

Interim Regulatory Partnership Group: Project B

**Redesigning the higher education
data and information landscape**

A Pathway to Reform

June 2012

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Executive Summary

Introduction

This is the feasibility study report from the 'Redesigning the higher education data and information landscape' project (the Project) commissioned by the Interim Regulatory Partnership Group (IRPG) to inform the developments that will enable the implementation of new funding arrangements and a new regulatory framework for Higher Education (HE) in England.

The work of the Project highlighted a commonly held concern about the number of collections of related, but differently defined data by a wide range of bodies.

This report sets out a vision that, in the medium term, HE providers and Agencies will collectively govern the information landscape to the benefit of information providers and users.

The main recommendation in the report is for the key stakeholders to establish a collective oversight of the information landscape to achieve a more efficient and effective system of governance. This would enable a programme of work, using shared expertise and building on the key strengths identified in the sector, to create a more coherent set of arrangements for the collection, sharing and dissemination of data and information. This would require each of the organisations involved to make a real commitment to work collaboratively and openly on issues involving data and information.

The Project has had meaningful engagement with at least 350 individuals representing over 150 different organisations who have a stake in the information landscape. This level of engagement gives rise to considerable confidence in the findings of the Project and the proposals made.

The Project Team is deeply indebted to all those people and organisations who gave so willingly and enthusiastically of their time and expertise to participate in the Project.

The Current Landscape

The aims of the Project stem primarily from sections 6.21 and 6.22 of the government's White Paper '*Students at the Heart of the System*' (BIS 2011) which calls upon the Higher Education Statistics Agency (HESA), the Higher Education Funding Council for England (HEFCE) and the Higher Education Better Regulation Group (HEBRG), in consultation with the Information Standards Board (ISB) and Skills Funding Agency (SFA), to seek ways of reducing the data collection burden imposed on HE Providers. It also anticipates that improvements in the management of the information landscape will improve the timeliness and quality of data for those that need it. In particular the White Paper focuses on the information needs of students and recognises the need to publish high quality and accessible information.

The related project 'Mapping the Higher Education Funding and Regulatory System in England' (IRPG 2012) noted that:

- the HE funding and regulatory landscape is a complex one;
- the landscape has evolved over a long period of time;
- it is likely that all or most of the main regulatory functions will continue to be required in any new system.

The project also made three specific observations about data and information:

- multiple uncoordinated reporting requirements by different players in the system place a substantial administrative burden on HE Providers;
- gaps in effective information sharing between sector bodies places an unnecessary reporting burden on HE Providers and can impede effective working between regulatory bodies;
- the lack of a single clear current source of information about all HE Providers and the regulation to which they are subject means that there is no holistic view of the system – creating the potential for gaps in regulation.

The same report also pointed out that:

- dialogue, collaboration and an atmosphere of ‘consensual regulation’ are strengths within the sector that will support a collective approach to improving the information landscape.

Taking note of that work and much else that has gone before, this Project identifies the features of the perceived burden of information and data collection within the sector and explores the potential benefits to the sector of a more coherent information landscape created by harnessing the strengths identified in the current environment. This builds upon the conclusions of earlier work including the 2009 PA Consulting report *‘Positive accountability’*.

This project also observes that some HE Providers still struggle to provide timely and accurate data and notes that the new requirement for data to support the Key Information Set (KIS) has identified issues of data management within some HE Providers.

Looking to the Future

Co-regulation is at the heart of the HE regulatory process. The Project consultation highlighted an aspiration to deliver a more coherent information landscape. Thus the establishment of an authoritative shared governance framework to coordinate information requirements and access amongst stakeholders and the sharing of expertise on data management and information standards is the basis of the Project’s proposals. This report explores a model for this. Behind the model is the principle that, while there is no single body that will ever actually ‘own’ the data and information landscape, it will be possible for the key stakeholders to develop a mechanism to understand and effectively manage that landscape. It is not anticipated that this work will interfere with the autonomy of business processes operating within HE Agencies or HE Providers.

Following early consultation with key stakeholders and some scenario planning work the Project considered a range of possibilities for the future:

1. Do nothing.
2. Establish a single collection agency to act on behalf of all stakeholders in managing the information landscape.
3. Extend the remit of an existing agency to encompass responsibility for managing the information landscape.
4. Harness the collaborative culture that already exists to improve efficiency.

‘It is important to concentrate on the boundary points not internal issues.’

(Stakeholder interview)

Option 1 was rejected as the growing rate of change impacting the sector and complexity of the landscape will demand improvements in collective capability to respond to new and changing information needs. This project was set up to address specific issues through a redesign of the data and information landscape so this option is not a feasible way forward.

Option 2 was rejected as such an approach is unlikely to be sufficiently flexible and responsive to meet the needs of the sector; it would also create the most upheaval and cost. It would impinge significantly on the core operational processes of a number of organisations and therefore create risks and issues of accountability.

Option 3 was rejected as, although more straightforward and less costly to implement than option 2, it would suffer many of the same drawbacks (including a possible need for legislative change) and would not adequately reflect the partnership between Agencies and with HE Providers needed to deliver real benefit.

Option 4 was identified as the most likely to gain traction amongst stakeholders. This option builds upon existing successful experience of collaboration and sharing of expertise across the sector and so may be expected to deliver benefits for relatively little additional resource and with manageable risk, recognising that successful implementation of this option will depend on firm commitment from all stakeholders.

As a result of examination of these options a consensus emerged during the consultation stages of the Project to develop a model to take Option 4 forward. The report therefore focuses on the opportunities offered by this option.

It was not within the scope of the Project to develop a detailed business case, with costs and benefits evaluated, or propose an implementation plan; that will be for a further phase of the programme.

Next Steps

The main recommendation in the report is for the key stakeholders to establish a collective oversight of the information landscape to achieve a more efficient and effective system of governance.

To achieve this IRPG should task some of the key stakeholders in information flows (e.g. HESA, QAA, SLC, UCAS, AoC, Guild HE and UUK) to develop and propose the structure, resourcing and operation of a governance model for the data and information landscape.

This would enable a programme of work, using shared expertise, to create a more coherent set of arrangements for the collection, sharing and dissemination of data. These arrangements would include the identification, development and adoption of data and information standards and the review and scrutiny of data requests.

In order to fulfil this role there would need to be a series of enabling projects, including:

- Develop a calendar and inventory of data collections across the year as a first step towards streamlining collections and improving the timeliness of information
- Develop a data model, lexicon and thesaurus for the sector - this would be a purely administrative/reporting model that does not seek to impinge on academic practice or to impact the way business processes are carried out. It may be that this would be a series of linked models using a consistent approach and a common data language.

The establishment of this collective oversight of the information landscape would require each of the organisations involved to make a real commitment to work collaboratively and openly on issues involving data and information.

Potential Benefits

The potential benefits are:

Reducing Duplication (Burden)

- reduces collection effort through minimising duplication;
- reduces the overhead of data transformation;
- facilitates re-use/linking and hence reduction in the overall number of returns;
- creates the opportunity for closer mapping between HE Provider and regulatory data exchange and business cycles;
- increases the opportunity for automation of data collection;
- reduced resource requirements for preparation of data offer greater opportunities to add value through analysis.

Improving Quality

- better alignment with business cycles means data is checked and validated by the time it is needed;
- standards limit the opportunity for ambiguity and misunderstanding;
- clear data models and increased automation reduces errors.

Increased Accessibility

- use of *de facto* standards will make exchange of data simpler;
- data presented in standard formats can more easily be recombined, reused and repurposed;
- standardised data in standardised formats more closely modelled within business processes can be accessed more readily and thus be more timely for a range of uses.

These benefits and aims, through making data more readily available and easier to comprehend, will in turn facilitate improvements to the student experience, accountability and transparency in a number of ways:

- by reducing the burden we create the opportunity for institutions to make more use of their data to improve their own performance and presentation;
- through improving quality we increase the trust that people place in the data and therefore the confidence in the decisions that are informed by such data;
- by making quality data more accessible we enhance the reputation of HE overall.

