

JISC Study of Shared Services in UK Further and Higher Education

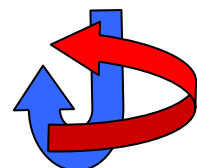
Report 3: The potential for shared service models for the delivery of administrative systems in UK FE and HE

April 2008

Undertaken on behalf of the JISC

Duke & Jordan Ltd

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1 Conclusions

Drivers and inhibitors

1. The surveys showed that the top ranked driver towards shared services was continuity and resilience of service, followed by quality of service.
2. Next was cost savings followed by releasing staff for customer facing activities.
3. Overall therefore, those surveyed were more interested in improving service than in cutting costs.
4. Funding Council pressure was found to be the least important driver in HE.
5. The principal inhibitors perceived by those we consulted were concerned with establishing and maintaining a satisfactory partnership with other parties.
6. VAT liability was assessed markedly differently between the two sectors, within HE it was rated the second most important inhibitor but within FE it was rated the least significant.
7. In discussions with witnesses, frequently mentioned benefits were seen to be saving on costs and the ability to learn from other partners in consortia.
8. Witnesses often mentioned inhibitors that were inherently difficult to quantify, such as the levels of cost saving that could be achieved: witnesses felt that savings had to be appreciable if the upheaval was to be justified.
9. Some witnesses in HE considered that the funding councils could not put much pressure on institutions to adopt shared services, citing the proportion of income they received from other routes.

Awareness of the shared services agenda

1. Witnesses had different understandings of the term shared services.
2. A small number of witnesses had a comprehensive understanding of these agendas and of their implications.
3. Few witnesses were totally unaware of the shared services agendas espoused by governments and funding bodies.
4. Most English HE witnesses were familiar with the HEFCE feasibility and pilot studies.
5. As a group the institutional senior managers were considerably more aware of the use and potential of shared services than the heads of administrative services or the ICT managers.

Competitiveness

1. We encountered a variety of views regarding competitiveness. Some were concerned that competitiveness might be compromised if service sharing were introduced while others said that it was not an obstacle.
2. Competitiveness did not rank particularly highly as a barrier when we carried out the web surveys.

Commitment to shared services

1. In the surveys it was most common to find (about 40% of respondents) that institutions "might" consider a shared service in the areas covered by the study. However, in each area about a quarter of respondents indicated that they would not consider a shared service. These findings were in accord with the information collected in the interviews and we feel it indicates a low level of commitment.
2. In answer to the possibly provocative survey question about their level of interest in using free shared services, a substantial minority (about 40%) did not know whether or not they would. Of the remainder, the balance of positive and negative attitudes was more or less even. Very few respondents felt certain that they would. These findings are also consistent with a low level of commitment.

Readiness for shared services

1. About half of institutions do sometimes consider the possibility of shared services when determining their strategy for renewal of an administrative system.

2. Many institutions consider they are not in a position to make decisions about whether they should change to a shared services model.
3. A minority of the institutions we contacted reported that they had conducted substantial business process analysis or re-engineering exercises. As comparisons of business processes are involved in moving towards shared services, we feel that in this respect the majority of institutions are not immediately well positioned for such a change.
4. It is evident from the responses that we obtained from people other than Vice-Chancellors and Principals that generally across the sectors, service costings are not sufficiently in place to make well considered cost judgements on transitions to shared services. This information is called for when estimating the payback time over which the estimated cost savings of running a shared service are to be offset against the costs of the change process.

Approaches to shared services

1. Most institutional witnesses saw shared services as of tactical value, for use in situations such as pursuing a regional agenda.
2. We most commonly found that in cases where institutions were considering or participating in shared services they were acting in a tactical way.
3. A small minority of institutional witnesses saw shared services as having a strategic value that could change the way the institution operates.
4. We consider that these two groups approach shared services in fundamentally different ways. This finding is in accord with the ECAR study mentioned elsewhere in this report and it allows the conclusion that the majority of UK HE and FE institutions have not yet made behavioural moves to become strategic collaborators. This is not to say that many institutions will not make this change but they have not made it yet.
5. The ANIC consortium in Northern Ireland shows that shared services can meet demands well. The RCUK project also appears impressive and the sector should learn from it. Both situations have come about as a result of decisions made at a high level that could be impressed on the organisations that use the services.
6. Few institutional witnesses felt that shared services had clear benefits.

National variations

1. In Northern Ireland, Scotland and Wales the shared services agenda experienced by tertiary institutions is set in a wider public sector context than in England.

Specific applications areas

1. Around a quarter of those replying to the web surveys already had a shared library service. Furthermore, when we asked in our survey whether institutions would take up a free shared service in the different systems areas we considered, it was the library system that received the most affirmative indications.
2. VLE services were the next most shared, at about 13%.

Delivery methods

1. Most administrative services were delivered by running the systems in-house.
2. All the suppliers we approached have business models available for hosting software for client organisations.
3. Some suppliers, notably Blackboard, have had significant success providing hosted shared services both in the UK and elsewhere.
4. Some suppliers have software that can support more than one business.
5. Two institutions were partway through implementing a service oriented architecture (SOA) as the framework for their administrative systems. Apart from this, SOAs received little mention from institutional witnesses.
6. Suppliers generally felt that few UK institutions were looking for new supply models.
7. Suppliers were keen to see software as a service (SaaS) expanding. They feel this approach could be used to supply better quality of services to institutions. Some felt that this was an inevitable future.

Systems replacement

1. Suppliers reported that the rate of churn in the market is now extremely low.
2. We found a lengthy cycle which institutions seem to go through in replacing or fully assessing all their systems against the marketplace: typically it is between 10 and 15 years. Our enquiries suggest that a little over 10% of all the systems that we are considering will be replaced or reassessed in 2008 or 2009.
3. The surveys showed that over a third of respondents said they could not indicate when they were going to review their administrative systems against the marketplace. This can also be interpreted to mean either that institutions are comfortable with what they have, bearing in mind the costs of making changes, or that they had other higher priority work to do.

Integration

1. We found widely varying levels of systems integration in different institutions.
2. There was considerable evidence showing that institutions consider it is a higher priority for them to have better integrated systems internally than to go to shared services.
3. Because integrating systems highly requires a detailed understanding of the procedures and processes operating within the institution, it is clear that making significant progress would be costly in time and money to the large proportion of institutions that had not already carried out substantial business process re-engineering exercises. However, such work would put them in a strong position to consider shared services in detail.
4. We found considerable evidence of local systems within faculties or departments being used in place of the corporate ones.
5. The level of integration of Estates systems with other administrative systems is notably low.

Costs

1. In our discussions with witnesses we encountered very little evidence about cost savings actually achieved through use of shared services.
2. The RCUK SSC project plans to make large-scale cost savings which appear in large part to result from the comprehensive way it is addressing all the costs of administrative functions.
3. Our feeling is that worthwhile levels of saving have to be demonstrable if institutions are to have their levels of interest increased.

Business and governance models

1. When asked about governance, witnesses overwhelmingly said they wished to see arrangements that were demonstrably capable and transparent.
2. A good model, one cited by several witnesses, was felt to be a two tier one in which there is a board comprised of senior stakeholders that is allied to a more operationally oriented management group.

