

LSCITS

Large Scale Complex IT Systems

Social Networking and The Home Office

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EXECUTIVE SUMMARY

1. This report considers challenges and opportunities brought to the Home Office by social network sites such as Civil Pages and Facebook.
2. The report is intended to support decision making around social networking, particularly how such technologies can be used in ways that are beneficial to the Home Office and Home Office staff.
3. Home Office strategy has so far largely been concerned with limiting the risks that arise from social network sites, particularly the risks to systems and operational security. Now that the risks are better understood, and that internal sites such as Civil Pages are emerging, it is timely to consider the opportunities.
4. Chapter one of this report gives the background to the report. Chapter two describes the Home Office and the problems of cooperative work.
 - 4.1. The Home Office is a large, distributed organisation. It is one of a number of ministerial departments that constitute the UK Civil Service.
 - 4.2. The Home Office must work together effectively both internally and externally in order to be effective and efficient in its business areas which are: border control, security and counter terrorism, crime and policing, and identity and passport services.
 - 4.3. Technology is not the sole answer to effective cooperative work, but can be used to address: problems of awareness, the causes of separate working, and incompatibilities of existing information technologies.
5. Chapter three looks at public social network sites.
 - 5.1. A “social network site” is an encapsulated technology designed to support social networking. Social network sites support the creation of profiles and making connections between profiles.
 - 5.2. A “public social network site” is defined as a site run by a provider and open to the general public.
 - 5.3. The Home Office has banned access to public social network sites from computers connected to their intranet.
 - 5.3.1. Making the restrictions followed concerns about: network capacity, security and productivity.
 - 5.4. There are several arguments for easing these restrictions
 - 5.4.1. Business reasons include: collaborative working across government, awareness of the public attitude, engaging with the public and operational effectiveness.
 - 5.4.2. Practical reasons include: use of social networks by support groups.
 - 5.4.3. Social reasons include: easing the work-life balance, and strengthening ties across the organisation.
 - 5.5. The restrictions only partially addresses the concerns. Personal devices such as iPhones can still be used to access sites, as can computers outside the Home Office. Several breaches of operational security, and most of the embarrassing information posted to social network sites are likely to have originated from computers outside the Home Office intranet.

6. Chapter four of this report discusses internal social network sites
 - 6.1. Internal social network sites are defined as those accessible only within an organisation. These have similar functionality to public social network sites but retain ownership and privacy of data to the organisation.
 - 6.2. Civil Pages is an internal social network site for the Civil Service
 - 6.3. Many other large organisations are developing their own internal social networks.
 - 6.4. Many employees, particularly younger recruits, expect large organisations to have an internal social network
 - 6.5. Internal social network sites often flourish because of frustrations with knowledge management systems.
 - 6.5.1. Enterprise content management systems such as SharePoint share functionality with internal social network sites, but tend to support smaller, more closely knit workgroups.
 - 6.6. Organisations usually have fears about how internal social network sites will be used but these fears do not play out in practice.
 - 6.7. Internal social network sites are only ever actively used by a subset of employees.
 - 6.8. The value of internal social networks can be hard to evaluate, and this must be done so qualitatively as well as quantitatively.
7. Chapter five discusses the opportunities and risks of social network sites.
 - 7.1. The opportunities of adopting social network sites for business activities are:
 - 7.1.1. Directories of people and skills can accumulate
 - 7.1.2. The distributed workforce can be connected through the formation of orthogonal groups, messaging to support situational and business awareness, and through information sharing.
 - 7.1.3. Interaction with the public through information campaigns and public consultation.
 - 7.1.4. Interaction with Home Office alumni.
 - 7.2. The risks of adopting social network sites for business activities are:
 - 7.2.1. Risks to information and physical security.
 - 7.2.2. Risks of malware, phishing and spam.
 - 7.2.3. The limited control the Home Office would have of internal and public social network sites.
 - 7.2.4. Information overload.
 - 7.3. The opportunities of making social network sites generally accessible are:
 - 7.3.1. Opportunities for staff retention and motivation.
 - 7.3.2. Visible leadership.
 - 7.3.3. Increased social capital among users.
 - 7.3.4. Infrastructure for support groups.
 - 7.4. The risks of making social network sites generally available are:
 - 7.4.1. Reduced productivity.
 - 7.4.2. Privacy risks.

- 7.5. The benefits of not making social network sites available over the Home Office intranet are:
 - 7.5.1.Reductions of the problems associated with network capacity
 - 7.5.2.Reductions to the risks associated with malware, phishing and spam.
 - 7.5.3.(Limited) reductions to the risks of physical and information security.
- 7.6. The risks of not making social network sites available over the Home Office intranet are:
 - 7.6.1.De-motivation.
 - 7.6.2.Harm to the image of the Home Office.
 - 7.6.3.Reduced scope for the accountability of social network site use.
 - 7.6.4.Misperception of the risks
 - 7.6.5.An increased workload for IT support.
 - 7.6.6.Silo working.
- 7.7. Practical constraints on the use of social network sites are that there are many social network sites in use; that any site will have a limited number of employees actually using it; and limitations to the access of some sites.
- 7.8. Legal constraints on the use of social network sites relate to: the mandatory minimum measures; the Data Protection Act; the Freedom of Information Act; and to issues of the ownership of data stored on external servers.
- 7.9. Governance issues are also discussed. The discussion is in terms of: moving from restriction to governance; monitoring and evaluating social network site use; and the relationship between social network sites and content management systems.
8. Chapter six concludes the report and makes the following recommendations:
 - 8.1. Focus on the governance of social network site use, not just restriction
 - 8.2. Focus on opportunities as well as risks of social network sites
 - 8.3. Develop requirements for social network sites and their use by Home Office staff
 - 8.4. Develop methods for evaluating social network site use with respect to the opportunities and risks they pose

1. INTRODUCTION

This report considers challenges and opportunities brought to the Home Office by social technologies, in particular those brought by social network sites such as Facebook and Civil Pages. The report is intended to support decision making around social networking, particularly how such technologies can be used in ways that are beneficial to the Home Office and Home Office staff. Home Office strategy has so far largely been concerned with limiting the risks that arise from social network sites, particularly the risks to systems and operational security. Now that the risks are better understood, and that internal sites such as Civil Pages are emerging, it is timely to consider what opportunities there are. This report does not specify what to do about social networking but contributes ways of framing the problems of social network use in a complex organisation and makes several high level recommendations.

1.1 Background to the report

This report has been written as part of the LSCITS initiative. Investigators (Prof. Ian Sommerville, Prof Justin Keen, Prof Dave Cliff and Mr Adeel Waheed Kahn) from the LSCITS initiative held meetings with members of the Home Office OCIO in February and June 2009 to discuss issues of scale and complexity in Home Office IT systems. Following the June meeting, social networking was agreed as a suitable research topic. A research plan was developed by Dr John Rooksby and Mr Adeel Waheed Kahn, and discussed in a further meeting in August 2009. Dr John Rooksby was assigned responsibility for undertaking the research.

1.1.1 Literature review

A literature review has been conducted, and was published in October 2009 with the title “Social Networking and the Workplace”. This focused on the technologies and practices associated with social networking and summarised the academic literature in this area. This review is now available online¹.

1.1.2 Organisational analysis

Following the literature review, a review of the organisational structure and objectives of the Home Office was conducted and used as a basis for discussing the potential of social technologies for business use. This was handed to the Home Office in November 2009 with the title “Home Office Overview and Comments Regarding Social Networking”. Feedback was given on this in December 2009. This document is based on secondary sources including academic literature, web-based materials, and publicly accessible Home Office documents.

¹ <http://www.scribd.com/doc/23926828/Social-Networking-and-the-Workplace>

1.1.3 Interviews

In November 2009 Dr John Rooksby visited the Home Office and met with Robin Pape and Patrick Doyle from the Office of the Chief Information Office (OCIO). He interviewed eight other members of the Home Office about their roles and issues to do with social networking. In January 2010, Rooksby had a further meeting with Patrick Doyle and conducted two more interviews. The interviews are summarised in appendix 1.

1.1.4 Online research

Official and unofficial Home Office sites on Facebook, Bebo and YouTube have also been examined.

1.2 The LSCITS initiative

LSCITS is the UK's national research and training initiative in the science and engineering of Large-Scale Complex IT Systems.

Leading British academics and industrial practitioners established this national strategic coordinated research and training initiative with a headline funding of over £15m. Research is being undertaken at a consortium of universities including Bristol, Leeds, Oxford, St Andrews and York.

