

JISC Study of Shared Services in UK Further and Higher Education

Report 4: Conclusions and Proposals

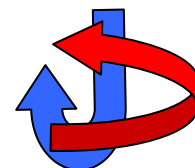
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Undertaken on behalf of the JISC

Duke & Jordan Ltd

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1 Executive summary

1.1 Overview

In this study we have investigated the current landscape and the potential development of shared services across UK FE and HE, have identified and characterised the marketplace for administrative systems and have provide advice and guidance to management in UK FE and HE institutions about involvement in shared provision of services. This final report seeks to inform future JISC and funding council work in supporting and assisting shared services.

1.2 Conclusions

We have reached five overarching conclusions:

Conclusion 1 There is a low level of enthusiasm for shared services in the sector.

While many institutions are prepared to consider shared services, they are less inclined to install them.

Conclusion 2 Adopting shared services carries risk with uncertain benefits, which are in any case dependent upon institutional circumstances.

Institutions have difficulty in gauging the benefits of shared services. Generally they do not possess good enough information on service costs to be of value in planning service sharing. Furthermore, generally institutions have not reviewed their business processes in detail.

Conclusion 3 The principal impetus for institutions towards shared services is the delivery of better services rather than towards being leaner organisations.

Conclusion 4 Partnership issues are the principal group of inhibitors hindering adoption of Shared Services.

The establishment, maintenance and means of clean dissolution of partnerships were principal concerns for those we consulted. In HE, VAT liability was also cited as an major inhibitor.

Conclusion 5 There is considerable commonality in the approaches of FEIs and HEIs to the adoption of shared services.

We did however find that the supplier market for administrative systems is fragmented, especially in FE. It was not possible to identify sets of several applications that were used in more than a few institutions.

1.2.1 Proposals

Arising from our work, we make 14 proposals.

The first four proposals are about policies we propose for adoption by the JISC and the Funding Councils.

Proposals 1 and 2 suggest the establishment of a high performance agenda by the Funding Councils with the JISC. Shared services would be seen as one element of a set of information system delivery tools, which institutions can employ to improve their performance. The agenda would facilitate the development of more flexible and agile colleges and universities and would stimulate a globally more competitive education sector for the UK.

Proposal 1 The JISC, the funding councils and their partner organisations such as the LFHE, should consider forming and progressing an institutional performance agenda, within which there is a programme to facilitate the establishment of shared services within the FE and HE sectors.

Proposal 2 As part of the institutional performance agenda, business process management and the full costing of services should be addressed.

This will lay the foundations for institutions to engage with shared services.

We propose that the JISC widen its Shared Service agenda.

Proposal 3 In its further consideration of shared services, the JISC should broaden its agenda both in the range of systems and in the modes of service delivery considered.

Basic services such as email or machine rooms should be considered. Other modes of service delivery such as software as a service and outsourcing should be considered.

We also propose th JISC should provide help and advice in support of Shared Services.

Proposal 4 Consideration should be given to establishing a dissemination programme, which will include the publication of information about actual shared service implementation as well as information, training and advice to assist institutions to enable themselves for shared services.

The next two proposals are directed at interoperability, the first at the JISC's initiatives for the development of interoperability using its SOA and the second at assisting institutions, especially small ones, to develop and test administrative system interoperability.

Proposal 5 The JISC should consider extending the scope of work on the e-Framework to embrace administrative systems with a view to attaining operational demonstrator status as soon as possible.

Proposal 6 Consideration should be given to establishing a facility for an interoperability development and testing environment.

The next three proposals suggest funding programmes: the first would assist institutions to establish shared service consortia, the second to develop an exemplar service.

Proposal 7 The JISC and the funding councils should provide funding support for the formation of substantial examples of shared services.

This proposal is aimed at producing some pathfinders which will also provide lessons for others.

Proposal 8 The JISC should consider establishing an exemplar service, using the existing network infrastructure, to provide a range of services including machine rooms, data services and administrative services.

The third of these proposals is aimed at assisting institutions to position themselves for consideration of Shared Service solutions.

Proposal 9 The JISC and the funding councils should consider providing funding support for the mapping and costing of specific business processes in institutional consortia.

Proposals 10 to 12 are essentially about supporting activities to facilitate the development of shared services within UK FE and HE.

Proposal 10 The JISC and the funding councils should consider developing the means by which institutions can record expressions of interest in shared services, so that other institutions can be aware of this.

Proposal 11 The funding councils should consider enlisting the support of their communities to lobby for the removal of VAT on shared services.

Current VAT legislation is an active hindrance to the development of shared services within the FE and HE sectors.

Proposal 12 aims to use the national customer base to get better terms from suppliers. JISC, through the partner organisation, should establish user community groupings to engage with suppliers to explore collaborative approaches that reduce the suppliers' cost base, with resulting savings shared between the suppliers and institutions. This should be a step towards entry to a shared service framework, would provide a driver to common standards and processes, but would retain institutional autonomy of choice.

Proposal 12 The JISC should consider contracting a partner organisation such as Eduserve or JANET UK to negotiate with administrative systems vendors at a community level in order to seek cost savings.

The final two proposals seek to assist institutions to develop shared services by the provision of support and guidance.

Proposal 13 The JISC should consider providing support for institutions that are considering merging or consolidating, to assist in the unification of their ICT systems.

Proposal 14 The JISC should consider funding the development of model governance schemes for shared services.

Overall, although these proposals do not follow directly from the Gershon report, which informed governmental drive for shared services, they are clearly within its spirit, in seeking to assist FE and HE institutions to position themselves for the future.

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This study on shared services was undertaken for the JISC by Duke & Jordan Ltd together with AlphaPlus Ltd, Mary Auckland, Chris Cartledge, Simon Marsden and Bob Powell.

We are very grateful to all those who gave their time and knowledge to help us prepare this report.

2 Introduction

This report – Report 4 of the entire study - represents the second deliverable of Phase 2 of the study. The study for the JISC as been organised in two phases and covers the four home nations of the UK. The objectives of each phase are shown in the table below.

Phase	Objective
1	To describe the current landscape and the potential development of shared services across UK FE and HE.
	To identify and characterise the marketplace for administrative systems.
2	To provide advice and guidance to management in UK FE and HE institutions about involvement in shared provision of services.
	To inform future JISC and funding council work in supporting and assisting shared services.

This study has been carried out in the context of the Gershon report for the Treasury¹, which sought back-office savings from the use of large-scale transaction-based systems. The Westminster government, together with those in Cardiff and Edinburgh, developed policies based to a greater or lesser extent, on Gershon's conclusions. This led to HEFCE commissioning a report from KPMG², a report which was critical in setting the scene for our study.

The three reports in phase 1 had the following purposes:

- Report 1** A description of the present state of usage of and planning for shared services in the delivery of administrative systems to FE and HE across the UK.
- Report 2** An analysis of the administrative systems currently in use across the FE and HE sectors.
- Report 3** A description of the appetite of UK FE and HE for the use of shared services for the delivery of administrative systems in the future.

The first deliverable in Phase 2 was a set of materials for training and awareness purposes, which drew on the lessons we have learned and the evidence we have received. The materials have been designed to be used in a number of different frameworks and can be adapted to different circumstances, to different timetables and to variations in funding council policy.