Pursuing a shared services agenda

1. Pursuing a business process analysis and engineering agenda with institutions would enable service sharing and service integration as well as yield knowledge of service costs. It would also facilitate institutional agility: an improved capability to respond to new challenges.
2. Business process alignment between partners will carry with it economic benefits and indeed may well be crucial to the success of shared services.
3. The time that has to pass before benefits can start to be realised by use of shared services has to be realistically considered: it is likely to be of the order of five years.
4. The diverse mix of different systems used by institutions (described in detail in Report 2) means that if a selection of systems were to be introduced then most institutions would have to change at least one of the packages that they use.

5. Use of software systems that can support more than one business could facilitate entry into shared services although the long-term economies possible from such an approach would not be expected to match the case where common process models were used.
6. While service oriented architectures (SOAs) are new and largely untried, they appear to offer considerable potential as a means of allowing considerable numbers of applications to interoperate in a manageable way. SOAs impose no architectural barrier to having different software components run at different locations: in fact they provide a means of doing this. They therefore appear to be a powerful means of facilitating both integration and service sharing.
7. The JISC has for some time been running programs and projects in the area of SOAs, but it does not have an actual deliverable and so far its SOA activity has been directed at a particular part of the area of administrative applications: student information systems, VLEs and library management systems.
8. We consider that the level of saving that can be achieved in the shared services agenda should be kept under review.
9. We found little enthusiasm from institutions for a wholesale change to a shared services model.

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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

2.1 Context

This study for the JISC is 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	<ol style="list-style-type: none">1. To describe the current landscape and the potential development of shared services across UK FE and HE.2. To identify and characterise the marketplace for administrative systems.3. To provide advice and guidance to management in UK FE and HE institutions about involvement in shared provision of services.
2	<ol style="list-style-type: none">4. To inform future JISC and funding council work in supporting and assisting shared services.

The three reports in phase 1 have 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

Inevitably, there is some common material between the three, each of which we have written to be read by itself. Report 1 has the most extensive information on background and context.

2.2 *The administrative systems considered*

The ITT for this work refers to administrative systems but does not provide a definition for these. We have chosen, 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
- 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 this first Phase of our study has been in two parts:

1. We have interviewed a large number of people, about 90, either by visiting them or by telephone;
2. We have undertaken 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 over 90 individuals.

Our web surveys, which are shown in the Appendices to Report 1, were in two parts. In the first part, we were seeking 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 a web survey out 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:

3. 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.
4. Vice chancellors and principals in the English HE sector: we were provided with contact details by HEFCE.
5. Members of UCISA: UCISA sent out the survey for us.

4 The institutions who responded

The responses to the second set of surveys were as follows:

- | | |
|-----------|---------------------------------------------------------------------------------------------------------------------|
| Survey 1: | Survey of those who had replied to the survey we had sent earlier through the JISC RSCs.
We received 25 replies. |
| Survey 2: | Survey of vice chancellors and principals in the English HE sector.
We received 42 replies. |

Survey 3: Survey of members of UCISA.
We received 17 replies.

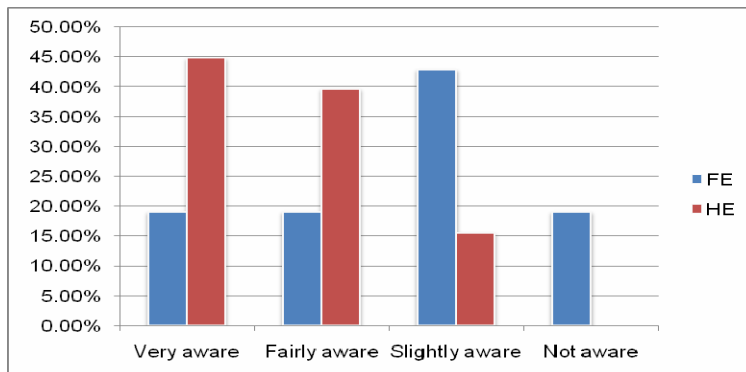
Together this provided us with 84 replies. Given the relatively small FE sample (those responding to the first survey were overwhelmingly for the FE sector), limited credence should be given to the actual figures of response but it is reasonable to look at trends.

5 Institutional awareness of the shared services agenda

5.1 Current awareness

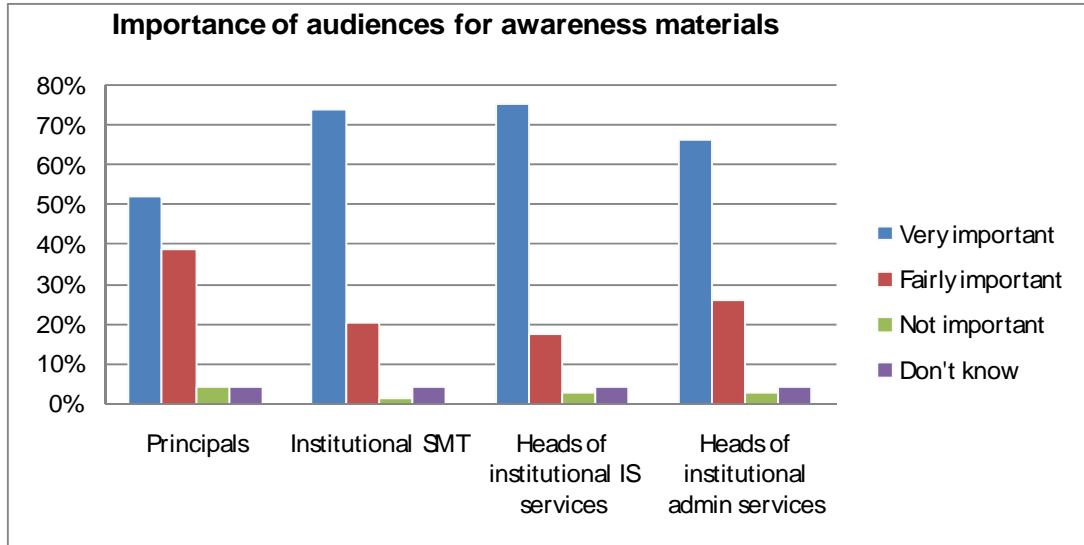
Awareness of current shared services activity in the UK was patchy. Our interviews indicated that few people are totally unaware of the shared services agenda, though there was clearly some lack of clarity about what the term actually means. A few people had a very clear understanding both of the agenda and of its implications. Almost all HE witnesses were familiar with the HEFCE feasibility and pilot studies. In general, witnesses already engaged in the shared services agenda were aware of considerably more other shared service activity than those who were not. No witness mentioned the RCUK Shared Service Centre initiative.

The following graph, using information from the surveys, supports this analysis: it shows awareness of the use of shared services as a means of delivering key administrative functions broken down by sector. It is clear that for FE there is a considerable variation in awareness, centring on only a slight level. For HE, all respondents had some awareness and it was most common to find a high degree. This is probably because of the preponderance of answers from principals.



5.2 Where awareness is needed

Our interviews indicated that senior managers were better aware of the shared services agenda than others: the librarians we spoke to understood the concepts very well. In the second set of surveys we asked to whom any awareness materials or events should be addressed. The graph below shows the aggregated responses. These suggest that the principal targets should be below the level of Chief Executive, which correlates with the patterns of awareness we met in our interviews.