Looked at from another perspective the benefits to each stakeholder group are as follows:

Benefits to HE Agencies

- a more coherent landscape provides flexibility and capability to meet new/unforeseen requirements;
- easier recombination and repurposing of data allows a wider range of analysis that helps better policy making through better information;
- reduction in effort on data collection makes more effort available for processing thus increasing opportunities for added value;
- improved quality and timeliness of data implies greater confidence in policy and funding decisions;
- increased information sharing could assist early detection of issues in an increasingly diverse landscape;
- there is no interference with business activities and processes.

Benefits to HE Providers

- coherent definitions of data used for internal and external reporting and KPIs helps HE Providers to further improve management of performance;
- efficiency savings can be realised from reduced load in remapping/translating data for different but related requirements;
- better alignment with the HE Provider business cycle minimises peaks in workload at certain times;
- consistent data permits accurate benchmarking;
- consistent data facilitates partnership working.

Benefits to Students and the wider public

- coherent and consistent information helps learners navigate an increasingly diverse landscape;
- facilitates improved information, advice and guidance (IAG) that goes beyond data to deliver good contextual advice to assist student choice;
- students who make better informed choices are more likely to stay and succeed;
- simpler, more coherent presentation can enable a wider variety of stakeholders (including lifelong learners and employers/business) to understand what HE might offer to them;
- better information/greater transparency implies greater confidence that engagement with HE Providers will provide value for money or other investment e.g. time and effort.

These benefits may be expected in due course to shift the balance from the perception of an unavoidable burden to a drive for investment in an information landscape that enhances the entire system of higher education.

1 Introduction

1.1 Background, Aims and Scope

The Interim Regulatory Partnership Group (IRPG) was established in 2011 to consider and advise on the development of new regulatory arrangements for the English HE system as outlined in the White Paper *'Students at the Heart of the System'* (BIS 2011). The IRPG is a non-statutory body that includes the Chief Executives of the main funding and regulatory bodies in higher education and other agencies involved in regulation, plus the Chief Executives of HE sector representative bodies, the National Union of Students (NUS) and the Universities and Colleges Admissions Service (UCAS).

IRPG commissioned two projects to inform the developments that would enable the implementation of the new funding arrangements and regulatory framework:

- Project A: Mapping the Higher Education funding and regulatory system in England
- Project B: Redesigning the Higher Education data and information landscape

The first project delivered its report to IRPG in March 2012 and this is the report of the second project. The two reports are intended to be read in tandem with one another: there is a considerable amount of background information on the roles and operation of the main funding and regulatory bodies in the *'Mapping the Higher Education funding and regulatory system in England'* report and this material is not repeated in the current document.

The aims of the Project are set out by the Department of Business, Innovation and Skills (BIS 2011) in paragraph 6.22 of the White Paper:

'We will ask HEFCE, HESA and HEBRG, in collaboration with the Information Standards Board for education and skills (ISB), to redesign the information landscape for higher education in order to arrive at a new system that meets the needs of a wider group of users; reduces the duplication that currently exists, and results in timelier and more relevant data.'

Good information and data are important in enabling student choice, performance assessment and demonstrating accountability: an effective information landscape provides broad confidence in higher education.

The scope of the Project was to:

- deliver a high-level feasibility study (this report);
- identify options for change;
- deliver an impact analysis to inform further work.

The Project was undertaken to a tight timescale therefore, although the wider landscape was considered wherever possible, priority was given to considering data and information flows relating to students and their programmes of study as offering the greatest potential to fulfil the objectives of the Project within the required timescale. The Project looked at HE provision across all of the recognised provider types (universities, HE in FE provision and private providers). The report also considered the UK dimension to what is essentially an English-led initiative. The inclusion of an impact analysis in the scope was predicated on the assumption that corresponding regulatory changes would have been announced: these changes are still being discussed so the Project has only been able to look at benefits in generic terms.

1.2 Project Approach

The Project commenced set up activities in December 2011 and formally began when approval of the core documentation and outline plan was given at a meeting of its Steering Group on 11 January 2012. The need to have the final report drafted and approved for submission to IRPG on 15th June 2012 meant that Project activities were compressed into a period of approximately 4.5 months.

1.2.1 Governance and Management

IRPG delegated the governance of the Project to a Steering Group chaired by Steve Egan Deputy Chief Executive of HEFCE (see Appendix 1 for a full list of members). The day-to-day management of the Project was delegated to HESA.

1.2.2 Stakeholder Engagement

The Project had meaningful engagement with at least 350 individuals representing over 150 different organisations through interviews, workshops, conferences and a webinar. Organisations represented included a wide range of HE Providers as well as regulatory and related bodies; for the latter we have used the term 'HE Agencies' to encapsulate this diverse group of organisations in the remainder of this report. Individuals in provider organisations ranged from planners and financial managers through student administrators and Registrars to technical staff and students. This level of engagement gives rise to considerable confidence in the findings of the Project and the fact that the recommendations meet with widespread support. Further details of the stakeholder engagement can be found in Appendix 2.

1.2.3 Project Principles

Key to working with such a large and diverse group of stakeholders is establishing commitment to a common purpose and finding the areas of shared understanding and common ground. One of the first activities of the Project was to establish a set of principles that could be owned and agreed by all stakeholders. A set of principles was agreed by the Steering Group and subsequently refined throughout the lifetime of the Project.

The principles are as follows:

- The landscape should be designed around a holistic and learner-centred view of higher education.
- Data collection should relate specifically to the core activities of delivering higher education.
- The costs associated with collecting and maintaining the information should be proportionate to the benefits from having this information.
- HE Agencies should work together to apply consistent definitions and standards in order to streamline the amount of information collected.
- Data used for regulatory purposes should be collected once and secure access to it be made available to those with a legitimate right to use the information.
- Data used for regulatory purposes should be managed in such a way as to ensure quality and consistency of the information, guarantee its provenance and limit the possibility for misleading use of the data.
- The cycle of data collection should be timed so that data is accurate at the point of need.
- Aggregated data should be openly available unless there is a compelling reason to restrict access.
- Personal data should only be available to those with a legitimate need for the information.

1.2.4 UK Dimension

Although the Project was set up in support of changes to the English funding and regulatory system, many of the HE Agencies (e.g. HESA, QAA, SLC, UCAS) operate on a UK-wide basis therefore the Project needed to keep the UK picture in mind throughout. The Project Team has interviewed representatives from funders and other relevant organisations in each of the devolved administrations and representatives from HE Providers in Scotland, Wales and Northern Ireland have participated in Project activities.

The response in all cases has been to agree that this vision has the potential to deliver considerable benefit across the UK and that its value will be enhanced if the recommendations can be implemented UK-wide. HE Providers, in particular, felt strongly that UK HE reputation overseas is very substantially dependent on being able to present a coherent picture of a high quality system backed up by evidence from a coherent, quality-assured data source. Whilst it was felt that there is a core set of data that can form the basis for a 'quadrilateral' approach, the increasing divergence of public policy across the four nations was however noted as a factor that cannot help but add complexity to the future landscape.

2 The Current Information Landscape

2.1 Issues and Challenges

The table below reflects the findings from the Project's engagement with stakeholders and highlights issues to be addressed. The Project found that some issues could be addressed by HE Providers, some need co-ordinated action amongst HE Agencies and some needed co-operation between the these two groups.

Issues for HE Agencies:

- Burden for HE Providers is generated both through multiple, uncoordinated external demands and internal data management issues - uncoordinated requests do little to encourage HE Providers to be coordinated in their responses (Consistent with Project A findings).
- Current administrative models used by the data collectors are based on outdated concepts related to 'typical' patterns/modes of study.
- There are particular issues with subjects such as medicine and teacher training where HE Providers are directly accountable to multiple funders.
- Professional Statutory and Regulatory Bodies (PSRBs) account for a significant percentage of external reporting and previous studies have been unable to suggest a clear mechanism for addressing this element of burden.
- The need to interact with two different regulatory regimes causes particular burden for HE in FE Providers and HE with FE provision.

Issues for HE Providers:

- Few HE Providers have a complete picture of their data and reporting requirements.
- The experience of the KIS suggests that there remain some weaknesses in data management within HE Providers
- Many HE Providers see accountability returns as a route to 'reward': 'The burden will never go away while the outcomes matter'.
- Many HE Providers have limited resources to respond to data demands.
- The performance of HE Providers in meeting demands for data and information is variable.