The motivation for the LSCITS Initiative is the on-going growth in the size and complexity of information technology (IT) systems. Our ability to develop, maintain and manage such systems is falling behind the growth in their complexity. There is a high risk that we will find ourselves reliant on IT systems that we don't fully understand and that we cannot effectively manage.

We are addressing this risk at different levels of abstraction through the research of: Complexity in Organisations; Socio-Technical Systems Engineering; High Integrity Software Engineering; Predictable Software Systems; and Novel Computational Approaches.

1.2.1 The author

Dr John Rooksby is a Research Fellow in the School of Computer Science at the University of St Andrews. His research concerns socio-technical systems, covering issues in the development and evaluation of information systems in healthcare, education, government and industry.

The following members of the LSCITS initiative have also contributed to this work.

Dr Gordon Baxter, University of St Andrews

Prof Dave Cliff, University of Bristol

Mr David Greenwood, University of St Andrews

Dr Natalie Harvey, University of St Andrews

Prof Justin Keen, University of Leeds

Prof Ian Sommerville, University of St Andrews

Mr Adeel Waheed Kahn, University of Leeds

2. THE HOME OFFICE

This section outlines what the Home Office is, what it does, and how the Home Office delivery groups and agencies are bound together. The section sets the backdrop for subsequent considerations of the problems and opportunities presented by social technologies.

2.1 The organisation

The Home Office is a large government department with expenditure in excess of ten billion pounds a year and over twenty four thousand employees. The Home Office has four main business areas:

- Border control
- Security and counter terrorism
- Crime & Policing
- Identity and passport services

These business areas are substantial and of critical importance to the UK. Consequently, the Home Office is a large and complex department.

2.1.1 Organisational structure

The Home Office is made up of several sub-organisations (a headquarters and three delivery agencies), and sponsors a number of non-departmental public bodies.

Headquarters: The Home Office Headquarters is staffed by around 2800 people². Two delivery groups are based in Home Office headquarters. These are the Crime and Policing Group and the Office for Security and Counter Terrorism. The delivery groups enable and guide the development and delivery of the Departments public services but do not provide services directly. The Crime and Policing Group is responsible for policing and for community safety. It sponsors several arms' length bodies. The Office for Security and Counter Terrorism is responsible for the counter terrorism strategy. The Office for Counter Terrorism is responsible for providing strategic direction to work on counter terrorism across government. Headquarters also includes, the Finance and Commercial Group, Human Resources, the Science and Research Group, the Strategy and Reform Directorate, International Directorate, Communications Directorate, Legal Advisors Branch, and Private Office.

Delivery Agencies: Three delivery agencies are directly managed by the Home Office. These are the UK Border Agency, The Identity and Passport Service, and the Criminal Records Bureau. The UK Border Agency has over 17000 staff and operates from 35 countries, the Identity and Passport Service has almost 4000 staff, and the Criminal Records Bureau around 550.

Non-Departmental Public Bodies (NDPBs): NDPBs also play an important role in delivering a range of Home Office services. These include the Independent Police Complaints

² As at April 2010

Commission, and The Serious and Organised Crime Agency. There is also the Independent Inspectorates and Ombudsmen, which is an independent body.

2.1.2 Organisational change

The above is simply a snapshot of the structure of the Home Office. As with all government departments, the Home Office is in regular change. It was formed in 1782, and has been reformed many times throughout its history. Many of the changes over the twentieth century have been to remove responsibilities to other ministerial departments, often in order to streamline and manage the size of the organisation. Major changes in the last decade include the removal of responsibility for criminal justice, prisons & probation and legal affairs (to the newly created Ministry of Justice), but also the addition of responsibility for counter terrorism strategy. The UK Borders agency is also an area of expansion, recently gaining responsibilities that formerly lay with the Foreign Office and HMRC. Depending on the results of the upcoming general election, there is also the prospect of a formal borders force with police powers.

Following some serious failings several years ago, and subsequent criticism by Parliament, the public and the media, the Home Office set about some major reforms. The reforms were also designed to take account of the changing situation in which the Home Office was working. The reforms were set out in the 2006 document *From Improvement to Transformation An Action Plan to reform the Home Office*³. These reforms resulted in new and clear objectives, and a statement of purpose being set: “Working Together to Protect the Public”. They resulted in many changes at the upper levels of the organisation, including a reshaping of the board and changes to directorships. The organisation was reshaped, including a reduction in size of the headquarters and a devolving of responsibilities. Other reforms include new approaches to risk (including information risk), a new people strategy, and a new information and communication technology policy (the Information, Systems and Technology Strategy).

2.1.3 Locations and mobility

In early 2005, the Home Office moved its headquarters to Marsham Street in London. The delivery groups operate within headquarters. The Agencies have offices in London, around the UK and internationally. The Home Office now operates from 35 countries, mainly through the moving of borders procedures to departure points.

Flexibility is associated with much Home Office work. This may be travel between different sites and to events, or may, in some cases, be because of a more mobile role. Many Home Office employees also have the facility to work from home and it is possible to connect to the Home Office intranet remotely. However the culture of the Home Office is such that people mostly prefer to be present and seen in the workplace.

2.1.4 Communicating with the public

A key difference between commercial organisations and government departments is the increased accountabilities held by the latter toward the public. The Home Office has a responsibility to be aware of public opinion and to inform those it serves about what it is doing, how, and why. The Home Office is also responsible from running a number of

³ <http://www.homeoffice.gov.uk/documents/reform-action-plan.pdf/>

campaigns to educate or inform public debate, and these include anti-drug and anti-violence campaigns.

2.1.5 Leadership

The Permanent Secretary is the senior civil servant; responsible for ensuring the Home Office achieves the goals set by the Home Secretary. The Permanent Secretary is accountable to ministers for the performance, organisation and delivery of the Home Office, and to Parliament for its efficacy and effectiveness on expenditure. The Home Office Board is chaired by the Permanent Secretary and is made up of the heads of the main delivery groups, executive agencies and corporate functions, plus two non-executive directors. This is the main critical level decision making body for the Home Office. There is also a supporting governance structure.

The Home Office board is expected to provide visible leadership and set the culture for the organisation. The Compact⁴ between Ministers and the Home Office Board includes commitments such as: we will “demonstrate a shared commitment to succeed”, “behave and work in line with Home Office values”, “exude pace and passion in the way that we work by adopting a proactive approach”, “ensure that decisions are taken at the right level”, and “work effectively with our partners and stakeholders”. The board is expected to be “strong, visible and behave cooperatively”.

2.1.6 The workforce

In May 2008, the Home Office published its People Strategy: *High Motivation, High Performance, High Achievement*. This strategy sets out how the Home Office will ensure that people are enabled to work successfully. The strategy consists of work in six areas: ensuring that the Home Office remains a great place to work; developing quality leadership and management; ensuring that our people have the skills they need; delivering high performance; working openly across the Home Office and in partnership with others; and, being responsive to change. One of the ways in which the Home Office is improving on ‘making it a great place to work’ is by “making recognition of achievement and celebrating success much more a part of our normal way of working”⁵

⁴ The Home Office Departmental Framework May 2007 (<http://www.homeoffice.gov.uk/documents/ho-departmental-frame>), p12

⁵ The Home Office Departmental Report for 2009 (<http://www.homeoffice.gov.uk/documents/ho-annual-report-09/>), p4

2.2 Cooperative work

The statement of purpose for the Home Office, “Working together to protect the public” emphasises the need for collaboration and cooperation both internally and with partners. This is reflected in the following statements:

“The Home Office is a group of delivery groups and agencies bound together by its common purpose to protect the public – and by its political leadership, governance, strategy and objectives, values and ways of working”⁶

“Our purpose emphasises that we need to work better with all our partners, including the police, intelligence agencies, local authorities, voluntary bodies, other departments and other governments. Most important of all, we must work with the public ... so that our services are responsible and accountable”⁷.

Cooperative work for the Home Office both internally and with partners is complicated for a number of reasons, including:

- It has many thousands of employees
- It is decentralised, housing multiple delivery groups and agencies
- It is geographically distributed
- It works with many partner organisations
- It is an organisation in change
- It is accountable to the public

Silo-working is a problem for large organisations that do not achieve effective internal and external cooperation. The silo serves as a metaphor for organisational units that are self-contained and cut-off from other units, and as a result can be inefficient and ineffective. For example, one unit may be replicating the work of another, or the outputs from one unit may be incompatible or contradictory with another. The problem is associated with decentralisation, whereby business units become more autonomous. Decentralisation is not itself the problem, it being a necessary feature of any large, complex organisation. According to Page⁸, the problems underlying silo working in the Civil Service are:

1. The desire to maintain or extend the range of responsibility of the department or section.
2. The need to protect budgets, whereby departments do not want to lose income, or gain new responsibilities without correlative budgetary increases.
3. Differing outlooks, whereby departments view the same issue from different perspectives and so pursue alternative solutions.
4. A lack of awareness that another department has an interest in the same area or is doing a similar thing.
5. Different organisational and legal bases of problems that require separate working.
6. Technology reasons such as the incompatibility of computer systems.