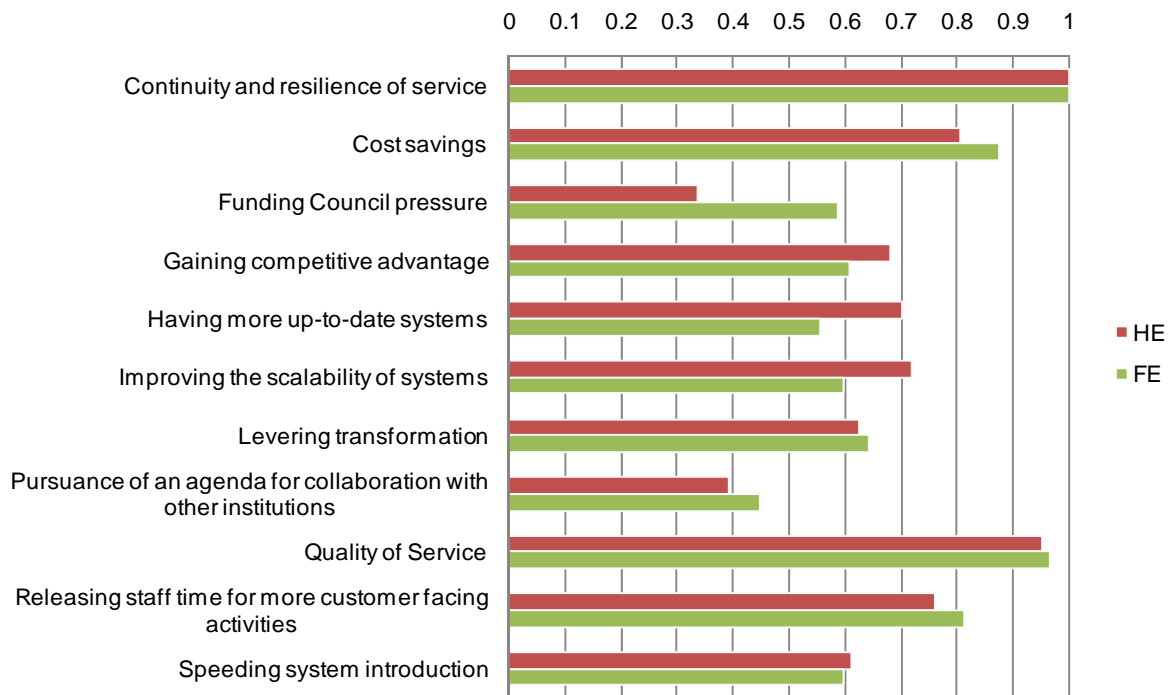
One of our survey respondents did suggest that Boards of Governors should also be targeted. Another wrote “We are not convinced that awareness is the key issue - finding a route to implementation is more significant.” This echoed a number of our interview witnesses who said that they wanted to see some success stories.

6 Readiness of institutions to be part of shared services

6.1 Institutional drivers and inhibitors

The following chart shows how respondents to the web surveys rated the relative importance of potential drivers for shared service solutions, broken into HE and FE components.

Relative importance of drivers

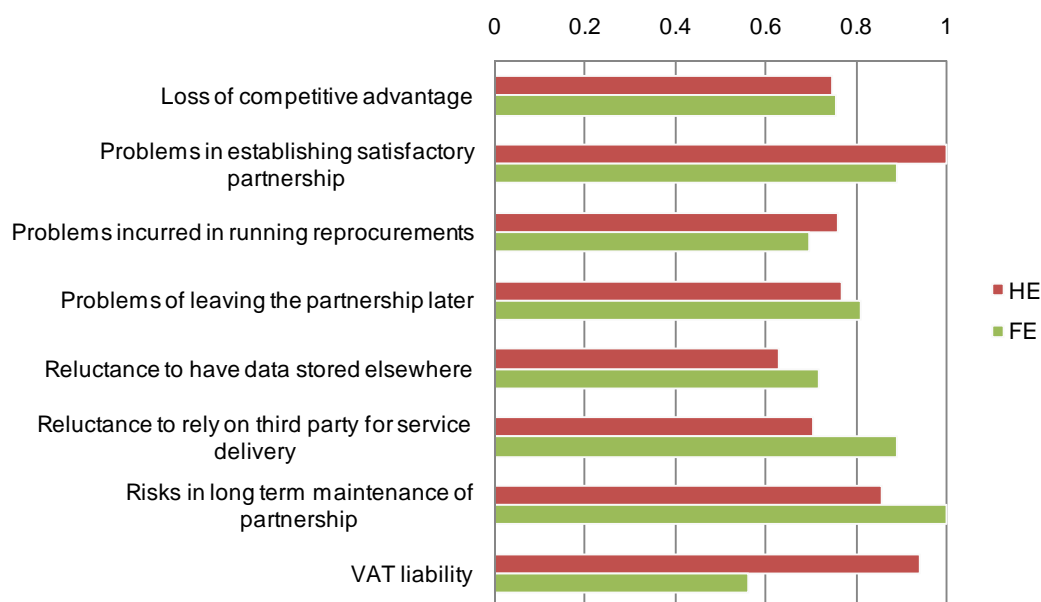


The two sectors rate most drivers very similarly, the clearest exception being that of funding Council pressure, which is seen as significantly more important by FE than HE. Interestingly, the driver shown as most important by the survey “continuity and resilience of service”, was not brought out frequently in our discussions with witnesses.

Of the top four drivers, three relate to service quality and customer experience, the exception being making cost savings. If institutions are to be guided in moving to shared services these will be the areas in which they will need the clearest assurance that the change will bring benefits.

The web surveys also asked about inhibitors and the results are presented below.

Relative importance of inhibitors



The top group of major of inhibitors related to partnership issues: establishing a satisfactory partnership, risks in maintaining it and problems coming up if a decision were made to leave the partnership. these are the key stages in a partnership life cycle and it is clear that any formal agreement process used in forming partnerships should address these openly and well.

Interestingly, VAT liability was assessed markedly differently between the two sectors, within HE it was rated the second most important inhibitor but within FE it was rated the least significant. This could be because HEFCE has raised VAT as an issue within its constituency.

It was common for witnesses to say that, if a shared service opportunity made business sense, they would consider it. Many however felt that there were a number of inhibitors which, while individually unquantifiable, in aggregate made them unenthusiastic about such an opportunity. Examples were

- that cost savings would only be marginal – many saw that 5 or 10% was not worth going through the pain for;
- the need for contingency plans in case the shared service provider suddenly stopped providing the service, which some felt implied a need to have access to a copy of operational data at short notice;
- the difficulty of managing the interface to the provider – we encountered several stories of difficulties with commercial providers.

6.2 Competitiveness

A number of witnesses were concerned that the competitiveness of their own institution might be compromised if service sharing were introduced. One witness asked “competition is demanded by the government: can competitors be trusted with vital data and systems?”. However several witnesses asserted that competitive advantage was not a barrier, one noting that UCAS is in a highly competitive area but nevertheless it is a shared service. Another felt

that shared services may be able to give an international competitive advantage to the sector as a whole but not to individual institutions.

