the alpha, beta, release candidate and gold release process that traditional software and web services usually undergo. Web 2.0 developers use the perpetual beta to continually add new features to a service and sometimes as a reason for not providing full support as the service is still in 'beta'.

Tim O'Reilly, in his paper 'What Is Web 2.0. 4. End of the Software Release Cycle', states 'Users must be treated as co-developers, in a reflection of open source development practices. The open source dictum, "release early and

release often", in fact has morphed into an even more radical position, "the perpetual beta", in which the product is developed in the open, with new features slipstreamed in on a monthly, weekly, or even daily basis. It's no accident that services such as Gmail, Google Maps, Flickr, Delicious, and the like may be expected to bear a "Beta" logo for years at a time.'

Many of the institutions who have outsourced their email services were confident in the provision of the service despite the beta status, though others had experienced problems supporting their users through frequent changes to functionality, user interfaces and availability. Institutions may also find that their service provider is keen to continue to add new functionality and even whole new products to the service 'bundle' originally agreed, even if the institution is not so keen to include them due to support, technical or governance concerns.

## Procedures and processes

All institutions have procurement processes, which need to be followed and adhered to. These processes are often geared towards the procurement of a service for which the institution will pay, leading to a need to rethink established processes when faced with procuring a 'free' service.

## Contractual

When using a 'free' service, such as third-party email, institutions should still consider the contract they have with the third party to ensure continuity of service, legal obligations and privacy. The contract should also cover service issues such as provision of user information, security (eg anti-spam and anti-virus) measures, advertisements, the ability to suspend problem accounts, to obtain logs of mail delivery or use, and to resolve any blacklisting of mail domains or servers.

An institution also needs to consider lock-in, both explicit and implicit, for example, whether there is any provision to transfer stored information to another provider and the period of notice required by either party.

## Legal

All institutions have a responsibility under the Data Protection Act to protect the data they hold about students and to ensure that any third parties to which they pass these data do likewise. If personal data are being moved outside the European Economic Area then additional provisions must be included in the contract, plus it may prove necessary to inform every 'data subject' affected by the change of what is being proposed.

Ensuring that all possible legal avenues are covered is important. For most institutions there are no major upfront issues, however this process can take time and will probably incur costs of some kind. Legal issues need to be carefully considered to ensure that an institution is not in breach of the Data Protection Act.

Institutions may want also to consider the jurisdiction(s) to which the servers that hold the student data may be subject and whether these represent an unacceptable risk.

Institutions should also ensure that safeguards are in place to reduce or eliminate the institution's liability from possible misuse of the e-mail by a student, and to be able to monitor and take action to prevent harassment, bullying and the sending of inappropriate content.

## Technical integration

There are two strategies when it comes to integration: integrate fully with other institutional systems, or keep it separate. A lot will depend on the level of integration already in place between different institutional systems, the skill levels of staff required to undertake the work and the extent to which the organisation is prepared to give the outsourced provider access to its internal systems and information. Integration may need to include the creation, deletion and management of accounts, password management, and any required interaction with related services such as MLEs, calendars, etc. Some institutions have outsourced this integration process.

## Conclusion

As this paper has highlighted, there are a number of considerations that need to be taken into account when deciding whether or not to outsource email, storage or similar services. There are a number of case studies available that highlight the experiences of institutions that have considered or chosen to outsource IT provision such as data storage or email. It is intended that these case studies will become part of a toolkit of support offered to institutions thinking of outsourcing.

## Further Information

UCISA case studies on email and data outsourcing  
[www.ucisa.ac.uk/members/activities/outsource](http://www.ucisa.ac.uk/members/activities/outsource)

O'Reilly, Tim, 2005. What Is Web 2.0: 4. End of the Software Release Cycle

[www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html](http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html)

JISC Legal carry useful information on the Data Protection and Freedom of Information Acts in relation to Web 2.0

[www.jisclegal.ac.uk/Web2](http://www.jisclegal.ac.uk/Web2)

This paper has been written and produced by Richard Otlet, Peter Tinson, Steven Bailey, Andrew Cormack and James Clay. Alternative formats of this briefing paper can be found at: [www.jisc.ac.uk/publications](http://www.jisc.ac.uk/publications)