The purpose of this present report is defined in the ITT as providing “recommendations of relevant potential foci for future JISC work in the area of Shared Services.” We agreed with our JISC sponsor a definition of Shared Services: “By shared services we mean institutions cooperating in the development and delivery of services, so sharing skills and knowledge, perhaps with commercial participation.”

The ITT referred to administrative systems but did not provide a definition for these. We have chosen, again in agreement with our JISC sponsor, to define administrative systems as those systems for which information is gathered by UCISA in the annual survey by its CIS Group of corporate information systems in use in HEIs. These systems are

Finance
Student Records

¹ http://www.hm-treasury.gov.uk/media/C/A/efficiency_review120704.pdf

² http://www.hefce.ac.uk/pubs/rdreports/2006/rd15_06/rd15_06.pdf

Timetabling
Human Resources (HR)
Payroll
Estates
Library Management
Virtual Learning Environment (VLE)
Customer Relations Management (CRM)

VLE and Library systems are often seen as academic rather than administrative systems: however, they are usually so closely integrated with other administrative systems that it is appropriate to include them.

3 Collecting information

Our approach to obtaining evidence for our study was in two parts:

1. We interviewed a large number of people, either by visiting them or by telephone;
2. We undertook a number of web surveys.

Our interviews were with key stakeholders, with suppliers, with other people with special expertise and with representatives from some 20 institutions. The key stakeholders were principally officers within the funding councils or within government. The suppliers we talked to were a sample from the principal companies delivering software solutions for administrative systems to FE and HE. We talked to a number of people with special expertise of relevance to the delivery of shared services, for example to discuss the technology. In total, we spoke to approaching 100 individuals.

Our web surveys were in two parts, both parts conducted in Phase 1 of this study. In the first part, we sought to identify the administrative systems in use by colleges and universities. We were fortunate to be given access by UCISA to the survey of their members undertaken by their Corporate Information Systems group in the autumn of 2007. This survey enabled us to identify the systems in use by about 50% of the HE sector: UCISA graciously reopened the survey in order to allow further additions and corrections to the data in the survey. We sent out a web survey through the JISC RSCs to the IT managers with whom the RSCs have contact: these managers are predominantly in the FE sector. In this survey, we sought to identify the use of the same set of administrative systems categorised in the UCISA survey.

In the second set of web surveys, we aimed at achieving two things: firstly, we attempted to quantify the qualitative results obtained from our interviews and, secondly, we asked questions designed to inform Phase 2 of the study. We sent this survey out to three groups of people: the questions in each of the three surveys were largely similar but were modified slightly to reflect the target audience. The three groups to whom we sent this survey were:

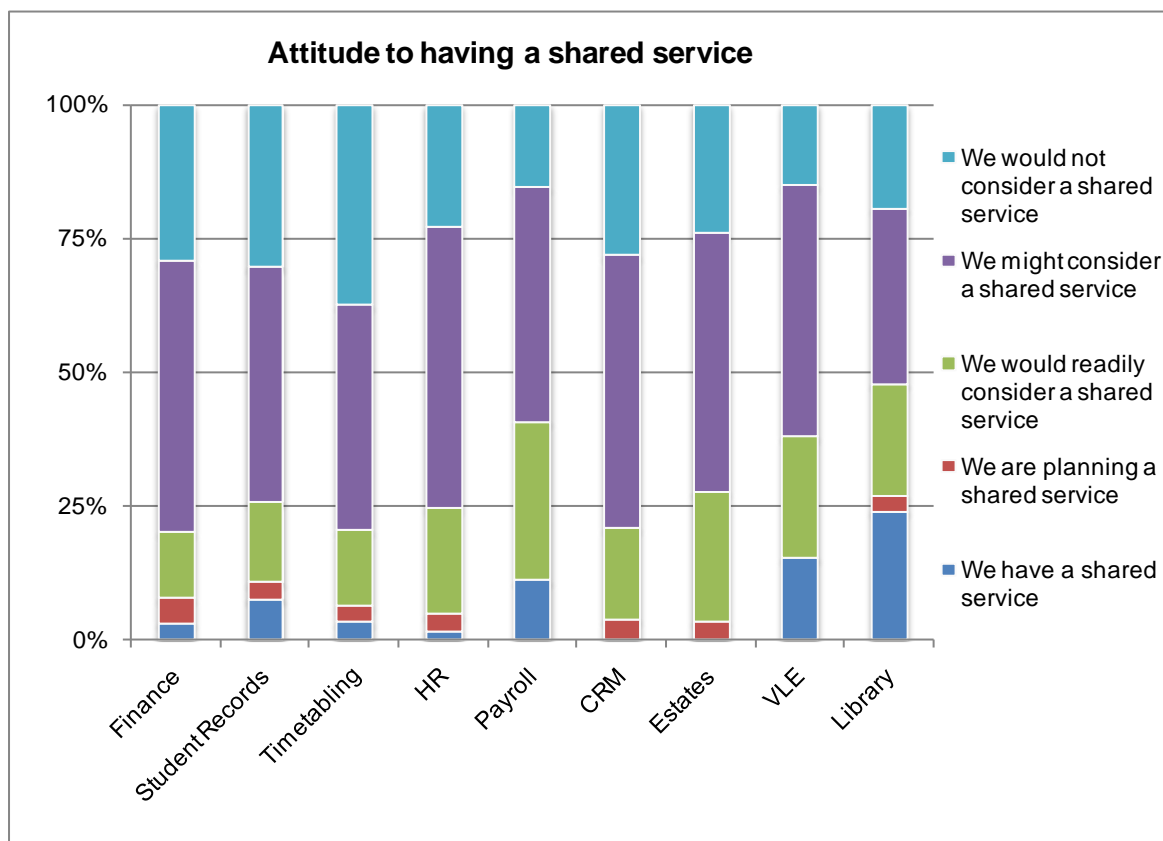
1. Those who had replied to the survey we had sent earlier through the JISC RSCs and who had replied that they were prepared to be surveyed further.
2. Vice chancellors and principals in the English HE sector: we were provided with contact details by HEFCE.
3. Members of UCISA: UCISA sent out the survey for us.

4 Conclusions

As a result of the work done in Phase 1, presented in Reports 1, 2 and 3, and of the further work carried out in Phase 2, we have reached five general conclusions.

Conclusion 1 There is a low level of enthusiasm for shared services in the sector.

The graph below demonstrates this. This is based upon the answers to a web survey question "what is your institution's approach/attitude towards the use of shared services for each of the main systems?" This graph shows that, while people are generally prepared to consider shared services, they are less inclined to install them.



We found there to be a number of reasons for this. The most important concerns for institutions were the difficulties of establishing partnerships with other institutions and then maintaining them. The dependence of successful partnerships on particular individuals, particularly those at the most senior levels of management, has led to concern that such alliances may deteriorate when the individuals concerned are no longer involved.

We also found that institutional managers are generally unable to gauge accurately the benefits to be gained from establishing shared services. Next, of course, there is the inevitable resistance to change: the fact that the benefits are not clear compounds the problem. Then there is the fact that the transition from in-house services to shared services will inevitably cost resources, especially in staff time. And finally, but by no means least, the shared services agenda does not stir principals or vice chancellors: administration is seen by many in education as a means to an end rather than as an end in itself and therefore making it more efficient is unlikely to excite CEOs.