The first three problems contain a political disincentive to work together and high conflict potential and reflect fundamental perceptions of what the organisation is and is working towards. The fourth, fifth and sixth problems do not represent any unwillingness to work

⁶ The Home Office Departmental Framework May 2007, p1.

⁷ Working Together to protect the Public, the Home Office Strategy 2008-11. (<http://www.homeoffice.gov.uk/documents/strategy-08>), p2.

⁸ Page E.C. (2005) Joined-Up Government and the Civil Service. In Bogdanor V (Ed.) Joined Up Government. Oxford University Press. 139-155.

together and have lower conflict potential. It is this second set of issues that can be best addressed by using technology to support cooperative work.

2.3 Summary

The Home Office is a large, distributed organisation. It is one of a number of ministerial departments that constitute the UK Civil Service. The Home Office must work together effectively both internally and externally in order to be effective and efficient in its business areas which are: border control, security and counter terrorism, crime and policing, and identity and passport services. Technology cannot be the answer to all of the threats to effective cooperative work, but can be used to address problems of awareness of other work, separate working, and incompatibilities.

3. PUBLIC SOCIAL NETWORK SITES

This section discusses how Home Office employees, business units and alumni have been using public social network sites. It examines the issues surrounding the restriction of access to public social network sites in the Home Office, and sets these in the context of findings from other organisations.

3.1 Definitions

“Social network site”

The term “social network site” is used to refer to an encapsulated technology that is designed specifically to support social networking. Boyd and Ellison⁹ define a social network site as a web-based service that allow individuals to (1) construct a public or semi-public profile within a bounded system; (2) articulate a list of other users with whom they share a connection; and (3) view and traverse their list of connections and those made by others within the system. We agree with this definition although note that not all social network sites are exclusively web-based, for example Twitter and FourSquare can be used via SMS text messages. Social network sites may be public (see below) or internal. Internal sites are generally restricted in some way to e.g. members of the same organisation.

“Public social network site”

Public social network sites are predominantly run by commercial providers, with the software and data residing on the providers’ own servers. They are often free, but sometimes subscription based. Well known examples include Facebook and LinkedIn. Most public social network sites are leisure oriented, although sites such as LinkedIn are designed to support interaction on a professional basis, particularly in finding and recommending expertise. Later in this report, *public* social network sites will be contrasted with *internal* social network sites.

⁹ Boyd D, Ellison N (2007) Social network sites: Definition, history, and scholarship. Journal of Computer-Mediated Communication, 13 (1): 210-230.

3.2 Access to sites from the Home Office

3.2.1 Restrictions on access

In January 2009, the Home Office Board decided that access to social network sites should be stopped. This affected a number of sites including MySpace, Twitter, Facebook and Bebo. This does not affect LinkedIn, which is classified as a professional social networking site, or Civil Pages, which is an internal social network site designed exclusively for the Civil Service. The restricted sites are not available from the desktop, which accesses the internet through the Government Secure Intranet (GSI). They are still accessible, from within Home Office premises, via standalone machines and personal mobile devices such as iPhones and Blackberries.

Until January 2009, Facebook was the most popular website accessed over the Home Office network. This was despite the fact that it had limited functionality (the Home Office intranet blocked JavaScript and ActiveX from this site, as with all non white-listed sites¹⁰). There were several concerns about social network sites that led to the restrictions:

- An IT service provider to the Home Office, had some concerns regarding the network capacity that access to Facebook was taking on the network.
- CESG (The Communications-Electronic Security Group within GCHQ) had issued warnings about security risks from social networks.
- The Cabinet Office asked Departments to consider their stance on social networking.
- The Home Office Board had concerns about the impact of Facebook on the need for information assurance and operational security.

The Home Office Board focused on security, particularly malware, in their decision-making and communications with staff about the restrictions. However in the interviews conducted during the writing of this report, productivity was cited as a major concern, in essence, there were concerns that staff were using these systems during working hours for personal activities. The Board's focus on security is possibly because productivity is a management issue and is already covered in existing Home Office policies about fair and reasonable use of IT.

3.2.2 Existing methods of access

Social network sites can currently be accessed from standalone PCs within Home Office premises. In the Home Office headquarters, there are standalone PCs in the Internet-café, and sited in various locations around the workspace. There is an increasing demand for standalone PCs which can, in part, be attributed to the restriction of access to social network sites.

The provision and use of stand-alone PCs causes a number of problems:

- Standalone PCs are time consuming to support, and are an extra and potentially unnecessary cost.
- If they need to be connected to a printer a separate printer must be purchased.
- They can also be difficult to site within an office, and can cause disturbances for people sitting near them.

¹⁰ The Improving the Internet Experience Project is addressing problems that cause sites such as Facebook to have limited functionality.

- For the people who require access to restricted sites including social network sites, it is disruptive to have to switch between a networked and standalone PC, and it is not possible transfer information easily between networked and stand-alone systems.
- Demand for the use of stand-alone PCs is high. There may also not be a machine available at the required time, and queues can form, which potentially contributes to a reduction in staff productivity.

The other way social network sites can be accessed from work is to use a mobile device or smartphone that can access the Internet. Many people within the Home Office have such devices (often as their own personal device), although none of the interviewees accessed social network sites this way. It is unlikely that such access would meet any business requirement, but means that leisure use during working hours is possible and practically impossible to forbid. Facebook reports that worldwide “there are more than 100 million active users currently accessing Facebook through their mobile devices. People that use Facebook on their mobile devices are almost twice more active on Facebook than non-mobile users.”¹¹ Of course, Home Office employees can also access Social Network sites from home and elsewhere.

The view of many employers in the UK and abroad on the use of public social network sites at work is not favourable. Many have banned the use of sites such as Facebook. A report by the TUC in 2007¹² recognised and sought to nullify concerns, arguing that the media exaggerates the problems and consequently employers have been overreacting. The TUC report recognises that employers’ concerns tend to be about time wasting, about the posting of inappropriate content, about the slandering of co-workers or customers, and the possibility of exposing the organisation to a higher risk of phishing attacks (e.g. Pet names mentioned on Facebook might be used as passwords at work). The TUC claim that when handled properly, providing Internet access for staff during breaks can be beneficial and can help individuals develop IT skills. They recommend a clear and well thought out policy on social networking as the best way to ensure employees do not waste time. The TUC also point out that employees are entitled to a private life.

The TUC report assumes social networking to be exclusively a leisure activity. However, as people’s private and work lives are blurred, so too is the use of social network sites. Many people will connect on a social network site to people they know through work, perhaps to colleagues, perhaps to their boss, or perhaps to clients¹³

3.3 Problems arising from the use of sites

3.3.1 Social network site use at work

Before January 2009, Facebook was regularly used from within the Home Office. It seems likely that much of this use was for what can be broadly categorised as “leisure reasons”. What exactly people were doing on Facebook and why they were doing it is not known.

¹¹ <http://www.facebook.com/press/info.php?statistics>

¹² TUC (2007) TUC briefing on online social networking and human resources. August 2007. <http://www.tuc.org.uk/extras/facinguptofacebook.pdf>

¹³ DiMicco JM, Geyer W, Dugan C, Brownholtz B, Millen DR (2008) People sensemaking and relationship building on an enterprise social networking site. In proceedings HICSS 2009, Hawaii, USA..

None of the interviewees used Facebook regularly and so are unable to account for the kinds of things that went on. Much of the Facebook use at work was probably for leisure reasons and of no value to the Home Office. If Facebook was used outside of lunch or break times this would probably have been an inappropriate use of time; at any time it drained resources such as network bandwidth.

Most of the interviewees thought that it was younger people who were using social networks, both in the Home Office and in general. However it is worth noting that the demographics of social networks are rapidly changing: 43% of US Facebook users are aged 25-54 (with the population of 35-54 year olds growing by 276.4% over the final 6 months of 2009) , and 64% of visitors to Twitter.com are aged 25-54.

It is likely that many Home Office staff who use systems such as Facebook are connected to other Home Office staff and stakeholders. There is an argument that social network sites help “strengthen ties” between employees, and between employees and customers or stakeholders. So arguably there is some value in Facebook use even when discussions are not work related.