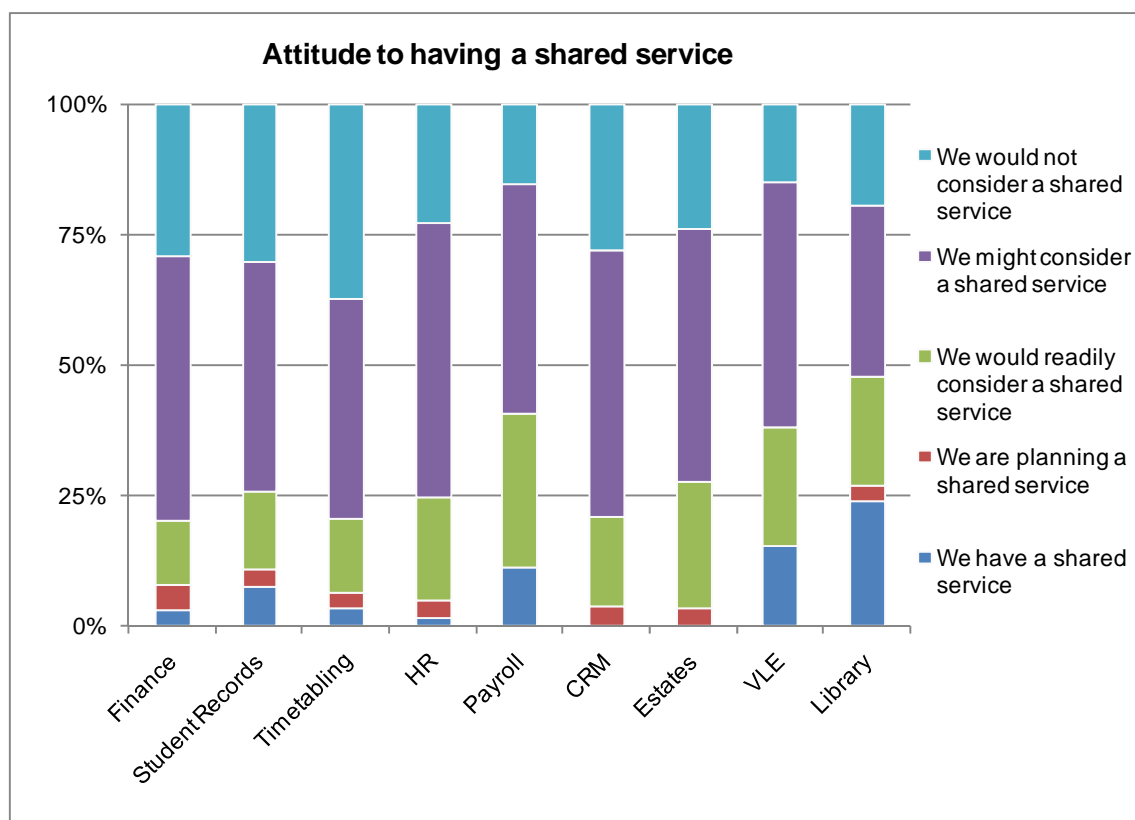
Our view is that attitudes vary widely and that some institutions have analysed this area better than others. We do not consider that students choose universities on the basis of their back-office systems although by the time they graduate they will take away a clear view of the quality of the educational and administrative services that they have used.

6.3 Institutional commitment

In answer to the survey question “What is your institution's approach/attitude towards the use of shared services for each of the named systems?” The aggregated results are shown below.

	We have a shared service	We are planning a shared service	We would readily consider a shared service	We might consider a shared service	We would not consider a shared service	Don't know
Finance	3%	4%	11%	46%	27%	8%
Student Records	7%	3%	14%	41%	28%	7%
Timetabling	3%	3%	13%	39%	34%	9%
HR	1%	3%	19%	49%	21%	7%
Payroll	10%	0%	27%	40%	14%	9%
CRM	0%	3%	13%	40%	22%	22%
Estates	0%	3%	20%	41%	20%	16%
VLE	14%	0%	21%	44%	14%	7%
Library	23%	3%	20%	31%	18%	6%

The graph below shows these results with the Don't knows removed.



These results suggest that, while there is generally some preparedness to consider shared services in these areas, a readiness to accept them is less common. There are exceptions. It may be that student records and timetabling are seen as needing to embrace the individualistic elements of the institution. For payroll, the balance of responses is consistent with the facts that its outsourcing is not uncommon: indeed nearly 50% of those giving a clear response have, are planning or would readily consider a shared service. The proportion of those who have, are planning or would readily consider a shared service for library management is nearly a half. There is considerable sharing of library management systems and VLEs as well as great wariness about sharing them. These two systems are of course at the heart of the academic process. It may be that there are two camps evolving: in one, there is a readiness to share and in the other considerable caution or even aversion

In the discussions with institutional witnesses, most were not hostile to the idea of using shared services but overwhelmingly they were seen as something that the institution or the particular service area should grow into in an evolutionary way. Often this growth was described as a means of progressing a regional or community-involvement agenda. With only one witness did we encounter hypothesising about conducting sharing of administrative services with peer group institutions that were geographically distant.

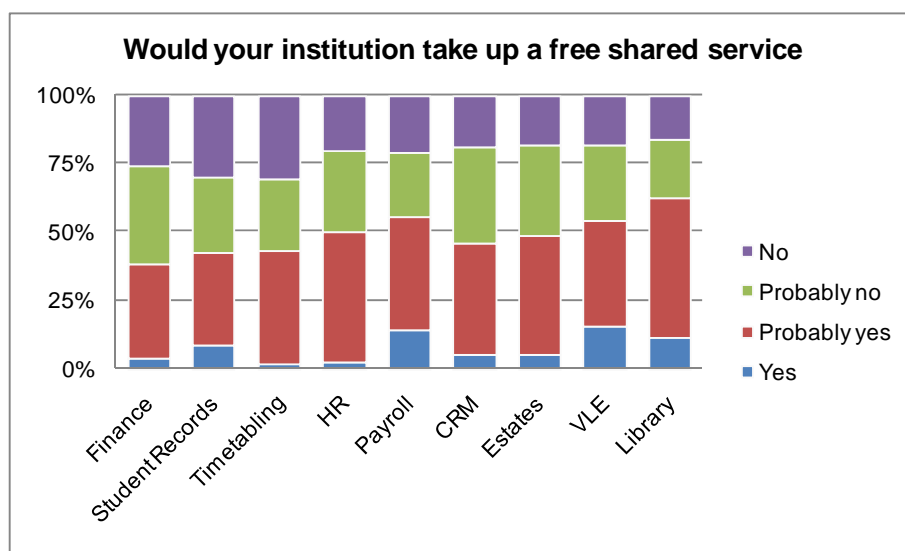
We found only modest amounts of evidence to suggest that institutional witnesses had really considered the implications of large scale service sharing, whereby significant amounts of back office support resource could be removed from the organisation. Where it had been considered, people usually saw clearly how the savings could be used – most commonly to allow more effort to be put into customer facing activities thereby improving the quality of service. There was general aversion to approaches involving step changes. We consider that this may often have

been because it was not common for appreciable amounts of business process examination and re-engineering to have already taken place within the administrative part of the institution. As one survey respondent wrote “Most of us do [already have up to date and robust systems]. Change is therefore very unattractive and would take much staff time.”

We also asked, perhaps provocatively and also perhaps simplistically, “If your institution were offered free participation in a shared service for each of the named systems, would it accept?” We asked this because, in a large company with a number of separate operating units, it is likely that those units either would be compelled to use a particular software system or would be given access to the holding company’s large system. The table below shows the aggregated responses.