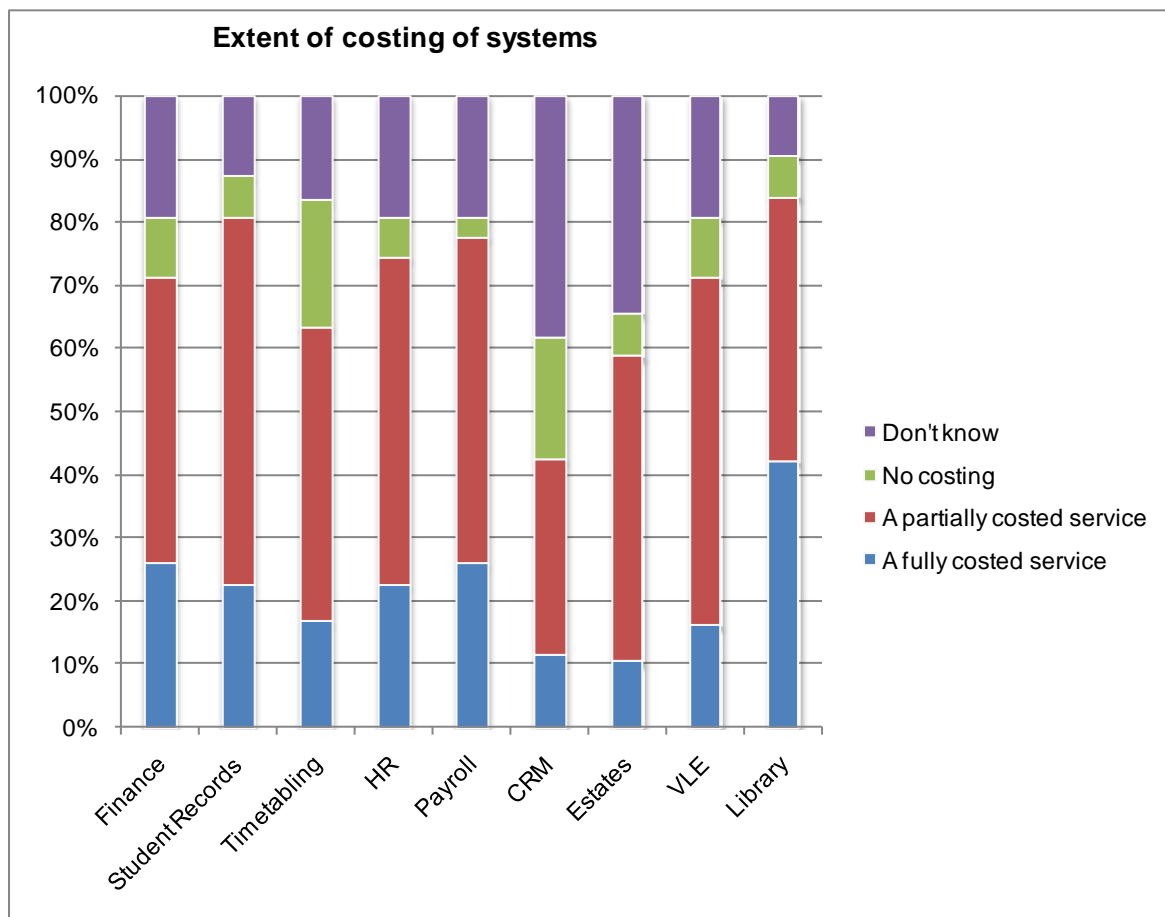
All however is not gloom. We found two major examples of shared services in the sector: the Association of Northern Ireland Colleges (ANIC) has been running shared administrative

systems for some time and RCUK is close to bringing shared corporate information services services to fruition. Both of these should be seen as exemplars. We found evidence of, and interviewed, individuals who enthused about shared services. We also found institutions thoroughly committed to establishing shared services for the delivery of their administrative systems, though it should be noted that some of these institutions had special factors in play, such as a need for large scale and prompt change which was being met by bringing in shared services.

Conclusion 2 Adopting shared services carries risk with uncertain benefits, which are in any case dependent upon institutional circumstances.

The adoption of shared services is undoubtedly seen as carrying risk: the reliability of administrative systems is critical to the running of an educational organisation. Managers do not put their institution on the line for the sake of adoption of shared services.

The benefits to be accrued are also, for most institutions, incapable of accurate assessment. Firstly, the full costs of existing services are generally not well known. While we found the vice chancellors and principals believed that these costs were well assessed, those responsible for these systems thought otherwise: in answer to a question about the extent to which systems were accurately costed, both in capital and operational terms, we obtained the following results.



On average, therefore, we found that only about 20% of systems are fully costed.

Secondly, it is clear from all those who have successfully moved towards sharing a service, where there is a single instance of a software package, that there needs to be good

alignment of business processes across the partner organisations involved in the sharing exercise. Undertaking such alignment demands not only a rigorous process of analysis within the organisation but can also lead to changes in an institution's own processes so as to harmonise with those of partner organisations.

Thirdly, though the sources of the benefits to be obtained are clear, the value of the resulting benefits is not.

Conclusion 3 The principal impetus for institutions towards shared services is the delivery of better services rather than towards being leaner organisations.

The top-down driver for institutions is a political one, emanating from the Gershon report which sought back-office savings from the use of large-scale transaction-based systems. The sector's response to the government's papers on the subject showed an initial degree of scepticism, probably characterised best by HEFCE's comment that the government's depiction of many systems as being old, custom-built and using obsolete technologies was a gross oversimplification. Nevertheless, the funding councils have felt compelled to pursue the government's agenda.

Our survey evidence showed that institutions, both further and higher, perceive the advantages of moving to shared services as relating to improved quality and reliability. Cost savings and releasing staff time to undertake more useful activities come next. Some FE institutions did perceive the potential for transformation of the organisation by moving to shared services.

In our web surveys, we asked about the importance of the following drivers:

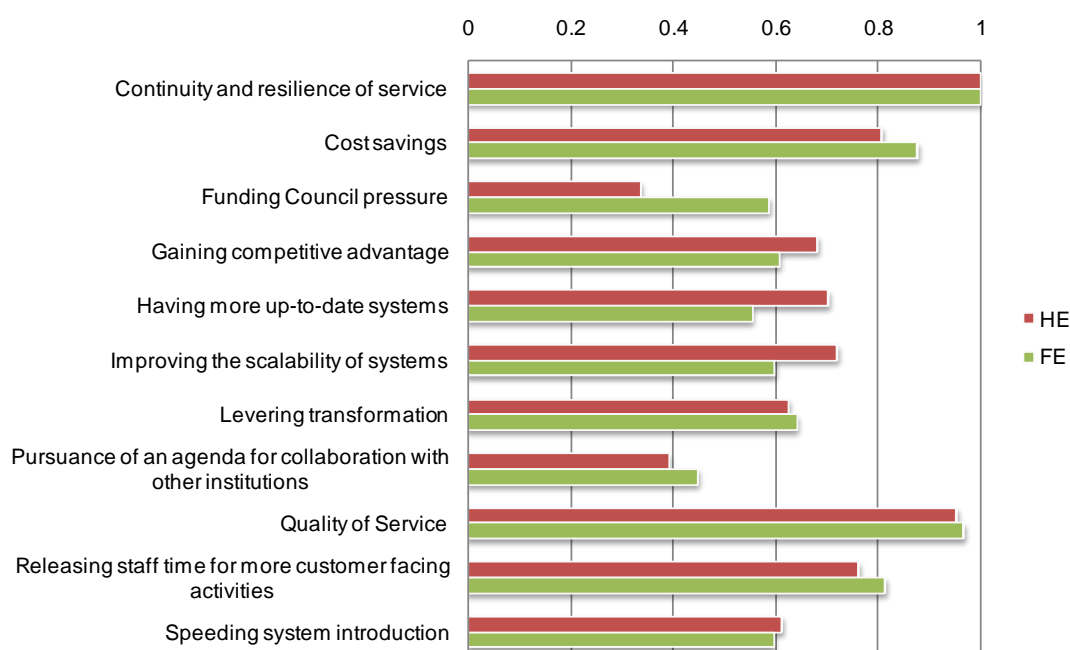
- Continuity and resilience of service
- Cost savings
- Funding Council pressure
- Gaining competitive advantage
- Having more up-to-date systems
- Improving the scalability of systems
- Levering transformation
- Pursuance of an agenda for collaboration with other institutions
- Quality of Service
- Releasing staff time for more customer facing activities
- Speeding system introduction