Issues for Co-ordination

- Inconsistency of definitions, duplication of data requested and grouping of returns at particular times of year are significant issues the HE Agencies need to address collaboratively with HE Providers.
- FOI requests appear to be placing increasingly onerous demands on HE Providers.
- Gaps in information sharing can impede effective working between HE Agencies and adds unnecessary burden to HE providers (Consistent with Project A findings).
- There is no holistic view of the system (Consistent with Project A findings).

2.2 Key Strengths

The system of higher education in the UK has robust assurance measures backed up by a body of evidence that is subject to rigorous scrutiny. During their engagements with the Project, senior managers in HE Provider organisations were at pains to point out that the HESA dataset provides an international benchmark against which many other nations fall short and this echoes the comment from a study on International Benchmarking referenced below.

The sector has a long tradition of collaboration and co-regulation. There exists a collective will for organisations to work together for the benefit of the sector and the wider public good. This provides a firm foundation for achieving consensus on improving information sharing and streamlining by means of a common data language.

There are a number of trusted agents owned by the sector, such as HESA and UCAS, who have considerable expertise in the field of data and information management and who have established a core of well-known *de facto* standard data sets.

HESA, UCAS and the SLC publish a range of statistics about higher education which inform national policy. Some of those statistics also inform the wider public, providing assurance about the quality and efficiency of higher education as well as giving prospective students information that will help them choose what and where to study.

Information for students which has been made available through developments such as UniStats and the Key Information Set (KIS) forms a significant part of HEFCE's student-focused information provision. Provision of course information is seen as a key part of UCAS' mission.

UCAS and HESA data (and increasingly data from SLC on income flow) is used by institutions as an essential part of their corporate planning and monitoring. The recent Universities UK Task Group report '*Efficiency and effectiveness in HE*' (UUK 2011) has highlighted the value of benchmarking as a driver of efficient operation in the higher education sector and the broader benefits of benchmarking were highlighted in the recent HEFCE-funded HESA project '*Realising business benefits through the use of benchmarking*'.

The benchmarking project commissioned a report from PA Consulting on '*International benchmarking*' (PA Consulting Group 2011) which underlined the value to the UK and to the sector in collecting and publishing timely data. The report noted that:

- HESA is one of relatively few national agencies collecting and publishing timely and reliable national data on institutional performance.
- In the UK we are accustomed to having recent data about our HE institutions but this is not universally the case.

These features of the existing landscape are all assets that can be built upon to address the challenges ahead.

Collaboration often takes place in a relatively *ad hoc* fashion amongst organisations which have a mature relationship and clear understanding of one another's business. It will be necessary to scale up this good practice across a landscape where there are relatively new and changing HE Agencies, a new and diverse group of HE Providers and increasingly varied models for the delivery of learning.

'There is a real respect for data across the institution now. It is seen as a management tool not just a compliance output.'

(HE Provider)

It will be a challenge to ensure that greater sharing of data does not have unintended consequences in terms of distorting either HE Provider behaviour or student choice due to difficulties in interpreting the information in a complex environment.

There are however reasons to think that the proposals stemming from this Project are well placed to draw on the strengths in order to address the challenges:

- The information landscape has grown organically over time, with each organisation viewing the sector through its own particular lens, and this is the first time there has been a root and branch review of the entire picture.
- Progress has been made through the work of HEBRG and others, that bring some of the bodies together but this is the first time that such an extensive set of stakeholders have been brought together to develop a shared understanding of the issues and ways forward.
- Previous efforts at streamlining and reducing burden have stemmed from a focus on regulation and accountability and are therefore mired in the complexities of the legal framework whereas this Project is looking at the issue from the perspective of data and information flows within an established or changing legal framework.
- Despite some excellent work that has gone on in relation to data standards, that agenda has so far remained firmly rooted in the technical arena and the benefits have not been effectively communicated to senior decision and policy makers.

2.3 Nature of the Burden

Paragraph 6.22 of the White Paper specifically charged the Project to look at reducing the *duplication* that currently exists in the data and information landscape. In early conversations with stakeholders (of all types) ambitions for the project were most frequently expressed in terms of '*reducing the burden*' on HE providers. The project team therefore thought it important to undertake some analysis on the precise nature of what constitutes the 'burden'. The project team referred to a number of earlier studies as well as exploring the issue in engagements with HE Agencies and HE Providers.

The issue of HE regulation and reporting burden has been high on the agenda for much of the past decade. The Higher Education Better Regulation Group (HEBRG) was established in 2010 as a successor to the Higher Education Regulation Review Group (HERRG) which itself came out of work undertaken by the Better Regulation Task Force. HEBRG is a UK-wide group that is committed to promoting efficient and transparent approaches to regulation and, through the publication of the Principles for Better Regulation of HE in the UK, has made a significant contribution to the co-operative environment that this project now aims to build upon.

The HE funding and regulatory landscape is a complex one. The landscape has evolved over a long period of time and needs to deal with considerable diversity in terms of activities, provider type and the student body. The '*Mapping the Higher Education funding and regulatory system in England*' project report

'A lot of this is empty talk while we don't have a clear model of 'the burden'. We need more realistic thinking about what makes this stuff burdensome.' (Project event)

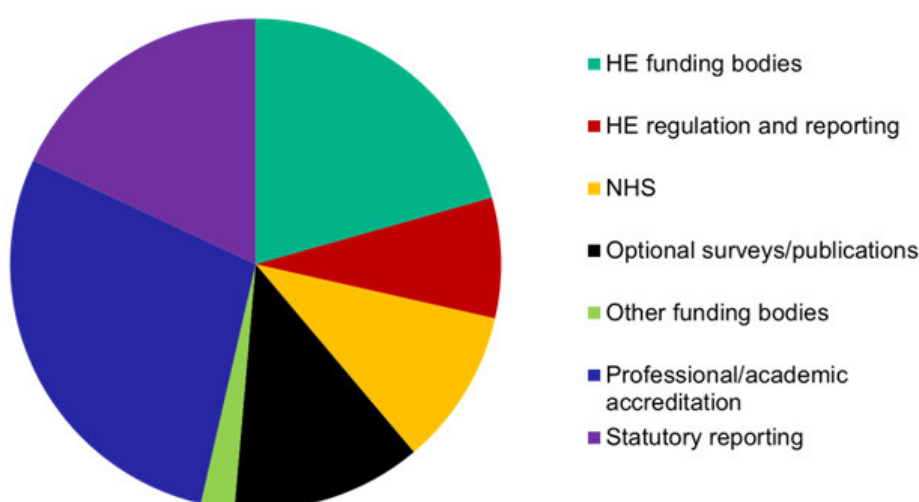
'There is a lot of scope for things to get worse! The changes in the regulatory framework e.g. with both SLC and HEFCE as major funding bodies, could in fact make matters worse and spawn even more data relationships.' (Project event)

'The sector requires a reduced burden not a different burden.' (Project event)

(IRPG 2012) notes '*Complexity itself is not the issue*' and goes on to make the point that the current system is not 'broken'. This project is operating on the assumption that all or most of the main regulatory functions will continue to be required in any new system thus limiting the extent to which the landscape can be simplified. Analysis does however reveal considerable opportunity to streamline some of the data relationships.

2.3.1 HE Regulation and Reporting

Although much of the work of the Project was focused on student-related data, a key source of evidence for this study was a 2010 survey conducted jointly by the Association of Heads of University Administration (AHUA), HESA and the Universities and Colleges Information Systems Association (UCISA) on behalf of HEBRG which aimed to establish the totality of external reporting undertaken by HE institutions throughout the UK. The survey identified some 550 separate external reporting requirements that can be grouped into seven main categories.



Relatively few external reporting requirements have universal applicability; this reflects the different funding and legal requirements in the different parts of the UK and also highlights the amount of external reporting that is linked to specific subjects or types of activity undertaken by institutions. While the obvious/high profile external HE reporting (e.g. HESA, funding councils etc.) was consistently described there was a lot of reporting that was not consistently identified by institutions. A conclusion drawn from this work was that few, if any, institutions have a complete single view of their external reporting. This conclusion was explored further during the course of the Project both at workshops and with the Academic Registrars Council (ARC) and appears to be valid.