Skeels and Grudin¹⁴ found that at Microsoft, in early 2008, around 37% of employees were using Facebook, with around 17% using it daily. More employees, around 50%, were found to have LinkedIn accounts, but far fewer of them, around 4%, were using it daily. Skeels and Grudin identified a number of positive benefits come from using these technologies e.g. LinkedIn was useful for building and maintaining professional networks and Facebook was useful in the workplace for creating and strengthening ties. However, they also found worries amongst many staff using LinkedIn and Facebook about the legitimacy of this activity. In particular, there were questions over time wasting, and over security and the possibility of disclosing confidential information. There were also more practical problems for staff in mixing professional and social life, and there were related issues in whether connections should cross hierarchy, status and power boundaries.

DiMicco and Millen¹⁵ on the other hand looked at the use of Facebook by graduate recruits to IBM. All of these people had joined the IBM network on Facebook, therefore making themselves visible to anyone within the organisation. But the ways they chose to present themselves differed markedly. They noticed that recruits would present themselves in one of three ways. Some were, as DiMicco and Millen put it, “reliving college days”, some were “dressed to impress” and others were “living in the business world”.

What becomes clear from these studies is that the benefits and drawbacks of allowing public social network sites in the workplace are extremely difficult to evaluate. People use these sites in different ways, and the benefits people find in them, such as the creation and strengthening of ties, are difficult to measure.

3.3.2 Security

Some of the uses of social network sites have caused problems to operational security. For example The Daily Record (a Scottish tabloid newspaper) reported that members of the UKBA in Scotland had posted pictures and discussed people they were investigating, using their real names. There have been several other incidents similar to this.

Some uses of Facebook pose reputational problems for the Home Office. For example, Facebook groups have been created by Home Office staff including “Home Office (ex

¹⁴ Skeels M, Grudin J (2009) *When social networks cross boundaries: A case study of workplace use of Facebook and LinkedIn*. In *Proceedings of Group 2009, Sanibel Island, FL, USA*: 95-104.

¹⁵ DiMicco JM, Millen DR (2007) *Identity management: Multiple presentations of self in Facebook*. In *proceedings of Group 2007, Sanibel Island, FL, USA*: 383-386.

workers)” and “I Worked at Lunar House”. Most of the comments on these are innocuous, although some are more harmful and there are photographs of employees that show computer screens and paper forms in the background with information that clearly is not public.

The News of the World drew from these groups when it reported that “CIVIL servants have revealed how they SKIVE OFF work and MOCK immigrants - in a flood of astonishing messages on Facebook”. The comments that this article draws on are spun by the paper in order to create a sensation. In fact only a small number of the comments are in any way astonishing; the great majority are completely innocuous. Several of the comments actually say that the UKBA can be a great place to work. It is also notable that, though the article was published in 2009, the comments and photos are several years old and that the groups have seen little use since 2007.

Such problems seem to involve a tiny minority of users, and seem to have largely stopped since 2007. These problems arguably happened in the early days of social networking when privacy and issues of appropriate use were perhaps misunderstood. Users from UKBA have been particularly visible, several security failures and embarrassments that appear to have originated in UKBA. However this may reflect the comparative size of UKBA.

Many Home Office employees, in line with the UK public as a whole, are likely to use Facebook at home or elsewhere in their leisure time. There is no reason why any of the problems mentioned here could not have originated from home computers. Thus, restricting social network use from business premises cannot, in itself, prevent the posting of inappropriate content.

3.4 Arguments for access to social network sites

3.4.1 *Business cases*

The decision to restrict access to social network sites was taken with the proviso that, if an individual or business unit could produce a convincing business case for the use of social network sites, then access would be granted. However, at the time of writing this report, there is no process for submitting and evaluating such business cases. This is now in development. There are several options as to how access can be granted, and these are being considered and investigated. They include granting full and unrestricted access to sites, read-only access, or time-limited access. It is technically feasible to grant access on an individual case-by-case basis, although controlling access in this way is new for IT operational teams and it is unclear if resources are available to support this. The likely scale of demand is also being investigated. The Home Office is also investigating the approaches being taken by other departments regarding social networking.

The Home Office Board have stated that access to social network sites may be granted where there are “genuine business reasons”. Requests for access mainly concern the sites Bebo, Facebook and Twitter. Key business reasons for using social network sites that have been put forward include:

1. collaborative working across Government and with key external stakeholders;
2. awareness of the public attitude;
3. engaging with the public;
4. Operational effectiveness.

Collaborative working across Government: the Home Office has recognised that Civil Pages is likely a more effective way of supporting collaborative working than using an external social networking site. However, key external stakeholders may not be able to access Civil Pages and, therefore, limited use of external sites might be helpful in these instances.

Awareness of the public attitude: The requirement for awareness of the public attitude comes from the Press Office, which is regularly contacted regarding stories that have originated on social network sites. Access to social networks, such as Twitter, provides immediate information about current concerns.

Engaging with the public: Home Office Communications find external social networks to be an appropriate place to interact and communicate with younger people. An anti-knife crime campaign “It Doesn’t Have to Happen” uses Bebo to create and interact with a community of users. The drug information campaign “Talk to Frank” uses Bebo in a similar way, and a profile for “Pablo the Drug Mule Dog” on Facebook to distribute information through video interviews. These campaigns generate a large number of questions and comments, many of which must be responded to in a timely manner.

Operational effectiveness: Immigration Officers have requested access to social network sites, in particular Facebook, to view personal profiles associated with cases they are investigating. Privacy changes to Facebook are likely to have an impact on the effectiveness of this, if users understand how to use these. Counter Terrorism Officers may also have a similar requirement, but secret and top-secret work is transmitted using different systems. One interviewee also mentioned that Facebook could be used to screen job candidates.

An issue faced by Communications and the UKBA in interacting with the public is what kind of profile would be appropriate to use for social networking? Business profiles would often be more appropriate than personal ones, but there are several issues in how these are set up and managed. “Pablo the Drug Mule Dog” is an effective business profile for the ‘Talk to Frank’ Campaign, but connecting to people who are having their cases reviewed by UKBA, or to people to monitor behaviour (for example extremism) would need to be done in a different way.

There are also some more general concerns, including at the high level, that the reputation of the Home Office might be damaged because of the restricted access to social network sites.

3.4.2 Practical cases

There are several groups within the Home Office that support the needs of particular employees. The Home Office group SPECTRUM support Lesbian, Gay, Bisexual and Transgender (LGBT) staff, raise awareness among staff and management of issues affecting LGBT staff, provide peer support, and act as a watchdog on diversity statements and policies. This group has made use of social networking facilities. The HODS (the Disability Support Network) may hold similar interests in social networking.

Social networking for support groups is not a business reason as such, and it is likely to have been overlooked because of the focus purely on business cases. However, such groups are of importance to the Home Office and their requirements should not be overlooked. The availability of social networks may therefore support HR policies such as equal opportunities for all.

3.4.3 Social reasons

Despite the concerns about productivity it is possible to make a case for an easing of access restrictions. There are two main reasons why this might be done:

Work-life balance: People increasingly use social network sites and email to organise their social and family lives. Allowing people to do this at a reasonable level from the workplace would possibly increase job satisfaction and ability to perform, especially when it is necessary to work long hours. The argument here is comparable to the argument for permitting personal phone calls.

Strengthening ties: Based upon the findings from Microsoft mentioned in section 3.3.1, the case can be made that social networking among employees can increase and strengthen the ties between employees, and therefore have an indirect benefit on productivity.

Neither of these reasons unequivocally merits the easing of restrictions to social network site usage over the Home Office intranet, particularly in light of the unreasonable levels of use prior to 2009. But they present a case for acknowledging there can be reasonable use of personal devices to access sites during work time. Reasonable use would need to be outlined and managed appropriately.

3.5 Outside users

Most of the content on the “Home Office” and “I worked at Lunar House” Facebook groups was not posted from inside the Home Office. Much of it comes from people who say they used to work at the Home Office. Some of these alumni have posted inappropriate content (the person who has posted inappropriate photographs no longer works at UKBA). On the other hand, there are people who say they miss working at UKBA and would like to return.

There are also a number of Facebook groups that are publicising Home Office related issues, often the deportation of individuals. People also often comment on Home Office related news and issues on Twitter. The Home Office does not appear to engage with these, and it seems unlikely that it needs to. However, units such as the Press Office would like to have awareness of these.