By weighting the answers to the survey question as follows

Very important	3
Fairly important	2
Slightly important	1
Not important at all	0

we obtained the following measure of the importance of drivers:

Relative importance of drivers



This shows that the top four drivers towards shared services are, in order,

- Continuity and resilience of service;
- Quality of service;
- Cost savings;
- Releasing staff for more customer facing activities.

Our witnesses did note the potential benefit that shared services could deliver. As an example, the overwhelming majority of higher education libraries in the UK are served by only four suppliers and this represents a great opportunity for the development of shared services at a national level³. We certainly obtained the view that shared services could give the sector greater negotiating power with suppliers. A further advantage to be gained by moving to shared services is that it could give smaller or less well funded institutions the opportunity to have access to software currently beyond their means.

Another advantage of shared services is that it can give the ability to deliver services that would not otherwise be possible: an excellent example of this is the out of hours helpdesk service provided from Northumbria University. One vice chancellor noted the possibilities afforded by shared services in supporting students 24/7 around the globe.

There are also internal factors which can affect the adoption of shared services: we formed the impression that institutions most likely to find shared services acceptable have people within them with experience of change. Such change may have been due either to previous success or to previous failure. Those we consulted were also consistent in saying that the introduction of shared services must have wholehearted commitment from senior management. Lack of commitment by senior managers was seen as a most significant inhibitor: by and large, shared services were seen as being below the radar of most Principals and Vice Chancellors. Some in higher education recalled the MAC initiative,

³ This point is expanded at length in "Library Management Systems Study" a report for the JISC and SCONUL, March 2008.

which has a generally bad reputation across the sector: for many, shared services smacks of MAC.

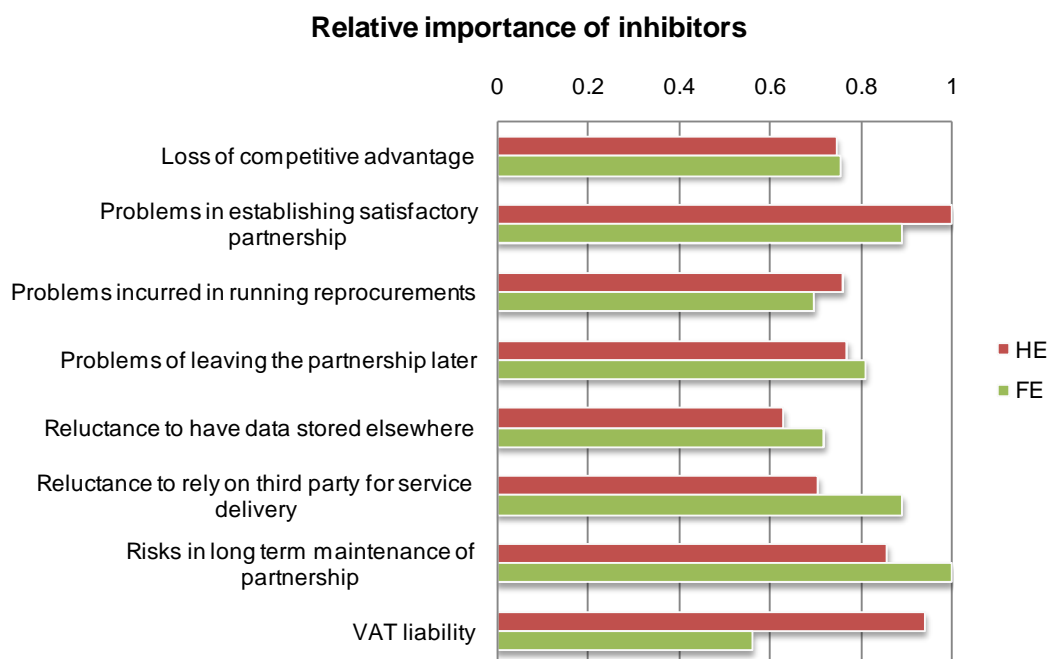
In our web survey, we asked about the importance of the following inhibitors:

- Loss of competitive advantage
- Problems in establishing satisfactory partnership
- Problems incurred in running reprocrements
- Problems of leaving the partnership later
- Reluctance to have data stored elsewhere
- Reluctance to rely on third party for service delivery
- Risks in long term maintenance of partnership
- VAT liability

By weighting the answers to the survey question as follows

Very important	3
Fairly important	2
Slightly important	1
Not important at all	0

we obtained the following measure of the importance of inhibitors:



Doubt was also expressed about the ability of shared services to deliver the cost savings underlined in the Gershon report. For the majority of those we consulted, the business case is not clear.

Conclusion 4 Partnership issues are the principal group of inhibitors hindering adoption of Shared Services.

The principle set of inhibitors to institutions thinking of adopting this shared services concern the partnerships which need to be created. All the key stages in a partnership life cycle are matters of concern. There is the need to create a satisfactory partnership in the first place,