A report for HEFCE '*Positive Accountability*' (PA Consulting Group 2009) suggested a set of criteria for public interest assurance requirements that are closely aligned with the principles developed as part of this Project. The report states that requirements should be:

- justified in terms of tangible benefits to specific public interests;
- clearly articulated and understood by all parties;
- proportionate to the scale of and/or risks to public interests;
- aligned with institutional governance and management systems;
- co-ordinated with similar requirements from other stakeholders;
- designed to avoid unintended costs or distortions for institutions.

It went on to suggest that requirements that fail one or more of these tests may be considered to represent at least an element of reducible burden, which should be addressed.

The report cited above was one of a series of studies commissioned by HEFCE (PA Consulting Group 2000, 2004, 2009) and the Project has compared its findings with those published earlier. The findings of both studies are virtually identical in terms of the issues highlighted.

The findings of the Project also mirror very closely those of a study on *'Identifying and quantifying the provider data burden'* commissioned by the Information Authority and covering the Further Education (FE) and skills sector (The Information Authority 2008).

The burden on institutions, and good practice in reduction of the perceived burden, was examined in the 2008 report by PriceWaterhouseCoopers *'Data quality and efficiency in Higher Education'* for the UK Funding Councils and the Training and Development Agency for Schools (TDA).

Further detail on the specific issues for HE Providers can be found in the summaries of workshop outcomes on the Project website particularly the workshops at Greenwich, Sheffield and Birmingham. Discussion of HE Providers' early experiences of delivering the Key Information Set (KIS) highlighted many data management issues within HE Provider organisations. KIS will be the subject of a forthcoming evaluation exercise by HEFCE.

The actual profile of the burden will vary considerably across HE Providers and depends on a number of factors. For example, the range of courses offered will have an effect on the number of relationships with accrediting bodies (statutory or otherwise) and the quality of the HE Provider's own data management capability will impact on the effort involved in responding to requirements.

It is clear that the issues are neither new nor confined to the HE sector only. Significant progress has been made in reducing the burden in HE but the magnitude of the changes to the landscape means that the time is right to take an overview. We have seen that HE Providers who also offer FE and FE Providers who offer HE suffer particular difficulties from the need to interact with two regulatory regimes. There may also be lessons to be learned from the data standardisation work that has already taken place in the FE sector, and current cooperation should be built on.

'The burden arises from the fact that the landscape was never designed and engineered as a whole. Individual stakeholders do what best meets their own needs.' (Stakeholder interview)

'The degree to which we need individual level data has increased enormously and the system begins to sink under its complexity. The expectation has gone from data that is valid in statistical terms to data that is correct when examined under a microscope.' (Stakeholder interview)

'There is pressure from institutions for a greater level of detail because they always tend to think that approximations work to their disadvantage.' (Stakeholder interview)

'Institutional MIS is often not fit for purpose and people don't know how to use it to get the best out of it. The landscape currently does nothing to help and by not getting its own house in order just provides excuses why it's not worth institutions even bothering.' (Stakeholder interview)

'When bodies such as SLC and HESA use different definitions it is difficult to ensure parity of the student experience.' (Project event)

2.3.2 Professional Statutory and Regulatory Bodies (PSRBs)

A significant amount of reporting by HE Providers relates to the requirements of professional and statutory regulatory bodies (PSRBs). As noted in the PA Consulting report (2009) *'Positive Accountability'* HE Providers identify that a constructive relationship with PSRBs brings significant benefits in terms of professional recognition, quality of programmes and student recruitment, while much of the data collected by PSRBs is qualitative and connected with quality assurance (programme specifications, external examiners reports etc) and, in some cases, student data.

HEBRG has recently undertaken an analysis of the relationship between PSRBs and HE Providers (HEBRG 2011) and developed an online database of PSRBs engaging with HEPs, which includes information on their self-reported activities, relevant subject areas and geographical remit. This database led to the more rigorous assessment and updating process by the KIS professional accreditation expert panel (HEBRG, HEFCE, HESA and QAA) and thus to the list of accrediting bodies for the KIS, hosted on the HESA website; this currently covers just over 130 such bodies, whilst the report identifies that there may be in excess of 300. The PSRBs are difficult to quantify because the term is an umbrella term covering a diverse set of bodies that perform a range of regulatory, representative and promotional functions in the HE sector.

HEBRG suggests that the number of HE Providers who maintain a central, publicly available register of their relationships with PSRBs may be as low as a third of the sector. The Project certainly found that the overall level of resource that went into meeting PSRB requirements was an unknown for many institutions and indeed the need to produce the KIS had been the impetus for some to develop a register of PSRB relationships.

The Project carried out a brief survey of PSRB requirements through the Quality Assurance Agency (QAA) PSRB Forum building on the recommendations of HEBRG below. The Project's discussions with HE Providers and with PSRBs indicates that much of the data collected by PSRBs is sent directly by course or programme teams and is not part of any kind of 'master data set' within the HE Provider and there are difficulties in deriving any kind of consistent match between this information and the major HE statutory returns such as HESA.

HEBRG noted that it is difficult to define PSRB data collection strictly as 'returns' as engagement, particularly in relation to accreditation, can take a variety of forms. It did however make a number of recommendations that are directly relevant to, and supported by, the work of this Project:

- There is an ongoing need for the HE sector and PSRBs to improve the consistency of the language and terminology used to define PSRBs' status, role and key activities. This will become more important with the sector's current focus on improving public information to enable better-informed student choice.
- Umbrella groups and inter-professional groupings of professional bodies and regulators have established channels for discussing areas of mutual interest and sharing good practice. Their expertise should be recognised and their work should be more widely disseminated.
- HEBRG should collaborate with the QAA, HESA, sector representatives, funding bodies and PSRBs to enhance engagement with PSRBs and maintain and update the HEBRG database of PSRBs as a working resource.
- HEBRG and HESA should undertake further analysis of the data from the university statutory and external returns survey to identify areas where greater alignment could be sought between PSRB requirements for data and the services offered by HESA.
- HEBRG should take forward work to secure the commitment of PSRBs to the new Principles of Better Regulation for Higher Education in the UK with the aim of increasing regulatory efficiency, both for HEPs and the PSRBs themselves.

The burden resulting from PSRB requirements has long been considered a 'tough nut to crack' not least due to the number and diversity of the bodies involved and the fact that their activities are not the responsibility of

any of the main HE regulators and the sector has not mobilised itself to speak with a single voice. 'The demands on institutions from these sources are substantial and probably growing, but they lie outside HEFCE's commitment to reducing the costs of those impositions that it can potentially influence.' (PA Consulting Group 2009)

'If the key bodies can agree a common data language then standards will acquire a momentum that others will have to follow.'

(Stakeholder interview)

The opportunities identified by the Project may however indicate that progress can be made. Consideration of the timing of data returns in the new landscape opens up the possibility that a core dataset used for a variety of regulatory purposes may also meet the needs of many PSRBs and the groundswell of support for the Project's proposals may create the necessary momentum for PSRBs to come on board. This is not to underestimate the challenge involved in convincing such a diverse and autonomous group of stakeholders of the benefits of greater standardisation. There is however a clear focus for this work in the QAA [PSRB Forum](#) and the response from QAA to the idea of using this forum as a vehicle to progress the issues has been positive.

2.3.3 Non-HE Regulation

HEBRG (2011b) has examined statutory reporting that is not specific to HE: this constitutes a broad spread including Companies House, pensions, local councils, equality, energy, Freedom of Information (FOI) and the regulation of specific controlled substances and scientific procedures. These areas fall outside the scope of the Project which is focused on HE specific requirements for reporting and data returns, but one of the HEBRG findings is worth noting.

HEBRG noted that compliance with FOI requirements is the (non-HE specific) regulatory requirement that causes HE Providers most concern. It cites an estimate by Universities UK (2011) that this costs the sector at least £10 million per annum. In discussions around the nature of burden at the workshops FOI requirements came up frequently as an increasing source of burden and there was a call for a central body to handle 'round robin' requests that cover the entire sector. This was suggested as a means of alleviating burden on individual HE Providers and also ensuring consistency of response.