3.6 Summary

The Home Office restricted access to public social network sites such as Facebook in January 2009. Concerns about the use of such sites included their effect on employee productivity and network capacity, concerns about malware, and concerns about information security. The restrictions led to an increased demand for standalone PCs, and can also be worked-around by the use of personal mobile devices. Several compelling business cases for access have been made, and this report also makes a case for opening up use for practical and social reasons. The restrictions of access appear only to address the problems of malware. The problems of information security persist because information can be posted from home or from mobile devices, and because much of the inappropriate information posted to Facebook groups was done so by people who formerly worked for the Home Office. Productivity problems also persist.

4. INTERNAL SOCIAL NETWORK SITES

This section discusses the Civil Pages internal social network for the UK Civil Service, and places this in the context of internal social networks within other large organisations. It concludes with a discussion of the relationship between internal social networks and content management tools, such as Microsoft SharePoint.

4.1 Definitions

“Internal social network site”

Some large organisations run their own social network site on their own servers, what we will refer to as an “internal social network site”. Internal social network sites are those hosted inside an organisation. Examples we will discuss include Beehive at IBM, and Watercooler at HP. In some cases, organisations contract an external provider to provide a private social network site for them. Although external provision means that the servers are unlikely to be physically located in an organisation’s premises, we will also treat this as being an internal social network site.

“Enterprise content management”

Enterprise content management refers to the technologies and processes used for managing creation and access to documents and other forms of data among groups of people. Microsoft SharePoint is an Enterprise Content Management system used by the Home Office. There is an overlap between internal social network sites and enterprise content management systems. SharePoint has social networking functionality, meaning that it can be used to support social networks. Internal social network sites on the other hand are often able to manage content.

4.2 Civil Pages

Civil Pages is a social network for the UK Civil Service, and runs on the Government Secure Intranet (GSI). It is developed by The National Archives. It is in beta (trial), and was launched at Civil Service Live in 2009. It has been granted funding to 2012. Civil Pages was originally suggested by a member of Home Office Staff. It supports the creation of user profiles, connections to other users, status updates, group creation and controlled group membership.

Civil Pages cannot currently be used to collaborate with people outside of the Civil Service, or civil servants who do not have access to GSI.

Most of the consideration regarding social networking by the Home Office has regarded the problems of external sites. Some interviewees said they had not considered issues in internal social networking at all until the interview. One interviewee said they regularly used Civil Pages but was involved in its implementation. Other interviewees were either unaware of Civil Pages or had simply looked at it once and paid no further attention to it.

4.3 Internal social network sites in other organisations

4.3.1 Experiences in large organisations

Some organisations have developed or purchased their own social network sites for use internally. This section will examine why these have been deployed and how they are used. Organisations that have developed their own internal social network sites include:

- SAP has developed an internal social network called Harmony¹⁶.
- Accenture have developed a social network site called People Pages¹⁷.
- Microsoft has developed a site called Town Square.
- Deloitte (who use the SelectMinds system mentioned above to power their external alumni social network) have created an internal social network site called D Street.
- IBM have developed two internal social networks: Bluepages (launched in 2001) and Beehive.
- HP (Hewlett Packard) have developed their own internal system called Watercooler.

Many organisations that use internal social network sites appear to be using systems developed by third parties. Organisations using third party supplied internal social network sites include:

- Proctor and Gamble use an online community application called PeopleConnect, which is supplied by Telligent¹⁸.
- Best Buy have an employee social network called Blue Shirt Nation, which has been built by third party developers using the open source framework Drupal¹⁹.
- BearingPoint, Deloitte, Dow Chemical, and IBM are using a system called The SelectMinds Corporate Social Networking Solution Suite, which is supplied by Select Minds.

¹⁶ Richter A, Koch M (2008) *Challenges of the use of social networking services in (German) enterprises. Paper presented at the Workshop on Social Networking in Organizations, CSCW 2008, San Diego, CA.*

¹⁷ Richter A, Kneifel D, Ott F (2009) *Fallstudie: Social Networking bei Accenture Wirtschaftsinformatik & Management*1(1):78-81.

¹⁸http://www.cio.com/article/500363/How_Procter_Gamble_Got_Employees_to_Use_Social_Networking_at_Work

¹⁹http://www.computerworld.com/s/article/322857/The_new_employee_connection_Social_networking_behind_the_firewall?taxonomyId=16&pageNumber=1

There is not a great deal of information available about these internal social network systems, although Kuhn from SelectMinds has published a general report²⁰ about his experience in the area. Kuhn explains that there is often enthusiasm for social networking sites amongst many staff of large organisations; many will desire an internal version of Facebook, and college graduates joining the workforce will be surprised employers do not already offer such services. Kuhn explains that there is often frustration with existing knowledge management and portal solutions, and unofficial, special-purpose social media offerings often flourish. However, he also says that managers and directors regularly have concerns about adopting internal social network sites. Concerns include: that social networks might not correspond to organisational charts and could undermine command and control prompts apprehension; that there may be inappropriate behaviour (this fear is driven in part by horror stories in the media, but also the real concern of legally actionable behaviour); and that social networks could be used to form or reinforce cliques. These fears can be mitigated with the provision of controls such as pre-approval of user-generated content, controls on abusive language, and controls on repetitive and potentially abusive behaviour. He has never encountered a client that is comfortable with the 'anything goes' world of Facebook, but says that the interest in control lessens over time as internal social network sites mature.

Kuhn explains that organisations that devote one or more people to driving usage (by submitting content, by seeding and encouraging forum discussions, by sending digest email updates) see far more traffic than those who devote fewer resources. In Kuhn's experience, the typical constituencies of internal social network sites are employees, alumni, retirees and VIPs (managing directors, retired partners etc.).

Some other large organisations, particularly those in the technology sector, have created their own social network site. The information available about most of these sites is usually descriptive rather than evaluative. The exceptions are IBM's Beehive²¹, HP's Watercooler²² and Deloitte's D Street²³. These companies have all published research papers about their social network sites, and so we are able to discuss them here. All of these social network sites have taken inspiration from popular sites such as Facebook. D Street and Beehive were designed with profile creation and connection in mind, but Watercooler has grown from being an information aggregator. At the heart of Watercooler is blogging and micro-blogging, rather than the profiles themselves. Beehive builds upon an older IBM social network called Bluebook.

Watercooler, Beehive and Bluebook were implemented in large, distributed organisations in which employees are scattered across a myriad of sites, business units and countries, making it virtually impossible for them to know everything going on inside the company. Employees at all three companies had already been finding value in the use of Web 2.0 technologies including social network sites, but these mainly public sites were not always an appropriate place for company information.

Beehive was launched in May 2007 and, within a year, supported 30,000 employees (around 7.5% of IBM staff). Around one third of these however did not connect to another user or contribute any content. Uptake was globally distributed, and tended to reflect the structure of

²⁰ Kuhn S (2008) *SelectMinds Abstract for CSCW 2008 workshop: Social Networking in Organisations*. Paper presented at the Workshop on Social Networking in Organizations, CSCW 2008, San Diego, CA.

²¹ DiMicco JM, Millen D, Geyer W, Dugan C, Brownholtz B, Muller M (2008) *Motivations for social networking at work*. In *Proceedings of CSCW 2008, San Diego, CA, USA: 711-720*.

²² Brzozowski M (2009) *Watercooler: Exploring an organisation through enterprise social media*. In *Proceedings of Group 2009, Sanibel Island, FL, USA: 95-104*.

²³ Romeo, P (2008) *The D Street Case Study*. Paper presented at the Workshop on Social Networking in Organizations, CSCW 2008, San Diego, CA.

IBM and the mix of roles rather than any one group. Watercooler was launched in June 2007. The go-live of Watercooler coincided with a major emergency (a forest fire near one of the locations), and the technology was quickly found useful as a way of getting up-to-date information. However, the number of active users of Watercooler is 3000, 0.9% of HP's employees. D Street was launched for 1500 Deloitte staff in June 2007. In June 2008, it was rolled out to 46,000 staff, and around 25% of these had edited their (automatically generated) profile within eight weeks.

There are useful lessons to learn from Watercooler, D Street and Beehive, but all three proved hard to track and evaluate. Users do not have to be logged in to use these technologies, click rates do not correlate with reading rates, and content production rates do not necessarily correlate with quality. In order to understand the effectiveness of Watercooler, HP carried out a survey, and supplemented this with an analysis of clicks on blog posts. To understand the effectiveness of Beehive, IBM carried out interviews, repeated over the course of a year. Deloitte appear to have gathered feedback, but it is unclear which methods were used. Watercooler was found to be popular for finding people with specific interests or expertise, and for more generally exploring the organisation and groups of people. A majority of users would check the Watercooler home page for new content regularly, and around one half of people that did so would sometimes or usually read new content. Around 20% of people who looked at the homepage rarely clicked on links to new content, but some said they appreciated being able to see what is going on at a glance. Beehive was found useful for people to build relationships and make sense of other people. It was found that although users connected with local colleagues, they did not use the site to share content with them. Instead content was more likely to be shared with "weak ties". These weak ties would initially be people they had formally worked with, but would later include people they met through the system. Users liked Beehive because they were able to connect with people more personally. They saw it as helping their career advancement, and they could gather support for their projects. Deloitte clearly views D Street as valuable, although the patterns of use have not been reported. The lessons learned reported by Deloitte concern governance and programme management. They realised they needed buy in across the organisation and legal guidance during the requirements definition. Senior stakeholders wanted moderators to be able to view and veto content.