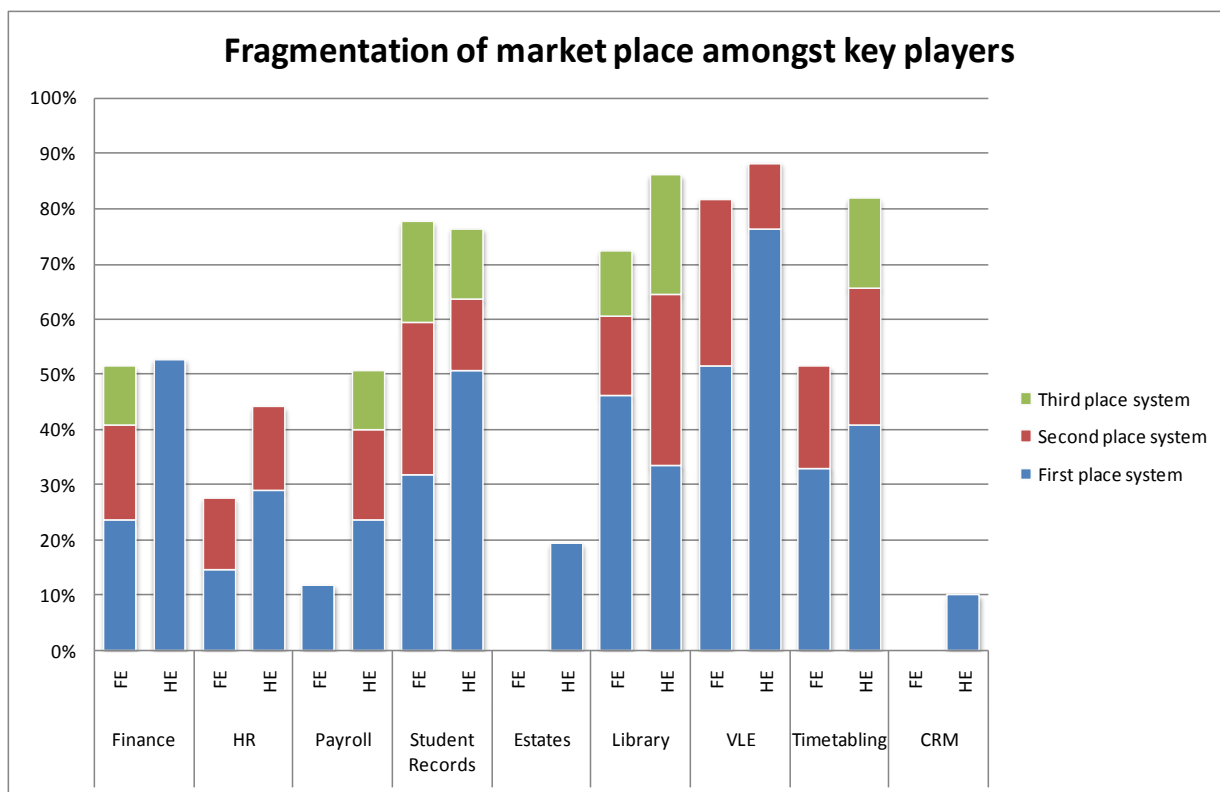
the risks attached to maintaining it in a fully functional state and the problems which will occur if the partnership is for any reason dissolved. Clearly any formal agreement process and the arrangements for governance of the partnership must address these problems openly and clearly.

Another issue of concern was the possible loss of control of process or of data to another institution. If the shared service is delivered by one institution to a second and a crisis in service delivery occurs, institutions expressed a concern as to whether the service would be restored to the second institution at the same time as to the first institution. And in a world where the loss of data seems to be an everyday event, institutions whose data is held at another institution may well be concerned as to whether the integrity and security of that data would be as well maintained as it would be by the institution whose data it is.

Conclusion 5 There is considerable commonality in the approaches of FEIs and HEIs to the adoption of shared services.

The consultation process we adopted for this study involved approaching FE and HE institutions in similar ways: our interviews involved approximately equal numbers from each sector. When we disaggregated the results from the two sectors, we found them to have many similarities. In particular, the drivers and inhibitors were very similar for the two sectors and their approaches to establishing shared service arrangements had much in common.

The two sectors did however differ in two significant ways. Firstly, we found a wider spectrum of views in FE than in HE. Secondly, we found that FE uses a much wider range of generally more modest software products for its administrative systems than does HE. This fragmentation of the marketplace is shown in the graph which follows, in which the percent of the market taken by the first, second and third players in each functional area from each of the two sectors is represented. [Note that only players with more than 10% of the sector market are plotted: note also that Estates and CRM systems are omitted from this graph as they are highly fragmented markets in both sectors. The gap between the top of each bar and 100% is accounted for by the minor players.]



A consequence of this fragmentation is that it is not possible to choose a set of several products that matches those used in more than a small fraction of institutions. Our analysis of the underlying data, presented in our second report, confirms this.

The graph does show that in every area, other than for library systems, the predominant system supplier in higher education has a larger market share than does the predominant system supplier in further education. The same conclusion extends to the sum of the first and second place system suppliers: only in the case of student records systems do the first three suppliers to further education have a higher market share than the first three suppliers to higher education.

We do believe that FE would probably get more from the adoption of shared services than would HE. This is for two reasons. The first is that the strong managerial structures within FE would ensure that institutional moves to shared services delivered maximum benefit. The second follows from the fragmentation of the FE market for administrative systems: the availability of shared service solutions could reduce the resource cost to individual institutions of higher functionality and erstwhile more expensive systems.

5 Proposals

Given these conclusions, we make fourteen proposals. The first four relate to policy: the remainder propose activities to assist the introduction of Shared Services.

5.1 Policy

5.1.1 An institutional performance agenda

The surveys and interviews with stakeholders showed the following:

- Only about 20% of institutions considered that they had full costing information on their MIS systems.

- Only a small minority of institutions had conducted business process reviews on their MIS services. We found no evidence of institutions operating formal business process management.
- One third of institutions had no plans to review their MIS systems against the marketplace.

Furthermore, as highlighted in the JISC funded MUSIC study⁴ published in 2007, integration between MIS applications continues to be a significant issue.

These observations show that, in general, although institutions clearly have control of their MIS services in a tactical and day-to-day sense, there is still work to be done if they are to obtain full control. If institutions are to be ready to appraise their options for entry into shared services, they will need to have achieved a comprehensive understanding of their business processes as well as their service costs. Thus the majority need to review their MIS business processes and fully cost their services.

However, although this work may appear daunting, it has a much wider applicability than just facilitating consideration of shared services: it puts the services into a well understood form that allows the impact of any type of change to be assessed faster and better. Such work contributes to the agility of the institution, in other words its ability to adapt rapidly and cost effectively in response to external changes. Once a business process review has been conducted, the techniques of business process management can beneficially be employed to maintain control over the processes. Furthermore, this work allows the principles of lean thinking⁵ to be applied

- It facilitates the elimination of redundant processes
- It allows correct identification of where value is added to particular services
- It enables understanding of delays inherent in services
- It facilitates harmonisation of business processes, should sharing of services be entertained with other organisations.

We therefore see shared services as one of a number of mechanisms which have a place within a high-level agenda for improving institutional performance.

Proposal 1 The JISC, the funding councils and their partner organisations such as the LFHE, should consider forming and progressing an institutional performance agenda, within which there is a programme to facilitate the establishment of shared services within the FE and HE sectors.

The proposals which follow are designed to fit within this umbrella agenda, which we suggest would address a range of performance improvement methods. We suggest that the agenda would benefit by having a dissemination programme as a significant strand and this point is addressed in more detail in section 5.1.3.

Proposal 2 As part of the institutional performance agenda, business process management and the full costing of services should be addressed.

Work on the introduction of business process management and on the full costing of services must precede shared service work, to enable the outcomes of the former to guide consideration of the latter.

⁴ http://www.jisc.ac.uk/media/documents/programmes/jos/MUSIC_report.pdf

⁵ www.poppendieck.com/papers/LeanThinking.pdf

We found that, for the most beneficial implementation of shared services, business processes need to be harmonised between those sharing the services: this greatly facilitates medium and long term management of services, such as when service changes or software changes are involved.

For the benefits of shared services to be properly gauged, existing services need to be fully costed and plans developed to release the value of projected savings.

These points are made in a recent report of the Committee of Public Accounts⁶, which said “Whether or not they move to using shared services, public bodies will miss potential efficiency savings if they do not streamline their administrative processes. Without careful analysis of whether all the steps in their processes are really adding value, public bodies cannot know whether they are receiving value for money from their corporate functions. Even when shared services are not adopted, public bodies should be able to show that they have mapped all the key processes in their corporate functions and used the results as a basis for driving out waste.”