2.3.4 HE in FE, FE in HE and Private Providers

The HE landscape may perhaps be better described as an 'ecosystem' when it comes to looking at types of provider. The diversity of university provision is matched by a long established, and equally varied, range of provision delivered through organisations whose main regulatory and reporting relationships are with FE Agencies. There are also a growing number of what are termed 'private providers' encompassing both 'for-profit' and 'not for profit' organisations and the declared aim of the English government is: '*We will make it easier for new providers to enter the sector*' (BIS White Paper '*Students at the Heart of the System*' Executive summary para 10).

The current landscape poses particular issues for providers of HE in FE and the Project website includes a summary of those issues from an English perspective. FE colleges who deliver HE provision directly funded by HEFCE have many of the same data and information relationships/demands as universities e.g. with UCAS, Student Loans Company (SLC), United Kingdom Borders Agency (UKBA), QAA and delivering KIS etc. Some FE colleges have a data relationship with one or many partner universities who validate their offering. FE colleges

who deliver franchised provision are in a situation where their (often multiple) university franchise partners act as data collectors and the demands of individual universities can vary greatly depending on factors such as the nature of the provision, the maturity of the partnership and, indeed, the capability of the university's own IT systems.

It follows that there are some FE colleges undertaking both directly funded and franchised HE provision who, together with their FE reporting arrangements via the Individualised Learner Record (ILR) and the Data Service (which passes HE relevant data to HEFCE) have to meet broadly the same data and information requirements as universities and also report directly to a range of universities. It is unsurprising that the overhead of this activity is considerable in relation to the number of students involved.

Many of the private (sometimes referred to as 'alternative') providers are new to the sector and operate within a different regulatory framework to the universities and colleges. There is more information about these differences and their implications for information flows in the *'Mapping the Higher Education Funding and Regulatory System in England'* report (IRPG 2012). Their future data reporting requirements are yet fully to be determined, but some, in publishing a KIS for each course, as expected by QAA, are now interfacing directly with HESA.

3 Looking to the Future

3.1 Future Scenarios

To provide a suitable framework for the development of its proposals, the Project undertook a scenario planning exercise working with staff from the organisations represented on the Steering Committee and a range of other stakeholders. An overview of the exercise can be found at Appendix 5, but the outcome further emphasised the appetite amongst stakeholders for a collaborative approach to the improvement of the information landscape. The remainder of this section looks further at the practical opportunities for action.

Key Findings from workshops and interviews

Collaboration:

- The sector should build on its traditions of collaboration and co-regulation in order to manage the future landscape.
- There is a need for a mechanism to qualify on-going and new data collection requirements and ensure they are efficiently fulfilled avoiding duplication (a possible approach to this is suggested in section 4.2).
- Information should be shared more widely amongst HE Agencies to minimise collection load on HE Providers building on the use of HESA data for example.
- There is strong support for making aggregated data open and readily accessible.
- There is more limited support for making individual datasets available, mostly due to concerns around the management of personal and commercially sensitive data.

Standards:

- A more coherent approach to data standards and terminology must be the first step in developing an improved landscape, the work of HESA and UCAS around the Joint Academic Coding System (JACS) provides a useful example.
- There is strong support for a more coherent approach to standards from the statutory bodies, HE Providers and system suppliers.
- There are already many bodies defining standards and the requirement for the sector is to select from those currently available rather than create new standards.
- A pragmatic approach based around converging on *de facto* standards could be implemented given the will to cooperate amongst key stakeholders.
- The potential for the Unique Learner Number (ULN) as a universal life time learner identifier analogous to the NHS number should be further explored.

Technology:

- Convergence on data standards is a pre-requisite for any attempt to harmonise the *technology* landscape.
- Suitable technologies to facilitate the creation of a single interface for two-way data exchange already exist and are proven to be reliable.

3.2 Collaboration

There are a number of factors to indicate that collaborative change is achievable:

- the sector recognises the need as evidenced by the attendees at workshops and interviews with university Registrars and other senior managers;
- there is political will as evidenced by the White Paper *'Students at the Heart of the System'*;
- market factors are causing a change in the emphasis placed on government regulation and finance;
- suitable technology is easily available.

Any model for partnership working needs to recognise the differing data and information needs of different types of organisation in the 'HE ecosystem' in particular it must:

- align to the business processes and operational cycles of the HE Providers themselves;
- support the transactional relationships between HE Providers and those organisations that directly support business operations e.g. application to HE and managing student finance;
- facilitate the linking of data to provide better analysis to support decision and policy making.

All of these functions need to be supported if we are to deliver an ecosystem rather than simply attempt to join up silos. The outcomes of Mapping the Higher Education funding and regulatory system in England (IRPG 2012) were reported at a conference in May 2012 where Sir Alan Langlands, Chief Executive of HEFCE, noted that many of the most significant issues the HE sector has to tackle exist at the boundaries of the responsibilities between different agencies such as risk-based assurance, widening access: *'We need to get very good at crossing boundaries rather than controlling boundaries'* (Langlands keynote address to IRPG conference 2012). His words echo advice given by the team developing the model and the standards for joining up the data landscape in the NHS (DoH Connecting for Health).

There are various models for establishing a framework that can deliver this kind of co-operation. Through the consultations carried out by this Project, one model is believed by the Project Team and consultees to have the greatest chance of success:

Identify and bring together the key players to exercise authority to challenge current and new demands for information so as to ensure that they can be satisfied efficiently, ideally using information already available; and to co-ordinate the development of coherent standards for data and information.

To take this forward the following actions would be needed:

- establish governance of the information landscape as a shared responsibility;
- draw on expertise from the IRPG member organisations, the sector and others as required for delivery of specific elements of this vision;
- engage with the devolved administrations to address the UK aspect of the work;
- establish interfaces with other relevant bodies (e.g. Information Authority, Data Service, ISB for Education and Childrens' Services, ISB for Health and Social Care etc.).

The sector is justifiably proud of its ability to deal with the complexity inherent in its business through a system of co-regulation built upon co-operation between agencies and peer review between HE Providers. The changes facing the sector make it essential to build on these foundations in order to create a new information landscape that appears coherent to the potential beneficiaries of the higher education system.

There is every reason to believe that in the medium to long term a more coherent information landscape can be developed in a consensual and collaborative way through the establishment of a shared governance framework and the sharing of expertise on data management and information standards. In section 4 Next Steps the project outlines one possible model to address this. The model shows that, whilst there is no single

body that will ever actually ‘own’ the data and information landscape, it is possible for the key stakeholders to develop a mechanism to understand and effectively communicate and manage that landscape.

The need for such a mechanism, developed as a shared undertaking between the regulators, HE Agencies and HE Providers, was the single clearest recommendation to come out of the extensive consultation process and it is one that has been independently raised, in various forms, in all of the workshops and group discussions. The recommendation is to develop a means of implementing the principles set out in section 1 of this report by:

- reviewing existing data collections to eliminate duplication and address issues of quality/timeliness and;
- scrutinising new or changed data collections to ensure consistency of approach and reuse of existing data where possible.

Similar proposals, albeit with a slightly different focus/scope, have been made as a result of a number of previous studies and the Concordat developed through HERRG was moving towards such an approach. We now have an opportunity and a need to bring this reform forward as a consequence of the changes to HE and our work:

'... there is scope for a more rigorous process of constructive challenge to existing and new accountability requirements, extending the work undertaken in recent years by the HERRG.' (PA Consulting Group 2009)

'There is currently no standing mechanism for this challenge process, and we commend it for consideration as part of the arrangements being established by Universities UK and GuildHE to replace the HERRG. In view of HEFCE's stated commitment to reduce accountability costs by at least a further 10%, the Funding Council should have an active role in these arrangements, as perhaps should the NAO, to encourage consistency among Government stakeholders.' (PA Consulting Group 2009)

'However, many of the issues raised consistently by providers relate not to specific data demands but to shortcomings in communication and relationship management between providers and the originators of data demands. Many issues also point to deficiencies in communication between different originators of data demands, or data users, regarding the potential to better co-ordinate data requirements as directed at providers.' (Information Authority 2008)

'... there is a need to move away from the tendency to view the provider as ‘conduit’ for data supply towards an operational model that sees the provider as proactive partner in identifying value-added data for their own and for the wider sector's strategic and operational needs.' (Information Authority 2008)

‘... is it time to make policymakers think? Should all new requests be subject to a regulatory impact assessment?’