	Yes	Probably yes	Probably no	No	Don't know
Finance	2.9%	23.5%	25.0%	17.6%	30.9%
Student Records	5.8%	23.2%	18.8%	20.3%	31.9%
Timetabling	1.5%	27.9%	17.6%	20.6%	32.4%
HR	1.5%	30.9%	19.1%	13.2%	35.3%
Payroll	8.8%	26.5%	14.7%	13.2%	36.8%
CRM	3.0%	22.7%	19.7%	10.6%	43.9%
Estates	3.1%	26.6%	20.3%	10.9%	39.1%
VLE	10.1%	24.6%	17.4%	11.6%	36.2%
Library	7.4%	32.4%	13.2%	10.3%	36.8%

This data, without the don't knows, is plotted below.



It demonstrates that respondents would be generally averse to taking on such a service for Finance, Student Records and Timetabling, but are more enthusiastic about such a service for Library Management and Payroll.

7 Capability for entry into shared services

7.1 Classifying shared services

There are a number of organisational models for service delivery in education. At one end of the spectrum is the devolved model, where services are delivered within units and departments of the overall institution. Next along the spectrum is the centralised model, from where services to the institution delivered as a whole. The other two examples of model both cross the institutional boundary. In the shared service model, there is a sharing of expertise and knowledge between the partners and the service will be delivered to a number of the partners from outside their own institutional boundary. In the outsourced model, delivery of the service is by an external organisation, with whom the receiving institution has a connection based on payment and, probably, service level agreements.

Devolved services can be very responsive to local needs but are generally expensive when replicated and they carry with them the likelihood of providing inconsistent data to the centre of the institution and, quite possibly, allow different and mutually contradictory procedures to co-exist. Centralisation can reduce costs, eradicate inconsistent data, and can relieve departments of the tedium of localised service provision. Collaboration in a shared service, participating in a consortium that deals with the service provider, takes the service boundary outside the institution. Full outsourcing, where services are bought by the institution from a supplier, is an alternative to this but it may not yield a lower cost as the negotiating power of the individual purchasing institution will be less.

The KPMG report commissioned by HEFCE¹ listed six organisational structures encountered in the public sector:

- Unitary – a single organisation consolidating and centralising a business service.
- Lead department – an organisation consolidating and centralising a business service that will be shared by other organisations.
- Joint initiatives (internal) – an agreement between two or more organisations to set up and operate shared services.
- Strategic partnership (external) – contractual arrangement with a third party provider for a range of services which may include shared services.
- Joint venture – joint venture legal entity between “Authority” and third party provider.
- Outsourcing – third party provider takes full responsibility for managing and operating the service.

The table below briefly describes some of the principal characteristics common to service-sharing situations and the options for each:

Characteristic	Options
<i>Number of services</i>	<ul style="list-style-type: none">• Single service• A collection of services
<i>Where services are hosted</i>	<ul style="list-style-type: none">• Locally• In another institution• At a specialist or third-party supplier

¹ http://www.hefce.ac.uk/pubs/rcreports/2006/rd15_06/rd15_06.pdf

<i>Partners</i>	<ul style="list-style-type: none"> • Selected from regional institutions or other organisations • Selected by other characteristics, commonly birds of a feather (e.g. on criteria of size, commonality of mission or complexity) • National scope
<i>Business processes</i>	<ul style="list-style-type: none"> • Customised to suit the institution • All members performing the same activities adopt the same processes for them

Generally, the assumption is that the potential savings from shared services will increase as one moves down each option list. However, the magnitude and difficulty of the transition process to the new state also increases as one moves down any given option list. Options at the top of each option list describe a *tactical* shared service situation – one designed to meet particular needs – while those to the bottom characterise *strategic* use of shared services – where the institution itself has to make permanent adaptation in order to participate. The shared service vision espoused by government is of a situation described by the lowermost entry in each option cell.

However, we have found a number of cases where institutions have undertaken or are undertaking major strategic business process review without taking the shared service route.

7.2 Business and governance models

Governance was seen by a substantial number of witnesses as an important issue and a variety of views, some conflicting, were encountered. The use of a Board for governance was always proposed as the best option, however some witnesses educated that shareholding in governance should be proportional to some measure of institutional size whereas others felt that representation should be on the basis of equal shares. We found one working arrangement where an existing governance and management structure (that of a regional network) was used with entirely satisfactory results. One witness was pessimistic believing that there are no governance models at the moment that would work for both FE and HE. Another noted that governments had to be effective in case there were pushy partners.

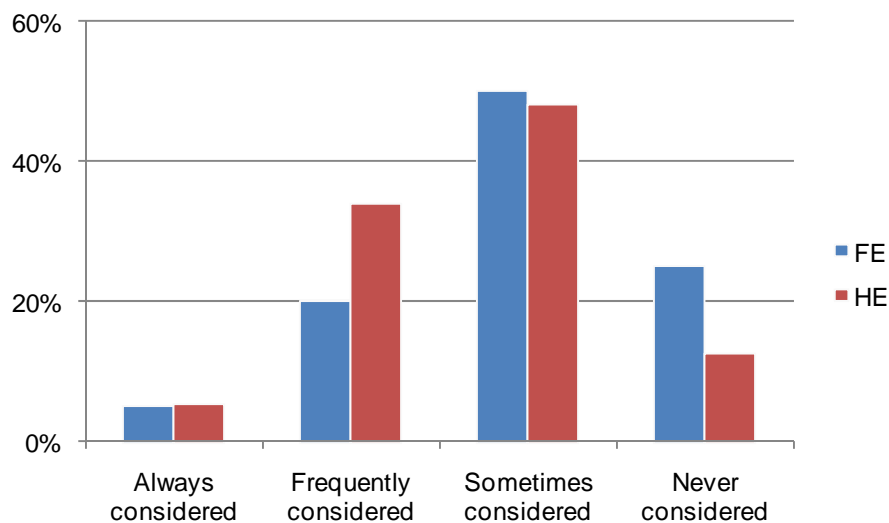
Overall, most witnesses were discussing situations that were hypothetical, that is to say from the viewpoint of not being engaged in a shared service situation. However, the model which seems to have the most support within the sector is a two tier one. Overall, there is a Strategic Governance Body, usually with representation at the most senior stakeholder level, ie Principal or SMT member: if there are a lot of stakeholders, it is likely that there will be some electoral system for selection, but generally large stakeholders are treated similarly to small ones. There is then often a group of stakeholder representatives giving support to the service management team on operational matters. The make-up of this lower group is likely to be of managers with skills in the specific service area. Other support groups may exist but these are generally not part of the governance structure.

By and large, the preferred model for shared services is a joint-venture company limited by guarantee. This seems to provide the appropriate legal protection, but sadly makes the venture liable for VAT.

7.3 Approaches to shared services

In our discussions with witnesses in the educational institutions, we most commonly found that where they were considering or participating in shared services (other than the established national ones such as JANET or UCAS which are mentioned in Report 1), they were acting cautiously. The developments considered or undertaken were of a modest scale. They most often involved a single service in a regional context and were either with other educational institutions, or less commonly, with parts of the public sector.

The surveys asked about how often consideration of involvement in shared services was made in planning discussions. The graph below shows the responses.



It can be seen that consideration is most commonly given sometimes and that rather more HE institutions consider it frequently than FE ones.