5.1.2 The JISC agenda

We were asked in this work to address issues arising from the use – or non-use – of shared services. However, the proposals we advance below are likely to be of help to the JISC and the funding councils in making additional options for service provision to institutions available, such as Software as a Service and outsourcing. It is worth noting that outsourcing is sometimes treated as being a means of sharing a service.

Proposal 3 In its further consideration of shared services, the JISC should consider broadening its agenda both in the range of systems and in the modes of service delivery considered.

We excluded outsourcing as a form of shared service, unless the contract was undertaken by a consortium of institutions. However, it was clear that outsourcing can deliver many of the advantages of shared services, without some of its disadvantages such as partnership management issues.

Further, Software as a Service⁷ (SaaS) is gaining acceptance and breadth of use. Concerns regarding loss of control of data, of process and of information management can dispose institutions towards retaining systems in-house.

The range of systems could include, for example, email and machine rooms. It is quite possible that consortia formed by sharing these basic services could form more easily than those based on MIS services, and then, over time and with an appropriate support environment, these could develop to embrace further services, such as MIS.

The modes of delivery considered could include SaaS and outsourcing and it may be beneficial to ensure continuous monitoring in these areas, which could be undertaken by TechWatch.

Furthermore, opportunities for easy wins may be sought across this extended agenda, perhaps in the area of library systems.

⁶ House of Commons Committee of Public Accounts: Improving corporate functions using shared services; Eighteenth Report of Session 2007–08: March 2008.

⁷ Wikipedia defines Software as a service as a model of software deployment where an application is hosted as a service provided to customers across the Internet.

5.1.3 Advice and help

Although we found broad awareness of the shared services agenda during consultations, it is noteworthy that shared services exist predominantly in the learning and teaching domain, such as for Library Management systems and VLEs, and that there is little available material on how to set about establishing a shared service. We therefore think that a managed programme of advice and training should be established. The materials we have provided earlier in this project can serve as a starting point. We believe the programme could include blogs, briefing papers and case studies as well as conferences organised with third parties such as AoC NILTA, the Leadership Foundation for Higher Education, UCISA and AHUA.

To facilitate the programme, all funding by the JISC or the funding councils connected with the provisions of shared services should insist on the funding being dependent upon a close and active link into this dissemination programme. Furthermore, results and outcomes from existing work such as the shared services in ANIC, in RCUK and in the HEFCE pilots could be publicised within this programme: if necessary, additional funding could be provided to deliver satisfactory level of material being made available for the dissemination programme. For the funding councils successfully to promote the development of shared services, institutions will need evidence of flourishing implementations, together with advice on avoiding pitfalls and overcoming major hurdles. The dissemination programme we propose should provide success stories and deliver advice for those areas of implementation where difficult decisions have to be made.

Proposal 4 Consideration should be given to establishing a dissemination programme, which will include the publication of information about actual shared service implementation as well as information, training and advice to assist institutions to enable themselves for shared services.

5.2 Actions

5.2.1 Interoperability

Enabling interoperability between different software systems is crucial to the effective deployment of most shared service solutions. Interoperability enables the real-time -- or near real-time -- transfer of data between systems. This means that separate copies of the same data do not need to be held in separate systems and also means that end users have only to access a minimum number of systems: they do not have to access directly every system containing data which they need. Interoperability also means that institutions are not restricted to purchasing specific functional systems: they have the opportunity to buy from a number of suppliers. It also enables them to have a system delivered in different ways, such as from a shared service, through Software as a Service or by outsourcing. SOA is widely seen as providing the way towards interoperability: note for example the commentary on this in the recent JISC & SCONUL Library Management Systems Study referred to earlier.

The JISC has had programmes relating to interoperability for several years. These programmes have been principally targeted at educational technology and, as such, have involved the student records systems. Its most prestigious programme is the e-Framework, which advocates a service-oriented approach to providing the interfaces between a variety of services which perform particular functions. The extension of the e-Framework to handling the essential administrative processes of an educational establishment would be of great benefit to colleges and universities developing their corporate information systems and would, we consider, increase its potential value to institutions. The very fact that it addresses interoperability should elicit the attention of every MIS manager. Commercial SOA products are available now and we therefore consider that the e-Framework should be developed so as to demonstrate its practical viability as soon as possible.

Proposal 5 The JISC should consider extending the scope of work on the e-Framework to embrace administrative systems with a view to attaining operational demonstrator status as soon as possible.

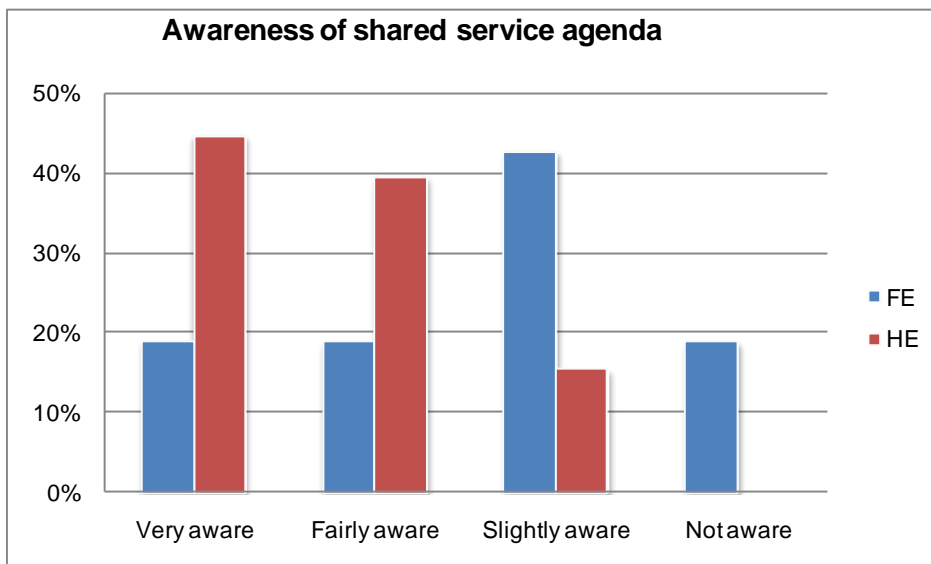
While large and well resourced institutions are generally able to develop the interoperability capability that they need for themselves, smaller institutions do not generally have the capacity to do this. There would be real benefits for such institutions were there to be a facility which provided an interoperability development and testing environment. Such a facility could be used to demonstrate both a functioning SOA as well as test software products for interoperability. We suggest that the JISC should consider developing such a facility and systems vendors could be made aware of the benefits of their demonstrating their software functioning in the environment.

The JISC should initiate a scoping study to ascertain the value of such a development and testing environment and then, if warranted, establish the environment. The environment could perhaps be located in an existing JISC service, such as MIMAS, or under the aegis of JANET UK. Although suppliers, in talking to us, demonstrated little present interest in interoperability, once some use the environment successfully, we would expect competitive pressure to drive others to follow. This would prepare the ground for institutions and consortia to use it as part of procurement procedures. Furthermore, the JISC could progress its open source agenda by introducing open source products into the environment.

Proposal 6 Consideration should be given to establishing a facility for an interoperability development and testing environment.

5.2.2 Funding of activities

Overall we found good awareness of the shared services agenda. The chart below shows the pattern.



However, we found limited evidence of exposure to shared services for systems remote from the learning and teaching domain. The table which follows shows the percentage of our respondents having one or more shared services.