(Stakeholder interview)

‘There seems to be an assumption that more data is necessarily a good thing – we should be asking what we really need. Who needs to know? Who wants to know? What right to ask?’

(Project event)

3.3 Data Standards as an enabler

Data standards are essential to facilitate the exchange and re-use of data. Expressed in their simplest form standards enable, for example, a piece of data to be recognised as a name or a date/time stamp in a variety of circumstances. Data standards enable us to send messages to recipients around the globe simply by knowing the correct format of their telephone number or e-mail address with no need to consider what particular type of communications hardware and/or software they may be using.

A range of data models¹ and information/data standards both *de facto* and *de jure*² have been developed in recent years, the most commonly used within UK HE being HESA and UCAS which provide well understood field definitions, for example, relating to students. However there are a number of other bodies producing standards and/or field definitions: the Information Standards Board ([ISB](#) - operating mainly in the schools sector), the Information Authority ([IA](#) - operating in the further education and skills sector), JISC Centre for Educational Technology and Interoperability Standards ([JISC-CETIS](#) - operating mainly in the learning technology field) and the Common European Research Information Format ([CERIF](#) - operating in the research field) being further examples.

‘The dictionary and vocabularies are critical in moving from data to information to wisdom.’

(Stakeholder interview)

The Project has been unable to identify any generally accepted forum to encourage collaboration amongst these bodies so as to produce a coherent set of standards that can be used with confidence by the majority of HE Agencies, HE Providers and other stakeholders where they are dealing with essentially common data. This results in the 'patchy' application of standards where they exist and examples where key terms and concepts, such as 'course' (see HESA 2011) remain inconsistently defined across the sector. Although there are legitimate reasons why definitions may vary across different contexts, the approach to standards should at least ensure that interoperability between datasets can be achieved through a better understanding of these different definitions.

With the Learning Records Service ([LRS](#)) managing administration of a Unique Learner Number ([ULN](#)) and the creation of a Personal Learning Record ([PLR](#)) there is in existence the necessary infrastructure for a universal identifier

highly relevant to a lifelong learning model. Its application is however currently limited and inconsistent.

¹ A data model can be thought of as a diagram that illustrates the relationship between data items and the purposes for which they may be used

² *De facto* standards can be considered as those accepted in custom and practice by consensus, *de jure* standards are imposed by an authority of some kind.

It seems clear that a coherent approach to data standards must be the first step in developing an improved landscape that can respond effectively to changing requirements. The value to the sector of agreeing common standards was borne out by responses from the major suppliers of administrative systems to the HE sector in a workshop run jointly by the Project Team, JISC and UCISA. Those suppliers were adamant that they were unlikely to converge on a common data model within their products, as this could be a threat to the perception of competitive advantage but standards for external presentation of data and reports were a different matter. Adoption of common standards (including internationally accepted standards where appropriate) could reduce the cost of system changes and aid the exchange of data between different systems.

3.4 Technology as an enabler

The findings of the Project make it abundantly clear that the problems inherent in the current data and information landscape are not of an 'Information Technology' nature. The landscape could be enhanced through communication, co-ordination and the application of standards to improve accessibility, efficiency and coherence without any change to the underlying technical infrastructure. There is no need for an over-ambitious systems development project that would cost a lot of money and be unwelcome. This was tried in HE some years ago (The Management and Administrative Computing (MAC) initiative) but demanded too much convergence of internal business processes between HE organisations and it failed.

That said, there is a cost to HE Providers in having a need for both technical and administrative staff to familiarise themselves with a range of different interfaces through which they interact with the statutory data collectors and other HE Agencies. Readily available and robust technologies therefore present further opportunity to enhance the landscape and add value by simplifying the range of interfaces through the adoption of up to date flexible solutions based on industry standard good practice.

One possible approach is outlined in Appendix 6. This shows an information and technology architecture which would greatly simplify the management of interfaces and data flows. It is developed from a proof of concept funded by the HEFCE Universities Modernisation Fund and already in service.

'The software suppliers are 'allies' in that they prefer clarity and mandation.'

(Stakeholder interview)

'You can't ignore the knock-on effect of standards in terms of a technical infrastructure that is affordable and works in a diverse landscape ...'

(Stakeholder interview)

4 Next Steps

4.1 Conclusion of feasibility study

The objective of this Project was to deliver a high level feasibility study on changes that may need to take place in order to deliver a data and information landscape '*that meets the needs of a wider group of users; reduces the duplication that currently exists, and results in timelier and more relevant data*'. The conclusion from this work is that there is now an opportunity to reconfigure the landscape in this way. The steps needed for this to happen build on an existing foundation of commitment, collaboration and consensus and can be set in motion relatively quickly.

We have already noted the findings of the Mapping the Higher Education funding and regulatory system in England project (IRPG 2012) that complexity in a system of this nature is inevitable. Each of the statutory data collectors has obligations imposed on them by law and the legislation governing each of the different funding streams is one of the key reasons why requirements, and hence definitions, vary across the different bodies. Whilst the regulatory landscape may remain to a degree complex in terms of its functions, considerable benefit can be derived by improved communication and coordination across the data and information landscape facilitated by the use of common data standards.

'We cannot come up with a vision that is so radical it will never get off the ground. However, the planets are in motion and are aligning.'

(Stakeholder interview)

'Separation of standards expertise and governance is critical.'

(Stakeholder interview)

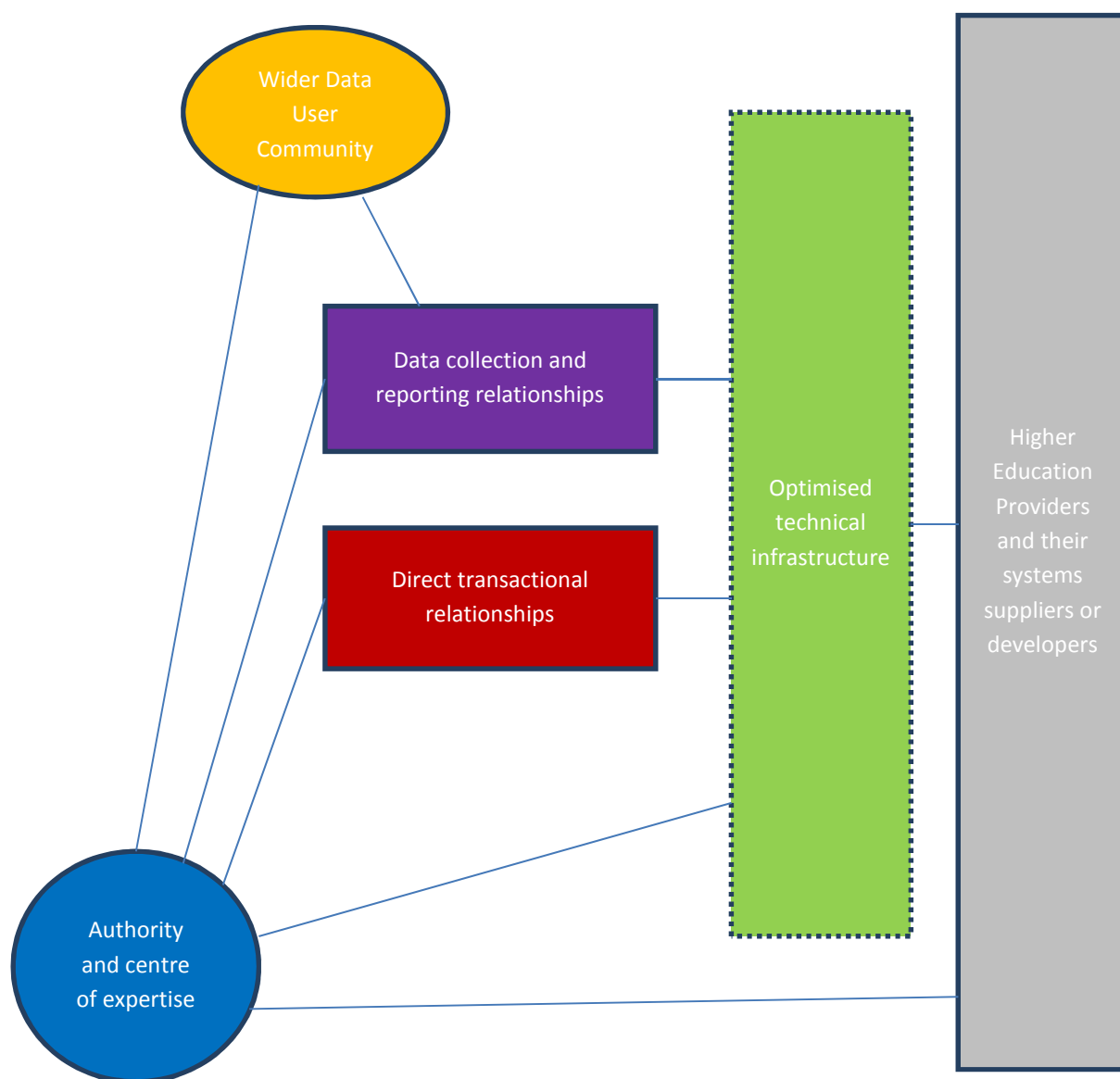
All of the organisations making up the ecosystem have their own functions to perform and need accurate, timely data in order to do this well. All too often HE Agencies find themselves in the position of creating new demands on HE Providers because existing systems and communication facilities within the landscape cannot respond to changing requirements quickly enough.