In contrast with these general findings we did encounter a very small number of cases where the shared service approach was being used strategically by institutions: notably the ANIC Consortium in Northern Ireland and two English FE colleges who were using it as an element in wider change programmes in which time was of the essence.

We consider that these two groups are approaching shared services in fundamentally different ways. Institutions in the first group are entering service sharing as a natural, tactical, extension of activities they have been doing for themselves. Those in the second group have entertained using shared services as a step change in their behaviour and the degree of service sharing that they are involved with will mean that it will always receive consideration in major planning processes.

Support for this viewpoint comes from a study² conducted in 2007 by the Educause Centre for Applied Research (ECAR) which took views from about 270 American higher education institutions about collaborations and their propensity to collaborate in the areas involving IT resources. The study found that institutions fell into two groups: collaborators who sought

² <http://www.educause.edu/ir/library/pdf/EKF/EKF0704.pdf>

partnerships as part of a strategy to develop or deliver services more cost effectively and non collaborators, who while they were generally open-minded about the potential of collaboration, were wary of engagement mainly because of their perception of the costs and complexities involved. The study found that the most common form of collaboration was shared services, with over a hundred and fifty institutions in their sample being so involved. Enterprise information systems were the most frequent area of collaboration closely followed by network infrastructure. Each of these areas involved over 60% of the collaborating respondents.

It would appear then, that UK HE and FE institutions, unlike an appreciable cohort of American ones, have generally not yet made behavioural moves to become collaborators in the sense of the ECAR study.

The RCUK project to establish a shared service centre (SSC) uses an interestingly different approach from all the above. RCUK accepted the message from the Gershon report and in 2006 commenced a £69 million 3 year project to effect a step change in the number of back office functions in order to release more of the research councils budgets into research. The project is planned to make savings of £450 million over a 10-year period. It is now on time and in budget. Initially the research councils found it difficult to accept the project's proposition, but under the effective leadership of both the chair of RCUK and the project director, the project is proceeding well, with a number of the research councils having made commitments to the shared service centre in their published plans. The progress made by this project suggests that with good leadership, appetites for major transformational projects can be generated and then made use of.

7.4 Suppliers

7.4.1 Delivery methods

All the suppliers we approached have business models in place for hosting software for client organisations as well as for licensing software to be run locally. The hosting model is quite common, particularly in other sectors, where rapid organisation change or growth, local labour costs are high, or skills are scarce. This model can, particularly in the HR and Financial areas, also be associated with centralising repetitive transactions into a shared central service centre. Unless multiple institutions are involved, this only fits the narrowest sense of shared service, but is normal when there is radical institutional reorganisation such as a merger. It may also arise through continuous improvement of business processes, but here new IT provision may well be unnecessary.

Suppliers generally have in place licensing models which support shared service procurement and provision across institutions. However, the savings are generally insignificant unless other changes are envisaged alongside with, for example, some service elements being moved to a shared service centre.

From a software point of view, the next stage of integration across sites is that multiple software instances are run from a shared service centre with shared skills and operation. With separate implementations, some variation in business processes and upgrade path can be accommodated but, unless there is some alignment, savings are likely to be small. One might as well outsource provision to the supplier.

To share a single instance of a package there needs, at the very least, to be a complete alignment of business processes across the partners. There can be other issues as well such

as assurance of data privacy, the fact that institutions are locked into a synchronised upgrade path, and perhaps limitations on data exchange. Few software packages are capable of handling multiple organisations in a single instance, and even where it is possible there is often some resistance, coming from concerns over proper authorisation control of data access.

It is notable that one supplier, Blackboard, has had significant success with providing hosted shared services in the UK and indeed globally. Here the supplier manages its own data centres in three continents. It has good standardised links between the major SIS systems and its VLEs. Its software is capable of supporting multiple institutions with institutional branding and it is delivered via the web to give a good user experience wherever they are located. In the UK the Bloomsbury Group in London uses this service.

Organising such an arrangement managing the risk and negotiating and monitoring contracts is a very different skill from running such services in house. Further hosting is usually through one or more partners which can leave institutions with complex contractual arrangements in which there may be a risk of business failure of one of the providers.

7.4.2 Demand for new supply models

The suppliers in general felt that relatively few UK Education Institutions were looking for new supply models. Coupled with that, the rate of churn in the market is now felt to be extremely low. Other models are more common in other territories, like Northern Europe and other market segments. There are currently not sufficient incentives for institutions to change. There was some frustration that in UK Education there is more talk than action.

7.4.3 Changes in business models

Suppliers are keen to see software as a service (SaaS) expanding. Software is ever more complex and expectations over service levels rise. It is argued that this is better managed by the software supplier and its partners rather than by individual institutions. There is a feeling that it is an inevitable future. It is also seen that offering products in a new way is the only way to invigorate what is a largely stagnant market.

7.5 Replacement of systems

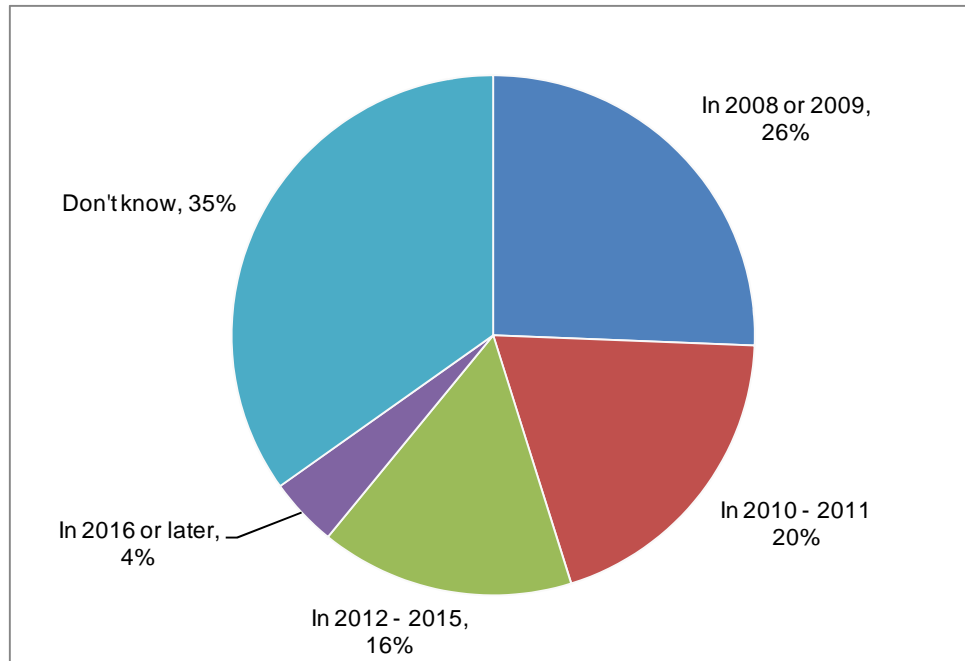
Interviews with witnesses indicated that the time in which the complete set of nine applications would be either replaced or properly tested against the market place would be of the order of ten to fifteen years. We attempted to quantify this in our second set of web surveys in which we asked about the likely date of such a replacement or market assessment for each system: this question was not asked in the survey which went to English vice-chancellors and principals.

The responses are tabulated below.