Respondent has a shared service for one or more of the ticked boxes									Percentage of respondents having one or more of these shared services	
Finance	Student records	Timetabling	HR	Payroll	CRM	Estates	VLE	Library management	FE	HE
✓									9	0
✓	✓								13	3
✓	✓	✓							17	3
✓	✓	✓	✓						17	3
✓	✓	✓	✓	✓					22	8
✓	✓	✓	✓	✓	✓				22	8
✓	✓	✓	✓	✓	✓	✓			22	8
✓	✓	✓	✓	✓	✓	✓	✓		26	15
✓	✓	✓	✓	✓	✓	✓	✓	✓	30	26

This table shows that HE and FE have very similar levels of exposure to shared service delivery within their institution for one of the nine functional areas in the table. However just 3% of HE institutions actually have a shared service in one of Finance, Student Records, Timetabling, or HR. This is substantially less than the number of FE institutions (17%) with one or more shared service in these areas. That there are 9% of FE institutions having a shared finance system is probably due to their origination in local authority control: several of those we consulted told us they still use the local authority system.

We do not think that small-scale funding of projects will achieve the awareness sought. It is likely to be insufficient to gain the enthusiastic involvement of senior managers within the institution carrying out the project and is therefore unlikely to gain the interest of senior managers outside that institution.

Proposal 7 The JISC and the funding councils should provide funding support for the formation of substantial examples of shared services.

This proposal is aimed at producing some pathfinders who will also provide lessons for others. In implementing this proposal, funding should be shared between the funding body and the institutions involved in the shared services: this would ensure commitment by those institutions to establishing the shared services. We would further suggest that the management of the project includes gateway reviews which would be linked to the staged release of funds by the funding body. Given the JISC's programme management experience, it might well be appropriate for these programs to be managed by the JISC, perhaps working for the funding councils. Below we make a proposal on awareness and dissemination and these programs should be subject to a rigorous discipline of publication and dissemination of results and outcomes.

The emphasis of shared service experience to date has been that groups of institutions have come together to develop common processes and service delivery platforms based upon some common agenda or need. An alternative approach would be to develop a 'reference service' based upon a selection of best practice processes and best of breed platforms.

Institutions could be invited to work towards aligning themselves with the model of operation and then towards adopting the service provision as a shared service. The service itself could be co-located with an existing JISC service. It would probably be sensible for the initial services to be based round the provision of machine rooms, e-mail or data storage services, for which process realignment is simple or non-existent.

In this approach, participating institutions would buy into one or more services depending on how aligned their processes were to the reference model processes. This is likely to raise the need to provide interoperability with those services still run in-house using different platforms – this is a requirement that could be supported using testing on the interoperability test platform suggested in proposal 6, especially for those institutions that do not themselves have complete development systems for test and trialling.

Proposal 8 The JISC should consider establishing an exemplar service, using the existing network infrastructure, to provide a range of services including machine rooms, data services and administrative services.

The provision of administrative services would be a natural development from providing the simpler services such as machine room services, data storage or email services, which are coupled to network services. Such services may be particularly appealing to smaller institutions that may lack the expertise and staff resource to undertake extensive systems integration, provide extended support hours and comprehensive help desk functions.

Such an approach would result in a centralised purchaser for administrative software systems. Should a centralised service attract a number of users, it may offer significant economies of scale in terms of support staff, machine room facilities and licensing costs, as well as providing a powerful customer capable of engaging systems platform providers in meaningful discussions about future development and interoperability issues. However further research into the per seat costs of administrative systems and the variability of costs across institutions would be necessary before it can be determined whether this approach is likely to yield significant advantages: examples from desktop system purchasing show that centralised procurement for many institutions does not always yield savings. Furthermore, issues of quality of service typically outweigh the per seat cost of procurement.

To enable institutions to prepare themselves for alternative modes of service delivery (SaaS, Shared Services and the like) as well as to help institutions become more flexible, we propose a programme for the initial support of institutional business process management.

Proposal 9 The JISC and the funding councils should consider providing funding support for the mapping and costing of specific business processes in institutional consortia.

This work could be jointly badged. Those institutions involved should be asked to demonstrate a commitment to using the results themselves. The projects should include a comparative assessment of the processes and evaluation of the mapping process. As a precursor to this work, Netskills could be commissioned to produce advice on service costing and planning. The outcomes of a number of JISC projects (e.g. ADoM) could facilitate this work. Possible areas for investigation include

- UCAS processing
- Processing of postgraduate applications
- The HESA return
- HR
- Student recruitment.

5.2.3 Assisting the development of shared services

During our consultations, we identified a number of areas where aid from the JISC or the Funding Councils could assist institutional cost effectiveness or ease movement towards shared services. We make three proposals in this area.

The first proposal is to establish a means to explore options with each other for institutions interested in investing in shared services. A prerequisite for establishing a partnership for a shared service is that all parties are interested in changing or updating a particular functional system. We found that a majority of institutions have no date set for market testing most of their administrative systems: however, without such a means, there is no means for an institution to know which other institutions may have a contemporaneous interest in making a similar change.

Proposal 10 The JISC and the funding councils should consider developing the means by which institutions can record expressions of interest in shared services, so that other institutions can be aware of this.

This activity would need to be planned carefully and timed to fit with the progress and success of the wider shared services agenda. The work might best be carried out by the funding councils, in part because different approaches may be appropriate in each country. In Northern Ireland, the ANIC consortium could act as an example. In Wales, the Webb report is providing a strategic imperative for mergers in the FE sector. In Scotland, the SFC is in very close contact with all of its institutions. However, in England the sizes of the FE and HE sectors are such that some means is probably needed for institutions interested in service sharing to find others with similar wishes. On the other hand, if cross border partnerships are acceptable to the Funding Councils, the JISC, as a pan-UK organisation is perhaps in a better position to deliver the service.

There are various ways that this service could be delivered. These could include events to discuss service sharing as well as setting up a registry of interest. With a registry, expressions of interest could be asked of institutions and they could be guided by asking for information under headings such as

- Why the institution is interested
- The types of services the institution is interested in (for example, basic ones, MIS or others)
- Anything the institution may be prepared to offer
- When opportunities for service changes are expected to occur (which may come from institutional planning),
- Whether other factors are important, such as geographical proximity, or the types of partner they would be most interested in working with.

The second proposal in this area relates to VAT. If a group of institutions wish to form a consortium, a reasonable way of doing this which facilitates good governance is to form a consortium which may be a separate legal entity. Presently this type of arrangement attracts VAT payment for services to institutions, which means that any services delivered in this way have to make a 17.5% cost saving before any economies become apparent to the consortium members. This is clearly an obstacle and consequently acts as a serious inhibitor to serious discussion within institutions regarding the introduction of shared services in the sector. Our surveys found that VAT liability for such provision ranked as the second most important inhibitor within the HE sector, surpassed only by a group of issues concerned with establishing and maintaining satisfactory partnership arrangements within a consortium. Within the FE sector, where shared services have had a lower funding council profile, the issue was not reported as important.

The National Audit Office in its November 2007 report “Improving Corporate Functions Using Shared Services⁸” reported on VAT as follows

“The Cabinet office shared services team has systematically identified a range of barriers to shared services in government and has successfully tackled some of them. The most significant barrier is concerned VAT and issues around buying and selling services.