Appendix 1 compares some of the features of the three companies and the three social network sites.

Not all the findings reported about Watercooler and Beehive are positive (we assume D Street also faced criticisms, but these are not reported). Some found the way Watercooler loosely confederated different services confusing. Some users of Watercooler found uptake disappointing and thought it should have been more heavily promoted. Some people stopped using Watercooler, citing a lack of time, and some mentioned that their managers did not seem to value their contribution to Watercooler. Similarly, with Beehive, although it had 10 times more users, people became disillusioned that not everyone was using it.

4.3.2 Experience within LSCITS

We have developed our own internal social network site for the LSCITS project, and for SICSA (Scottish Informatics and Computer Science Alliance).

The LSCITS social network was launched in mid-2008. It began as a social network for the project, but expanded for use for other purposes. Initially, all members of the project were asked to participate. Industrial partners were then also invited to join, and attendees of various events have been invited to join and use the service when the events occur. Members of the School of Computer Science at The University of St Andrews were also later invited to join. Over 100 people have registered, but many of these are people who have registered to use the system during a workshop and have not continued since. The number of active users

is therefore much lower, but the system is still very useful. Around 50% of the members of the LSCITS project actively use the system, logging in at least once a week. 30-40% of users have regularly added content. It is used to post progress reports so that all staff on the project can have visibility of the work being done at different sites. The use of this social network site in the LSCITS project and at the workshops was championed by two senior project figures.

SICSA (The Scottish Informatics and Computer Science Alliance) is an alliance between computer science departments in Scotland that provides funding for visitors and summer schools, and for several PhD studentships and research positions at the partner sites. It is designed to support improved interaction between sites and a more advantageous position for Scottish computer science on the world stage. The SICSA social network site, saw many registrations in 2008 when SICSA was launched, but usage has followed an unusual pattern. There are no regular users, and there has been no usage at all in the last 30 days. But there has been, and will continue to be spurts of behaviour. This is because the social network has been found useful for coordinating and undertaking document centric work across organisational boundaries; tasks such as report writing, and the evaluation of studentship applications. This is made possible because the software supports document sharing within private, managed groups. This functionality replaces what has previously been coordinated by email. It is used in a similar way to existing groupware systems, but unlike these, the software can be used across organisational boundaries.

The LSCITS and SICSA social networks are built upon the open source framework Elgg.

4.4 Enterprise content management

There are likely to be several technologies available within the Home Office that have or, at some point, will gain networking functionality of some sort. Microsoft SharePoint is one such technology.

SharePoint was introduced to the Home Office Headquarters during the Electronic Document and Record Management Programme. It is used on an ad hoc basis for teams to access people, who are not co-located, and information relevant to their work. Some groups are using SharePoint intensively for their collaborative work (e.g. the OSCT Knowledge Programme), while others use it sparingly or not at all (e.g. Science and Research Group).

SharePoint has clearly valuable functionality but poses two risks

1. In forming closed work groups, it puts boundaries on collaboration, perhaps creating or reinforcing silos.
2. Multiple team membership by individuals is not well supported.

Civil Pages replicates some of the functionality of SharePoint, which will possibly lead to some confusion about the appropriate place for storing and accessing data, or more generally for connecting to and communicating with people. Given the problems that have been encountered with SharePoint for limiting group membership and putting boundaries around communications, it seems likely that Civil Pages can play a complementary role to SharePoint. The Home Office will need to consider how these two technologies can best be used and it may be necessary to offer guidelines on this to staff. As Civil Pages is in beta, it will also be beneficial for the Home Office to recognise and highlight what its requirements are from this technology.

4.5 Blogging

There are several blogs written by senior members of the Home Office, including the Permanent Secretary. These blog posts attract a great deal of interest and many comments within the Home Office. The Permanent Secretary's blog has also been published on the Home Office website following freedom of information requests.

4.6 Summary

Internal social network sites are those run within organisations and are often described as “a Facebook for the organisation”. An internal social network for the UK Civil Service called Civil Pages is in development. Findings from other organisations using internal social networks indicate that uptake of such sites will be among a fraction of staff, but many of those who do use them find them useful. The business value of these sites is difficult to evaluate, but concerns about possible negative impacts usually fade away over time. Unanticipated uses can also emerge from social network sites.

5. OPPORTUNITIES AND RISKS

This section discusses the opportunities and risks that social network sites present to the Home Office. This section refers to both internal and external social network sites, as many of the opportunities and risks are, at a high level, relevant to both.

5.1 Adoption of social network sites for business activities

5.1.1 Opportunities

a) Directories of people and skills:

As members of the organisation sign up to a social network, a directory will accumulate. Profiles often contain a picture and some additional information about the user, and in a professional context, information about their skills. Most public social network sites allow users to keep their profiles private (accessible only to their connections), however for an internal site it would be useful to have all profiles accessible to everyone. Interviewees have said it is helpful to find some basic information about people before they meet them for the first time. New members of staff would likely find this especially helpful. Interviewees have also referred to instances where they were unaware of the expertise of specific members of Home Office staff and had unnecessarily used outside expertise. Constraints on this opportunity are that not everyone in the organisation will create a profile and keep it up to date, and that limitations to control of internal sites such as Civil Pages means a requirement for open profiles may not be heeded.

b) Connecting a distributed workforce:

The Home Office is a large organisation. The workforce is distributed between sites, and across large buildings. Social technologies create new ways for people within the Home Office to connect, interact and maintain awareness of each other. Technologies can be used to limit some of the risks of silo working.

i) Formation of orthogonal groups: Large organisations are divided into units, usually with a particular purpose or function. However it can be useful to create orthogonal groups to allow people across units with similar interests or needs to interact. Social networking provides a mechanism to do this. This can be useful for supporting existing orthogonal groups who may not have the opportunity to regularly meet, and can also be useful if employees can find new people they can valuably connect to rather than just connecting with people they already know.

ii) Situational awareness: Social network sites can be used to maintain awareness amongst workers of what others are doing. Status updates can be used to highlight

things such as when someone is in the office or working from home, changes to their role, and to mention what they are working on.

iii) Business awareness: Social network sites could also be used to make informal and short announcements about the activities of groups or agencies in the Home Office. Many organisations use external sites such as Twitter to keep their customers and others informed, and something similar to this could be done internally for staff.

iv) Information sharing: For internal social network sites, the sharing of documents and other data may be of use. This may not be the most appropriate way to share information within existing workgroups, but can be useful for occasional events and irregular incidents where there may be no stable group. One of the key issues that ought to be considered for internal sites is the relationship between social network sites and knowledge management technologies.

c) Interaction with the public:

External social network sites provide an opportunity for interaction with the public. The popularity of Facebook in the UK across a range of the population means this site currently provides the widest opportunities.

i) Information campaigns: The Home Office is already running information campaigns on Facebook and Bebo. They are predominantly aimed at younger people, and have been successful in terms of the number of people who have connected.

ii) Screening: Immigration Officers and the OSCT have expressed a desire to access social network sites in order to screen people. External sites can also be useful for screening job applicants, although changing attitudes and approaches to privacy mean the practicality of this is not guaranteed. Where Home Office employees are required to connect with those they are screening, the creation and management of appropriate profiles will need consideration.

iii) Public consultation: Social network sites may provide an appropriate mechanism for consulting with the public or for publicising consultations.

d) Interaction with alumni:

When people leave their position in the Home Office, it may often be beneficial to stay in touch with them. Alumni may have knowledge and skills that could be of continuing value to the Home Office. On the other hand, a lot of the activity on unofficial Home Office groups on Facebook has come from people who describe themselves as ex-workers. Using Facebook to set up an alumni group will provide a means for staying in contact with people after they have left. Having control over such a group would also be beneficial as inappropriate content may be easier to have removed, and appropriate privacy controls can be set. An internal social network for alumni is an alternative possibility but would have to be separate to Civil Pages and may see much less casual use.