	In 2008 or 2009	In 2010 - 2011	In 2012 - 2015	In 2016 or later	Don't know
Finance	23%	26%	26%	0%	26%
Student Records	13%	26%	19%	6%	35%
Timetabling	31%	25%	13%	3%	28%
HR	28%	16%	13%	6%	38%
Payroll	28%	19%	16%	9%	28%
Estates	13%	10%	13%	3%	60%

	In 2008 or 2009	In 2010 - 2011	In 2012 - 2015	In 2016 or later	Don't know
CRM	28%	17%	10%	3%	41%
VLE	41%	22%	9%	0%	28%
Library	25%	16%	22%	6%	31%

The Don't knows are too great in relatively small response numbers to allow detailed analysis. However the totals for all nine systems give the following graph.



This suggests two things:

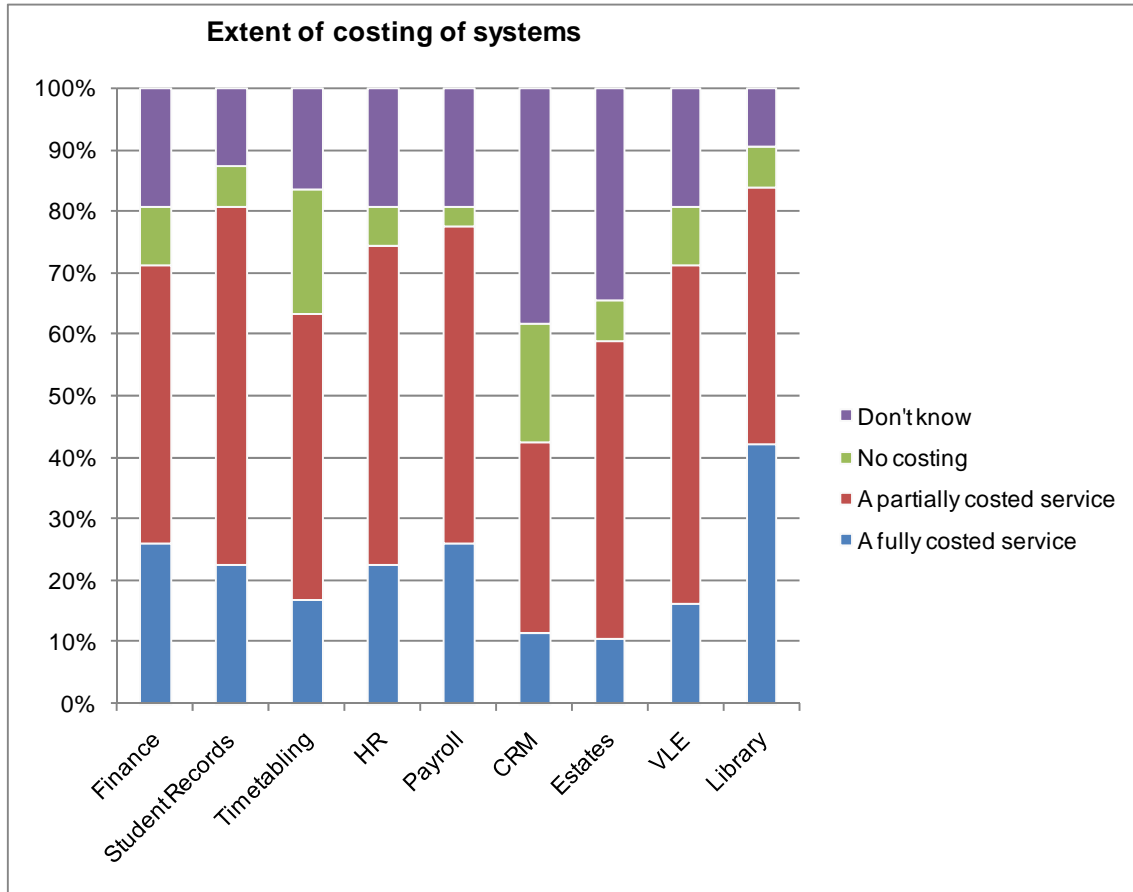
1. For 35% of systems, institutions have no strategic planned date for replacement or market testing. This may indicate that these institutions are relatively comfortable with their present position. The comprehensive functionality, stability and ever improving usability of package software mean that nowadays most systems meet most customers' needs. A consequence of this is that the cost of change is difficult to justify against benefits which are often only seen as marginal improvements. This leads to a low turnover of software.
2. 26% of systems are definitely due for replacement this year or next. It is probably that a small proportion of the Don't Knows relate to systems which actually will be replaced this year or next. The rate of 25% over two years implies a 100% replacement rate over 8 years, though of course some of this could be for the same systems.

7.6 Costing of systems

We asked in the second set of surveys about the extent to which costing of systems is known. We asked this because decisions about the merit or otherwise of using an alternative approach to service delivery can only properly be made with full knowledge of the costs. While we asked Principal about the costs as a whole, we asked in the other two surveys about each individual system.

A clear majority, 80%, of Vice-Chancellors and Principals replied Yes to the question “Does your institution have the detailed information required to allow you to identify the individual operating costs (recurrent and annualised capital costs) of your key administrative systems?”

We asked in the other two surveys about the extent of costing of each system. The graph here shows these responses.



This shows that full costing information is available for only about 20% of systems on average and that the Principals' views are appreciably more optimistic than these findings.

7.7 Systems integration

7.7.1 The background

The MUSIC study³ of systems integration, published in 2007 and discussed also in Report 1, concluded that the issue is a priority for higher and further education institutions, and that it represents a significant and growing challenge. It found five basic types of approach to the provision of administrative applications:

1. Integrated in-house software.
2. External systems from a limited number of vendors.

³ http://www.jisc.ac.uk/media/documents/programmes/jos/MUSIC_report.pdf

3. Best of breed software with ad hoc integration.
4. Best of breed software with central co-ordination.
5. Service Oriented Architecture (SOA) – where the applications communicate with each other using a standardised middleware layer running on a network.

It saw trajectories of evolution through time according to the decisions institutions made about the following three questions:

1. Make or buy applications?
2. Minimise the number of vendors (ERP) or select several “Best of Breed” items?
3. Accept ad hoc linkages between applications or specifically opt for items of data being held once and once only - a single point of truth (SPOT).

It concluded that the three dominant approaches to integration actually found are:

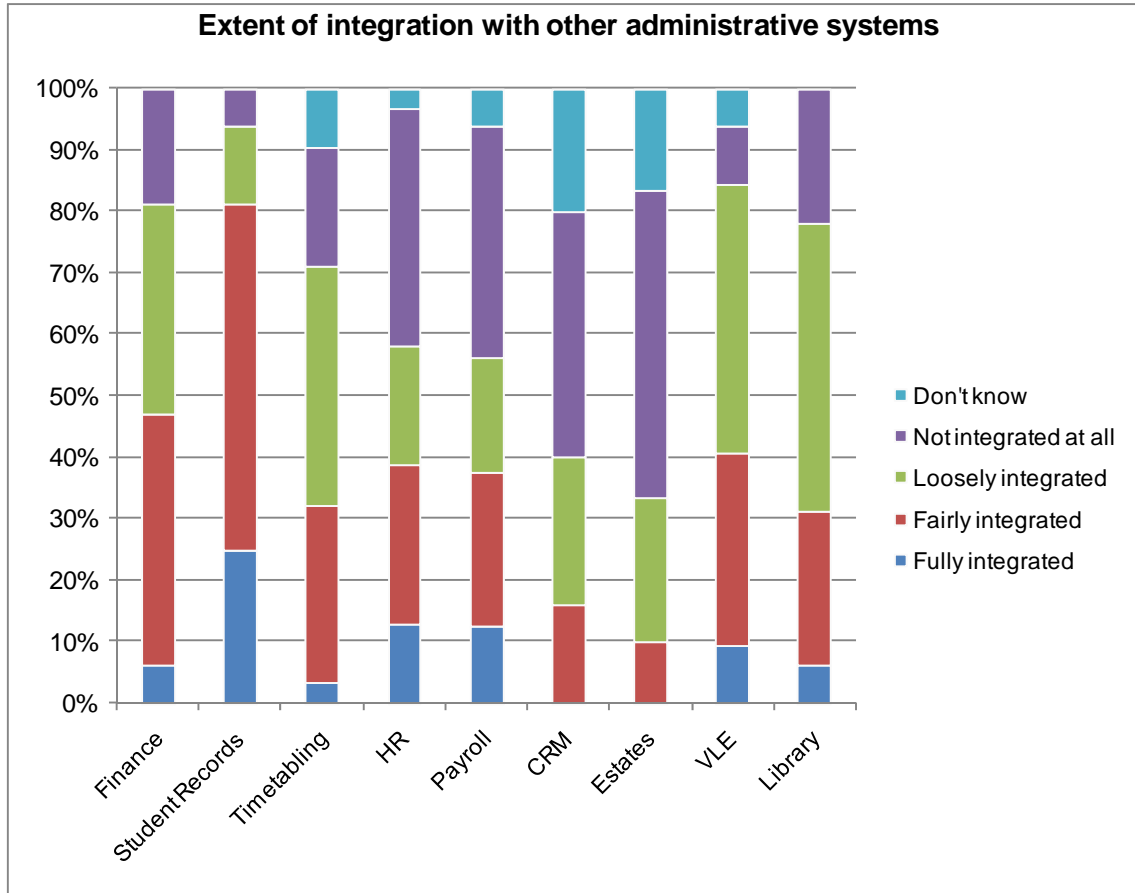
1. The ERP approach.
2. The best of breed approach accepting ad hoc integration.
3. The best of breed approach attempting SPOT.

From their sample, the study concluded that the second approach was most common, with a number of those institutions moving towards the third. The SOA approach was felt to be new and emergent. The study also noted that numbers of larger institutions are seeking to make much stronger external linkages in their main business areas including spin-off companies, research collaborators and overseas institutions. The study concluded that the SOA had particular appeal as an inherently more flexible vehicle for the support of such collaborative ventures. The study went on to say

“Taken together, the interest in SOA and shared services suggest the decomposition of the current, internally focused systems integration challenge and the emergence of a new set of issues concerned with standardisation and the sharing of data and services between institutions. These pressures are creating demands for new systems architectures. Current architectures are generally ‘Enterprise’ architectures based on a simple identification of ‘the enterprise’ as ‘the institution’. The new environment which further and higher education is moving towards needs to be able to envisage, and support, ‘enterprise’ at a range of scales (multi-institutional partnerships, discipline based networks, overseas alliances, links with schools, etc.). This represents a new stage in the systems integration challenge.”

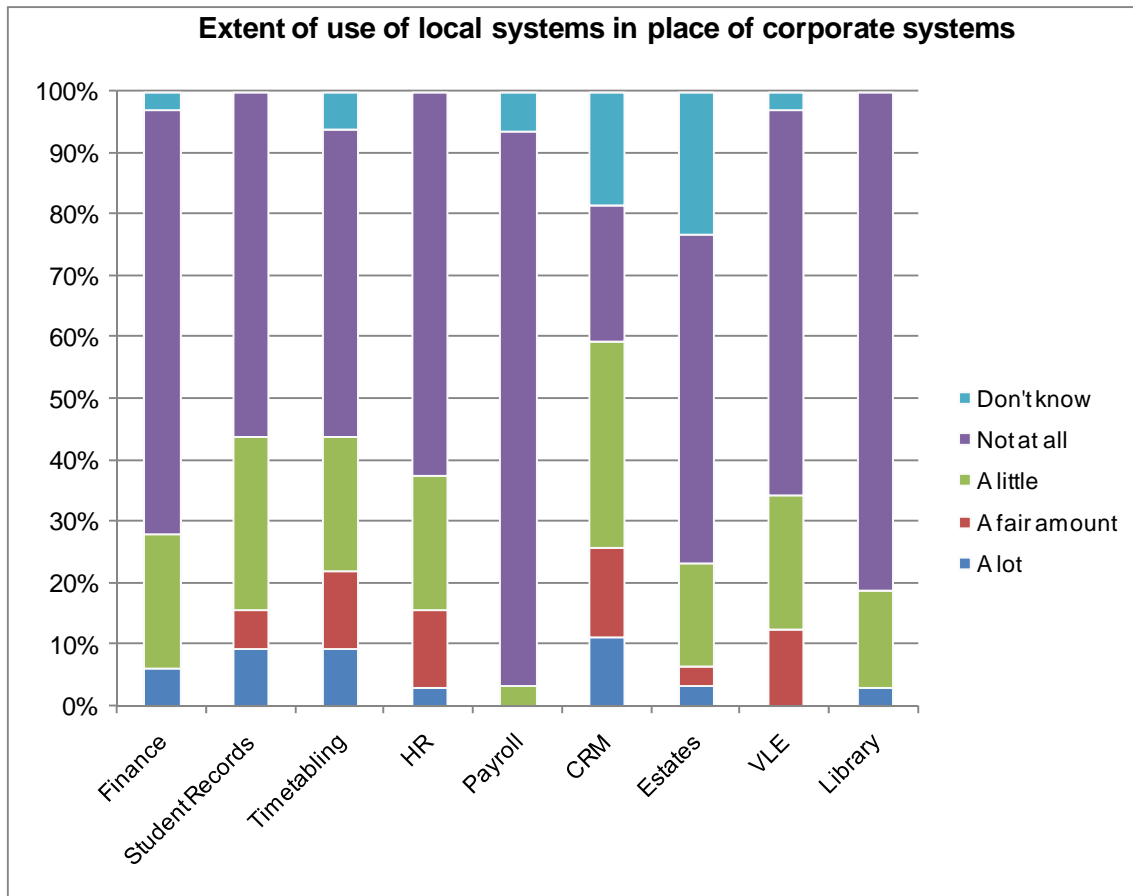
7.7.2 Extent of Integration

We asked about the degree to which each of the systems under consideration was integrated with other administrative systems: this question was not asked in the survey which went to English Vice-Chancellors and Principals. This chart shows the results.



Clearly Finance, Student Records, VLE and Library Management systems are the most integrated, while Estates and CRM systems stand out as being poorly integrated.

We also asked about the extent to which local systems are in use in place of the corporate systems: this question was not asked in the survey which went to English vice-chancellors and principals. The following graph shows the results.



Here we see that in over a third of institutions, local systems are in use to some extent for Student Records, Timetabling, HR, CRM and VLE. The largest proportion of Don't know replies were for CRM and Estates systems.

The extent of use of local systems raises issues of auditability for legislation such as Freedom of Information and Data Protection. It also suggests that processes may be in use, specific to individual parts of the institution, which run contrary to ordained practice within the institutions.