Under fundamental VAT rules reflected in EU agreements, buying services rather than providing them in-house may incur a VAT cost that can reduce to the attraction of shared services. This is not an issue for government departments and local authorities because, as a result of measures introduced in the past to remove disincentives to outsourcing or to ensure that VAT is not a cost on local taxation, they can reclaim VAT in appropriate circumstances. For other bodies, principally non departmental public bodies and the higher and further education sectors, VAT incurred on buying in services may be an irrecoverable cost. The Cabinet office estimates that the VAT barrier is potentially inhibiting £70 million in annual savings for non-departmental public bodies. The potential benefit from removing the VAT barrier for higher education and further education bodies is believed to be tens of millions of pounds per year. Further work is being carried out in the sector to provide a better estimate.”

In other words, although educational institutions cannot reclaim VAT, they are not treated like government departments or local authorities regarding VAT on shared services. Thus it is hardly surprising that shared services have made more headway elsewhere in the public sector than in FE and HE.

However, we reported in April that there appeared to be a lack of ministerial knowledge in DIUS about the VAT issue. This lack of concern was emphasised by an item in June’s Cabinet Office’s Shared Services Bulletin⁹ which reported that “The Treasury has decided not to pursue the VAT recovery scheme for Non Departmental Public Bodies (NDPB). The responses they received from their PES survey did not give them enough evidence to put a case to Ministers. We can still make further representations in this FY, so it will be really helpful if anyone can provide hard evidence of when a decision has been made that was adversely affected by the imposition of VAT.”

Proposal 11 The Funding Councils should consider enlisting the support of their communities to lobby for the removal of VAT on shared services.

The NAO report recognised that any solution would need to be consistent with EU law, the normal principles of public funding and the government’s wider position on irrecoverable VAT.

A primary driver behind the shared services approach is to improve the value for money of the administrative services that institutions rely upon. One element of the cost is the licensing and support costs that institutions incur from vendors. In markets with limited suppliers and fragmented consumers, supplier power can be such that high margins can be established, leading to consumers receiving poor value for money. In this case, any form of shared service would create larger consumer groups, theoretically able to negotiate more equally with the suppliers, driving down prices.

⁸ http://www.nao.org.uk/publications/nao_reports/07-08/07089.pdf

⁹ Cabinet Office: Shared Services Bulletin - Inside Government Shared Services: Issue 6 –June 2008

However, the picture that emerged in Report 2 is of an extensive and competitive supplier community – further work could be undertaken to examine the margins of particular suppliers, but it appears unlikely that there is an abuse of supplier power. Therefore, we suggest that savings should be sought in a collaborative approach to suppliers – seeking win / win solutions where the cost of support, development and/or operation is reduced for suppliers and a proportion of that saving is passed onto the customers.

Proposal 12 The JISC should consider contracting a partner organisation such as Eduserve or JANET UK to negotiate with administrative systems vendors at a community level in order to seek cost savings.

Such savings could include: preferred supplier status reducing the cost of sales, collaborative development reducing the cost of R&D and process or interface standardisation reducing the number of product variants supported. The last point is very relevant to moving to use of SOAs for integrating applications. Such approaches will be most effective when involving a significant proportion of the community operating a particular product. Therefore we suggest that the JISC would be ideally positioned to foster user forums to engage with particular suppliers and seek win / win measures to reduce the cost of platforms for suppliers and institutions.

There is a need to beware of unintended consequences: if certain standardisation activities drive the support cost of a product down, the incremental costs associated with those institutions unable or unwilling to take such standardisation measures may rise. This could lead to a situation where differential pricing means some institutions would see their costs increasing whilst the majority of users see costs fall. Ultimately this will act as a lever to standardisation (of process and product) and indirectly support a move to shared services.

5.2.4 Support and guidance for institutional moves to Shared Services

Most of the UK Funding Councils have an agenda for merging institutions, where there is a satisfactory rationale for that, or for consolidating institutions onto fewer campuses, where such consolidation would create a more effective institution. In contrast to the commercial sector and to local and central government, shared services in higher education are normally perceived as existing between organisations. Within those other sectors, shared services are often perceived as existing within organisations, typically serving two or more large departments. The unification of the ICT Systems in such cases is therefore a particular example of shared services.

We would suggest that the JISC should consider the provision of the support structure to assist organisations where such merging or consolidation is taking place: it is noteworthy that in the commercial sector unification of IT systems is often the major brake when merging two separate businesses. There are specific opportunities in the Welsh FE sector, arising from the Webb report, to provide such assistance. The provision of a support structure like this also addresses the need, found by the earlier JISC funded MUSIC study, for greater systems integration.

The lessons learned from such mergers and consolidations will also provide valuable source and case study material for the dissemination programme suggested in Proposal 4.

Proposal 13 The JISC should consider providing support for institutions that are considering merging or consolidating, to assist in the unification of their ICT systems.

As we have described above, one of the major inhibitors to institutions undertaking shared services development concerned establishing and maintaining satisfactory partnerships.

Furthermore, the issue of how to dissolve such partnerships in a way which would not damage service delivery was also cited. Another area of importance to institutions was ensuring that, where the shared service is delivered from another institution, at times of crisis the hosting institution would treat its customers fairly. Institutions were also concerned that the integrity and privacy of data held by another institution should be respected. Such considerations should be covered by the formal governance arrangements agreed for the partnership. Developing governance agreements can be a very time-consuming and expensive exercise, especially if lawyers have a substantial input. Furthermore, the creation of such agreements is often essentially a case of reinventing the wheel. We therefore make the following proposal:

Proposal 14 The JISC should consider funding the development of model governance schemes for shared services.

It is likely that there are existing governance schemes which can be generalised for the shared services environment: in particular, we think that lessons could be learned from the MANs. This seems an area for which Netskills could usefully develop a range of materials: it might also be an area in which the Leadership Foundation for Higher Education may wish to become involved. The schemes and agreements developed could probably be usefully extended to other jointly managed ventures. The Chief Information Officer Council of the Cabinet Office has a number of very helpful web pages covering these and many other aspects of shared services¹⁰.

6 Epilogue

This comprehensive study has shown that there is little overt enthusiasm for the introduction of shared services for the delivery of administrative systems within the FE and HE sectors of the UK. Much of this stems from the fact that presently the people concerned generally have insufficient reliable information available to help them seriously countenance such changes. Institutional managers do understand the potential benefits of shared services but they perceive the potential disadvantages and the risks as too inhibiting. Furthermore, others see alternative means of delivery, such as outsourcing, providing equally effective alternative means of achieving the ends which would otherwise be obtained through the use of shared services.

Administrative services are too important to institutions to take significant risks: no manager is going to gamble the institution on shared services. However, the alternative means of delivery, such as outsourcing and software as a service, have a number of features in common, such as the need for interoperability and for harmonisation of business processes, the development of which could usefully be supported by the JISC and the funding councils.

Developing flexible and agile colleges and universities would almost certainly facilitate a globally more competitive education sector for the UK and would enable them to serve their customers still better than they do at present.

The proposals we have made here do not follow directly from the Gershon report but are clearly in its spirit, allowing further and higher education in the UK to demonstrate social responsibility and a wish to deliver high value whilst at the same time positioning themselves better for a potentially uncertain future.

¹⁰ The pages are rooted at http://www.cio.gov.uk/shared_services/introduction/what_is.asp