5.1.2 Risks

a) Security:

i) Information security: Home Office workers and alumni have previously used external social network sites to put inappropriate and sensitive information in the public domain.

ii) Physical security: The business areas in which the Home Office works means that there are threats to the personal security of staff and to the security of buildings and

Home Office property. Increased use of social network sites means that information about the Home Office and its employees may be more readily available to outsiders.

iii) Malware, Phishing and Spam: External social network sites are a source for malware, phishing attacks and spam. Predominantly, users of social network sites are tricked into clicking on a link that leads them to another website where the malicious code resides. Social network sites offer protection against this by comparing the links with a list of blacklisted sites held by Google and other organisations. The Home Office is also able to block these sites and block downloads from these sites. Phishing attacks try to trick users into revealing their username and passwords; similar attacks have been distributed by email for many years. As with email, spam is also a problem. The risks from malware, phishing attacks and spam are serious but can and are being minimised by effective IT security in the Home Office. Information and training for users is also useful to counter the problems.

b) Limited control:

i) The Home Office would have limited control of Civil Pages as it is operated from another department. The funding for Civil Pages is also short term, meaning its future is uncertain. A proactive approach to Civil Pages by the Home Office may increase its influence on the software and the prospects of it being maintained in the future.

ii) There is a greater lack of control with external sites. The area is in regular change with sites such as Facebook making frequent changes to its design and policies. Facebook is increasingly popular, but the future of sites such as Bebo is not assured.

c) Information overload:

There is a risk that users are simply confronted with too much information. As with email, appropriate filters and strategies for dealing with the volume of information will need to exist. One advantage of social network sites over email is that it is more socially acceptable to ignore or not respond to messages and requests. Claims have been made about social network sites reducing the volume of emails, although there is little empirical evidence available to confirm this.

Further risks are to productivity and to privacy. These are discussed in the next section.

5.2 Making social network sites generally accessible

This section primarily refers to accessibility of social network sites from Home Office desktop computers. If sites are just available over mobile devices, the following opportunities are reduced but not lost.

5.2.1 Opportunities

a) Staff retention and motivation:

The Home Office People Strategy sets out how the Home Office will ensure that people are enabled to work successfully. Some of these are business focused, including “working openly across the Home Office and in partnership with others” and “being responsive to change”. Others are more general, including “ensuring the Home Office remains a great place to work” and “celebrating success”. It is increasingly difficult to balance work time with leisure time and social relationships

often overlap with professional relationships. Therefore, limited and reasonable use of external social network sites at work may be beneficial to staff wellbeing and motivation.

b) Visible leadership:

Social networking could be used to provide a mechanism for making leadership visible, and as a channel of communication between leaders and workers. People are also much more likely to use corporate social network sites if managers and leaders are also using them²⁴.

c) Social capital:

Social network sites allow people to build, maintain and interact with networks of people. This increases their ability to ask for help or advice and their ability to influence others, what academics refer to as increased social capital. Not every connection on a social network site is going to be part of a the users genuine social network, but many will.

d) Support groups:

Groups such as disability support groups and LGBT groups that can benefit from social support and information sharing. These groups can possibly benefit from using internal or external social network sites to connect to each other. It may be a requirement that membership of these groups is not visible to others on the social network.

5.2.2 Risks

a) Reduced productivity:

Social network sites, both internal and external are a potential source of time wasting and distraction. It will sometimes be difficult to judge what is and is not productive use of a site. The studies of social network site use in organisations refer to their value in terms of social capital, meaning users are able to build and maintain networks of contacts that they are able to call upon when needed. However it is ambiguous as to when somebody is building up these networks and when somebody is simply time wasting.

d) Privacy risks:

Some users of external social network sites may wish not to connect with colleagues and/or managers in order to keep their social and working lives separate. Problems are also posed for those who use external social network sites to interact with the public, where use of a personal profile may be inappropriate but use of a corporate profile may not have a positive reaction from members of the public.

²⁴ Brzozowski M (2009) *Watercooler: Exploring an organisation through enterprise social media*. In *Proceedings of Group 2009, Sanibel Island, FL, USA: 95-104*.

5.3 NOT making social networks generally accessible

This section looks at the benefits of banning social network sites from the workplace. This approach is a purely risk focused strategy, but with some side effects. It would be unreasonable and near impossible to stop Home Office employees accessing social network sites from personal devices and computers, particularly when they are away from work. Therefore the benefits and risks of a ban must be seen in the light of this.

5.3.1 Benefits

The benefits are reductions to some of the risks mentioned in previous sections.

a) Reduction of the risks posed by social network sites

The threat of malware, spam and phishing attacks is reduced, but these can still take place via email. Any problems to network capacity will also be reduced. Risks to physical and information security are slightly reduced but will not be eliminated. Much of the security breaches that have occurred on social network sites have occurred from outside of Home Office premises.

The risk of information overload is reduced. Risks to productivity may also be reduced, however other forms of time wasting may emerge. Several interviewees referred to having too little time to use Facebook, and it could be surmised from this that social networking is only a time waste for people who are looking to waste time.

5.3.2 Risks

Beyond missing the opportunities described earlier, there are several risks arising from restricting social network sites.

a) De-motivation:

Home office employees may be de-motivated by the restriction of access to social network sites.

b) Harm to the image of the Home Office:

Restricting social network site use may harm the image of The Home Office as a forward-looking organisation. However, restrictions are common across organisations and therefore any harm to image will more likely be at the unit level, for example to the press office and to communications.

c) Reduced scope for accountability of outside use:

A restriction to the use of social network sites from Home Office computers will not stop people accessing and using them in alternative ways. If social network site use is restricted at work this will lead to reduced visibility of what is being said about the Home Office and of any leaking information.

d) Misperception of the risks:

The restriction to social network sites from Home Office computers addresses the risk of malware, but does not wholly address the other security risks and the wider risks. Some employees in the organisation may wrongly infer from a restriction that the

risks only relate malware and/or only to the computers social network site use is restricted from.

e) Increased workload for IT support:

IT Support is responsible for controlling access to social network sites, and decision-making about social network site availability and use has repercussions for them. For example they have needed to develop new means of controlling access to sites, and have been responsible for managing the increasing numbers of standalone PCs currently used to access sites.

f) Silo-working:

The lack of awareness and of incompatible computer systems are among the problems that lead to silo working.

5.4 Constraints on the use of social network sites

5.4.1 Practical constraints

a) Multiplicity of sites:

There are many social network sites and an increasing number of technologies that have social network functionality (for example SharePoint). This entails that a social networking strategy has to take account of multiple sites, and that there is likely to be duplication of effort for users as they may have to set up more than one profile and manage content across sites.

b) Limited user populations:

For all social network sites, the percentage of people who join a social network and regularly use it has been a fraction of the total organisation. If social networking is deemed to be important, then uptake will need to be attended to. Uptake can be encouraged by organisations and has been shown to be strongest when managers and leaders use the sites. However, somewhere between 10% and 33% of employees actively using an internal site is likely to be a realistic number. A much larger number of users are likely to create a profile but not use a site actively.

c) Limitations to access:

People who do not have access to the Government Secure Intranet will not be able to use internal sites such as Civil Pages. For groups that work closely with people outside of the Civil Service (such as the Science and Research Group), this will curtail the usefulness of internal social networking tools.

5.4.2 Legal constraints

a) Mandatory Minimum Measures:

The mandatory minimum measures are government wide arrangements for information and data security. These measures represent the minimum necessary steps, and risk assessments should usually go beyond these. The measures recognise that information risk involves ensuring that information is used, as well as protecting it when it is used. Information Asset Owners must consider on an annual basis how better use could be made of their information assets within the law. All departments

and agencies must build a culture that values, protects and uses information for the public good. There must also be transparency and an incident reporting mechanism.

b) Data Protection Act:

The Data Protection Act sets out how information about identifiable, living individuals can be kept and used. The mandatory minimum measures address this.

c) Freedom of Information Act:

The Permanent Secretary's blog has been subject to freedom of information requests, and information placed on internal social network sites may similarly be subject to these.

d) Ownership of data:

If Civil Pages or external sites are used for Home Office business some questions about the ownership and rights around the data stored on these sites will arise. In both cases, data will be stored on servers outside the Home Office.

5.5 Governance of social network sites

5.5.1 Moving from restriction to governance

Restriction of access to external social network sites has not addressed all of the problems they have posed for the Home Office, and in several ways has been counter productive. Attention needs to be spent on developing and articulating a policy on social network site use by Home Office staff. If the focus of Home Office policy and communication with staff emphasises the threat of malware over operational and personal security, and over productivity, then it is possible that employees will not understand these latter issues. Access to social network sites through standalone machines, personal devices or from home may limit the risk of malware to the Home Office, but does not reduce the other risks, and employees may not understand this. Policies on fair use of the internet may need to be updated to cover use from personal mobile devices, and security and safety issues may need to be highlighted.