It should be possible, through shared understanding of one another's roles, to use information and data standards, coupled with new technologies, to reduce the effort and duplication involved in generating the information needed by stakeholders in their work. That, in turn, may be expected to improve the timeliness and availability of data for the use of HE Providers and other stakeholders to enhance the performance of the HE sector and to demonstrate its continued quality on the world stage.

In conclusion this report offers a vision that, in the medium term, HE providers and Agencies will collectively govern the information landscape to the benefit of information providers and users.

4.2 Initiation of next stage

The diagram below shows a model to illustrate how the establishment of a shared governance framework and the sharing of expertise on data management and information standards might be achieved.



The elements of the model are shown in different colours as follows; note that it is quite likely that one organisation may fulfil multiple roles:

- Blue - an authority that provides the governance for the information landscape and commissions specific activities using the expertise that already exists in the various Agencies and HE Providers involved.
- Red - transactional relationships with HE Providers directly supporting business operations e.g. SLC, UCAS and UKBA.
- Purple – relationships that cover statistical or other more general data for processing to produce reports and analysis to inform funding and/or policy decisions as well as to assess quality, support accreditation and inform stakeholders in the wider community e.g. HEFCE, UCAS and HESA.
- Green - an element that attempts to address the HEBRG vision of a single interface through an optimised technical infrastructure. This element is 'optional' in terms of the functioning of the model. It

could deliver additional benefits but would have harmonisation of definitions and standards as a prerequisite.

- Grey – The HE Providers and their information systems suppliers and developers.
- Yellow – The wider data user community which comprises those HE Agencies who can use data supplied indirectly from others together with the wider public including students and HE Providers in some cases

4.3 Implementation of next stage

The main recommendation in the report is for the key stakeholders to establish a collective oversight of the information landscape to achieve a more efficient and effective system of governance.

To achieve this IRPG should task some of the key stakeholders in information flows (e.g. HESA, QAA, SLC, UCAS, AoC, Guild HE and UUK) to develop and propose the structure, resourcing and operation of a governance model for the data and information landscape.

The creation of this governance model would enable a programme of work, using shared expertise, to create a more coherent set of arrangements for the collection, sharing and dissemination of data. These arrangements would include the identification, development and adoption of data and information standards and the review and scrutiny of data requests.

In order to fulfil this role there would need to be a series of enabling projects, including:

- Develop a calendar and inventory of data collections across the year as a first step towards streamlining collections and improving the timeliness of information
- Develop a data model, lexicon and thesaurus for the sector - this would be a purely administrative/reporting model that does not seek to impinge on academic practice or to impact the way business processes are carried out. It may be that this would be a series of linked models using a consistent approach and a common data language.

The establishment of this collective oversight of the information landscape would require each of the organisations involved to make a real commitment to work collaboratively and openly on issues involving data and information.

A key goal would be the harmonisation of a common 'core' of data substantially derived from meeting core business requirements (those shared with the relationships in the red box and those stemming from HE Providers own business needs). It is envisaged that this core (plus certain other significant and legitimate data requirements) would form a 'data basket' (as discussed in Appendix 5 on future scenarios) thus the purple box would become a managed and trusted source of data that a range of stakeholders could draw upon. In particular it is expected that this data source could meet the data needs of many of the PSRBs and that the range of bodies which have already given approval in principle ought to drive a momentum that will quickly engage this group of stakeholders.

Whilst there may be some initial overhead for the data collectors in participating in these activities, it should be noted that an explicit aim is the ability to translate their activities into a common data language for the benefit of the sector as a whole, and indeed the wider public good, rather than impact directly in such a way as to require changes to the business processes of the participating organisations. Any changes to the landscape must be sensitive to Intellectual Property issues and recognise the opportunities of some stakeholders to exploit their data processing expertise commercially. Other protocols and legal compliance issues such as the DPA must also be considered, but the use of suitable tools and technologies should ensure that these issues do not present major obstacles to greater accessibility and sharing of data.

The benefits of this common language are outlined in greater detail in the following section but in summary the investment in participating will yield returns in terms of having better, more timely information in order to carry out current business activities and also in terms of facilitating the kinds of data linking and information sharing that will be needed for each organisation to develop its services to meet new and changing requirements and to maintain a comprehensive picture in the face of increasing diversity. It will also enable developments, for example wider adoption of the ULN, that might not offer significant benefit for any one organisation or group of organisations but which would yield considerable dividends if applied sector wide.

It is appreciated that for HE Providers however, in order to realise potential benefits, some may need to better co-ordinate their internal data management.

Implementation of the model will rely initially on the collective will of organisations to work together although the organisations could seek opportunities to incorporate compliance with the agreed standards into the future regulatory framework as the opportunity arises.

4.4 Realising Benefits

The potential benefits from these proposals, as identified by the consultation process, address each of the Project's three main aims:

Reducing Duplication (Burden)

- reduces collection effort through minimising duplication;
- reduces the overhead of data transformation;
- facilitates re-use/linking and hence reduction in the overall number of returns;
- creates the opportunity for closer mapping between HE Provider and regulatory data models and business cycles;
- increases the opportunity for automation of data collection;
- reduced resource requirements for preparation of data offer greater opportunities to add value through analysis.

Improving Quality

- better alignment with business cycles means data is checked and validated by the time it is needed;
- standards limit the opportunity for ambiguity and misunderstanding;
- clear data models and increased automation reduces errors.

Increased Accessibility

- use of *de facto* standards will make exchange of data simpler;
- data presented in standard formats can more easily be recombined, reused and repurposed;
- standardised data in standardised formats more closely modelled within business processes can be accessed more readily and thus be more timely for a range of uses.

These benefits and aims, through making data more readily available and easier to comprehend, will in turn facilitate improvements to the student experience, accountability and transparency in a number of ways. First by reducing the burden we create the opportunity for institutions to make more use of their data to improve their own performance and presentation. Second through improving quality we increase the trust that people place in the data and therefore the confidence in the decisions that are informed by such data. Thirdly by making quality data more accessible we enhance the reputation of HE overall.

Looked at from another perspective the benefits to each stakeholder group are as follows:

Benefits to HE Agencies

- a more coherent landscape provides flexibility and capability to meet new/unforeseen requirements;
- easier recombination and repurposing of data allows a wider range of analysis that helps better policy making through better information;
- reduction in effort on data collection makes more effort available for processing thus increasing opportunities for added value.
- improved quality and timeliness of data implies greater confidence in policy and funding decisions;
- increased information sharing could assist early detection of issues in an increasingly diverse landscape;
- there is no interference with business activities and processes;

Benefits to HE Providers

- coherent definitions of data used for internal and external reporting and KPIs helps HE Providers to further improve management of performance;
- efficiency savings can be realised from reduced load in remapping/translating data for different but related requirements;
- better alignment with the HE Provider business cycle minimises peaks in workload at certain times;
- consistent data permits accurate benchmarking;
- consistent data facilitates partnership working.