5.5.2 Monitoring and evaluating social network site use

Social network site use from personal mobile devices or from personal computers will be difficult or impossible to directly monitor, and therefore some other forms of awareness of when and how social network sites are being used may have to be developed. Direct questioning of a sample of Home Office staff about their use of external social network sites, content they post concerning their work, connections with colleagues, what business value they draw from it (if any), etc. is likely to be the most effective means of understanding the domain.

Internal sites may be easier to monitor, but methods for evaluating their use will need to be developed. These methods should reflect what requirements the Home Office holds for social networks. For example if it is to build a staff directory then access rates to profiles will provide a more meaningful indicator of usefulness than rates of content publishing. A measure of success of internal sites may be the numbers of connections made by users outside the units they work in.

5.5.3 The relationship between social networking and content management

An issue that needs attention is the relationship between Civil Pages and content management systems such as SharePoint. There is overlap between the purposes of these systems, but SharePoint has its strengths in document management while Civil Pages has strengths in social connections and cross department groups. Some level of technical integration may be possible, although for security reasons possibly not desirable. Either way, the relationship between the two will need to be managed.

5.6 Summary

This section has recognised a number of opportunities and risks in the use of social network sites. It has examined the opportunities and risks in the adoption of social network sites for business activities, and the opportunities and risk of making social network sites generally accessible. The main opportunity is for connecting a distributed workforce, and therefore reducing the risk of silo working. The main risks are associated with security issues. Banning the use of social network sites does not address all of the security risks, and if the ban is not supplemented with appropriate communications and governance it can be counter-productive. This section has also commented upon the legal and practical constraints on social network sites, and discussed issues in their governance.

6. CONCLUSION

This report has considered challenges and opportunities brought to the Home Office by social network sites such as Facebook and Civil Pages. The report is intended to support decision making around social networking, particularly how such technologies can be used in ways that are beneficial to the Home Office and Home Office staff. Home Office strategy has so far largely been concerned with limiting the risks that arise from social network sites, particularly the risks to systems and operational security. Now that the risks are better understood, and that internal sites such as Civil Pages are emerging, it is timely to consider what opportunities there are.

The report has had to make sense of the jumble of issues in social networking. The issues are jumbled because the problem domain is in flux as new technologies and new social practices emerge, because there are (unavoidably) contradictory, partially specified and changing requirements, and because the solutions the Home Office pursues will serve to shift the nature and location of existing problems and possibly create new ones. On this basis, social technologies present what Rittel and Webber²⁵ have termed a “wicked problem”. Wicked problems have no single, correct and final solution, but require informed and ongoing management. Therefore, this report has sought to make sense of this problem domain, taking a broad perspective and seeking to clarify the problems faced in order to support effective decision-making.

The report will conclude with four high level recommendations.

6.1 Recommendations

1. Focus on governance

Restricting access to external social network sites from Home Office computers addresses some but not all of the risks of social network sites. These risks need to be managed through appropriate governance. The opportunities and risks of the use of internal social network sites and of sites such as LinkedIn also need to be managed.

2. Focus on the opportunities as well as the risks

Home Office strategy on social networking has been very risk focused. It needs to focus also on the opportunities that arise from social network sites.

3. Develop requirements

After recognising what opportunities are to be pursued, and in conjunction with the development of governance procedures, the Home Office can produce requirements for what

²⁵ Rittel H, Webber M (1973) Dilemmas in a general theory of planning. *Policy Sciences* 4, 2, pp.155-169.

it needs from social network sites. In particular, The Home Office can influence the development of Civil Pages if it has a clear vision of what it wants.

4. Develop evaluation methods

Social network site use is difficult to evaluate. It is difficult to collect data about the use of external sites and it is difficult to evaluate the new forms of practice and social relations that are emergent across social network sites. However, this does not mean that they cannot be meaningfully evaluated. Evaluation of the use of external sites may need to be qualitative, involving questioning of site users about the value of connecting to other employees and partners, and the value of using such sites during working hours. Evaluation of internal sites could look at connections that cut across the organisational structure. Evaluation methods should reflect the opportunities the Home Office decides to pursue, along with the risks.

Appendix 1: Interviews

Interview 1 (November 2009)

Interviewee's area: OCIO (Office of the Chief Information Officer).

The interview largely covered the structure and organisation of the Home Office and Civil Service. It also covered some of the general issues in Home Office IT infrastructure, and decisions made about social networking.

Hand written notes were made and have been transcribed.

Interviews 2 (November 2009) and 3 (January 2010)

Interviewee's area: OCIO (Office of the Chief Information Officer).

These interviews focused on decision making within the Home Office about access to external social networks. The interviewee was also able to provide information about Civil Pages. At the time of the first interview, the interviewee was working on a paper for the Home Office Group Information Systems and Technology Board (GIST) regarding social networking. The paper was completed and considered by the GIST board in late 2009. The follow up interview in January 2010 was to learn about this and the follow up actions.

Both interviews were recorded and have been transcribed.

Interview 4 (November 2009)

Interviewee's area: PPMSU (Programme and Project Management Support Unit).

The interview largely concerned the PPMSU and the potential for new technology to support its work. The interview took place in November 2009.

Interview 5 (November 2009)

Interviewee's area: HOIT (Home Office IT)

Interviewee acts as a customer relationship manager for a number of corporate customers. Access to social network sites has been a key issue for some of the corporate customers, particularly Communications. This interviewee was new to the Home Office, and so we also discussed issues for staff joining the Home Office.

Interview 6 (November 2009)

Interviewee's area: HOIT (Home Office IT)

Interviewee has a concern for security. The interview largely covered the implications of allowing access to external social network sites, particularly the considerations around security and productivity. The rationale for blacklisting social network sites was discussed, and the options of granting selective or timed access.

Interview 7 (November 2009)

Interviewee's area: DSU (Departmental Security Unit)

Interviewee holds responsibilities for physical security, personnel security, IT security and business continuity. The interview covered issues in protective marking and the data protection act, and a number of issues in IT security.

Interview 8 (November 2009)

Interviewee's area: A Home Office Business Unit

Interviewee wishes to remain anonymous. The interview covered the work of this business unit and their use of SharePoint. The interview also covered the conflicting priorities of secrecy and collaboration, and issues of protective marking.

Interview 9 (November 2009)

Interviewee's area: SRG (Science and Research Group)

Interviewee has a responsibility for coordinating the group's work. The interview focused on issues of collaborative, distributed and mobile working within the SRG, and issues in working with people outside the Home Office. The interview covered issues in working with confidential information.

Interview 10 (January 2010)

Interviewee's area: CD (Communications Directorate)

The interview covered the use of external social network sites and issues in using a standalone PC to do this. It also covered some more general issues in collaboration and new technology.

Appendix 2: Comparison of Internal Social Network Sites

Social Network Site	Beehive	D Street	Watercooler
Organisation	IBM	Deloitte LLP	Hewlett-Packard (HP)
Size of Organisation	398000 staff, the largest technology company in the world in 08 by staff.	165000 staff in 140 countries. 46000 consultants (professionals)	310000 staff, the largest technology company in the world in 08 by turnover.
Industry	Technology.	Professional services.	Technology.
Social Network Site Launch Date	May 2007.	June 2007 (limited) January 2008 (full).	June 2007.
Basic Functionality	Create profile. Connect to other users. Post status message. Post pictures. Post lists. Comment on others.	Create profile. Connect to other users. Suggest things to do when visiting local area. Blog integration.	Create profile. Connect to other users. Blogging. Tagging. Filtering. Virtual teams.
Technology platform	Lotus Connect. Reuses code from Bluebook.	MS SharePoint 2007.	
Profile Creation	Manual.	Automatic for every professional (consultant) in company directory.	Bloggers cross referenced with company directory.
Uptake in first year	30000 registrations (7.5% of staff). 2/3 of which contributed content or made connections.	11500 profile edits in first 8 weeks (25% of professionals).	3000 active users (0.9% of staff).
Who uses it?	Uptake reflects workforce. 40% of users in USA, 55 countries represented in total. 27% of users are engineers, 15% vice presidents or directors 32% are mobile workers.		Users in every business group, and 55 different countries. Highest usage from Engineering and marketing staff, lowest from operations.
Evaluation	Survey, interviews.		Survey, click analysis.
Control and moderation	Access controls, users can choose who they wish to share content with.	Moderated content.	



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