Benefits to Students and the wider public

- coherent and consistent information helps learners navigate an increasingly diverse landscape;
- facilitates improved information, advice and guidance (IAG) that goes beyond data to deliver good contextual advice to assist student choice;
- students who make better informed choices are more likely to stay and succeed;
- simpler, more coherent presentation can enable a wider variety of stakeholders (including lifelong learners and employers/business) to understand what HE might offer to them;
- better information/greater transparency implies greater confidence that engagement with HE Providers will provide value for money or other investment e.g. time and effort.

These benefits may be expected in due course to shift the balance from the perception of an unavoidable burden to a drive for investment in an information landscape that enhances the entire system of higher education.

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6 Appendices

Appendix 1 Steering Group Members

Alison Allden	Chief Executive	HESA
David Barrett	Assistant Director	OFFA
Alex Bols	Head of Education & Quality	NUS
Marcus Byrne	Programme Manager	UCAS
Dave Cartwright	Senior Manager, Data Services and Analysis	SLC
Ian Child	Deputy Vice-Chancellor & Chief Operating Officer, University of Chichester	GuildHE
Steve Egan	Deputy Chief Executive & Chairman of the Steering Group	HEFCE
Cheryl Emerton	Head of Enquiries Team & Admin Manager	OIA
Martin Furner	Data Collection & Analysis	TA
Julian Gravatt	Assistant CEO Director of Funding & Research	AOC
Kerry Hemsworth	Assistant Director of Education & Commissioning	NHS North West
Nick Johnstone	Policy Officer	GuildHE
Brian Lehaney	Assistant Director - Research, Development & Partnerships	QAA
Jovan Luzajic	Senior Policy & Data Analyst	UUK
John Perks	Head of the Information Authority secretariat	IA
Will Spinks	Registrar & Secretary, University of Manchester	UUK

Appendix 2 Stakeholder Engagement Strategy

The Project began by undertaking an analysis of its key stakeholders and suggesting mechanisms to ensure an appropriate level of participation from each stakeholder group. This engagement strategy was revised and approved at the first meeting of the Steering Group and formed the basis for the Project plan. The Project Team was at pains to avoid 'tokenism' where stakeholders are simply informed about decisions already taken or where the Project does not hear, and fully understand, a sufficiently wide range of views to make appropriate recommendations. To this end a variety of two-way communication channels were set up and the Project was conducted in as transparent a way as possible. The means of engaging with stakeholders included:

- a Project website regularly updated with the outcomes of each round of consultation and offering the facility to comment on items posted
- a discussion list to which 360 people actively subscribed
- interviews with over 80 people from c. 40 key stakeholder organisations
- a webinar with 27 participants
- presentations to c.1,000 people at 5 conferences (with mentions in plenary sessions at 2 others)
- a series of 5 Project workshops attended by 122 people
- 5 smaller workshops, in conjunction with other scheduled meetings/events in the sector, attended by approximately 120 people

The consultation process was an iterative one with each round of engagement building on the outcomes of previous discussions and findings being tested and validated with a range of different stakeholders. The final two workshops were focused on evaluating and refining the recommendations that are included in this report.

The level of engagement far exceeded initial expectations of the Project both in terms of the numbers of interviews conducted and the degree to which the Project was able to consult effectively with a significant number of HE Providers (in excess of 130 individual providers). It may also be worth noting that the Project also undertook workshops with the suppliers of the main administrative systems in use in the sector and with the most important group of stakeholders: learners.

Appendix 3 List of Interviewees

Organisation	Name	
AHUA/University of Derby	June	Hughes
AHUA/University of Manchester	Will	Spinks
AoC	Nick	Davy
BIS	Matt	Bollington
BIS	Gordon	McKenzie
BIS	Andrew	Ray
Buttle Trust	Susan	Mueller
CETIS	Adam	Cooper
CHRE	Kate	Webb
City of Bristol College	Viv	Manley
City of Bristol College	Tracey	Crane
Data Service	Rich	Williams
DELNI	Allan	Nesbitt
DELNI	Pat	Morrison
DoH	Ali	Enuyati
DoH	Kerry	Hemsworth
DoH	Keith	Wright
DoH Connecting for Health	Denise	Downs
DoH Connecting for Health	Nicholas	Oughtibridge
EPSRC	Ashley	Moore
ESB/Nexus	Roland	Major
GuildHE	Nick	Johnstone
HEBRG	Brooke	Sperry
HEFCE	Mario	Ferelli
HEFCE	Richard	Puttock
HEFCE	Paul	Greaves
HEFCW	Hannah	Falvey
HEFCW	Bethan	Owen
HESA	Adrian	Crossley
HESA	Jane	Wild
HESA	Jonathan	Waller
Home Office	Jon	Simmons
IA	John	Perks
ISB	Terry	Knowles
JISC	Ruth	Drysdale
JISC	Josh	Brown
Loughborough College	Jon	Brown
LRS	Una	Bennett
MEG/New College Durham	John	Widdowson
New College Nottingham	Mick	Blockley
New College Nottingham	Russell	Pearson
New College Nottingham	Nick	Whitehouse
Northumbria University	Keith	Davidson
Northumbria University	Adam	Dawkins
OFFA	David	Barrett
OFFA	Patrick	Jennings
QAA	Brian	Lehaney
RCUK	Iain	Cameron
RCUK	Kate	Reading

Regents College	Stephen	Quigley
Regents College	Angela	Posthill
SAAS	Miriam	Craven
SAAS	Esther	Laird
SAAS	Ruth	Ralph
SAAS	David	Wallace
SFC	Gordon	Anderson
SFC	Fiona	Bell
SFC	Martin	Fairbairn
SFC	Stewart	Fancey
SFC	Derek	Horsburgh
SFC	Sarah	Kirkpatrick
SFC	Gus	McDonnell
SFC	Jennie	McGregor
SLC	Kevin	Attfield
SLC	Dave	Cartwright
SLC	Paul	Smith
SPA	Janet	Graham
TDA/TA	Martin	Furner
UCAS	Marcus	Byrne
UCAS	Helen	Thorne
UCAS	Laura	Waddon
UCAS	Bethanie	Williams
UKBA	George	Shirley
UKBA	Shaun	Flaherty
Universities Scotland	Kirsty	Conlon
University of Derby	Kevin	Clifton
University of Derby	Clare	Foyle
University of Derby	Rachel	Hatchett
University of Derby	Emily	North
UUK	Jovan	Luzajic
Welsh Government	Chris	Williams
Wirrall Metropolitan College	Mike	Potter

Total 82

Appendix 4 List of Participating Organisations

1994 Group

Anglia Ruskin University
Association of Business Schools
Association Of Colleges
Association of Heads of University Administration
Bath Spa University
Birkbeck College, University of London
Birmingham City University
BIS
Blackpool & The Fylde College
Brunel University
Buttle UK
Canterbury Christ Church University
Capita Further and Higher Education
Cardiff Metropolitan University
Central School of Speech & Drama
City of Bristol College
City University
Colchester College
Compass Computer Consultants
Connecting for Health
Council for Healthcare Regulatory Excellence
Cranfield University
Datatel+SGHE (now Ellucian)
DELNI (Department for Employment and Learning Northern Ireland)
Deloitte
De Montfort University
Department of Health
Digitary
Disability Alliance
Doncaster College
Edge Hill University
Edinburgh Napier University
Falmouth University College
Gardant Communications
Glasgow Caledonian University
Gradintel
Greenwich Community College
GuildHE
Harper Adams University College
HEFCE
HEFCW
Heriot Watt University
HESA

Imperial College London
Information Standards Board
JISC
JISC Advance
JISC CETIS
JISC infoNet
Kings College London
Kingston University
Learning Records Service
Leeds Metropolitan University
Leeds Trinity University
Liverpool Hope University
Liverpool Institute for Performing Arts
Liverpool John Moores University
London Metropolitan University
London School of Economics and Political Science
London School of Hygiene & Tropical Medicine
London South Bank University
Loughborough College
Loughborough University
Macclesfield College
Manchester Metropolitan University
Middlesex University
Myerscough College
National Union of Students
New College Durham
New College Nottingham
NHS North West
Northgate Information Solutions PLC
Norwich University College of the Arts
Nottingham Trent University
Nursing and Midwifery Council
Office for Fair Access
Office of the Independent Adjudicator for Higher Education
Olivedon
Oracle Corporation
Oxford Brookes University
Pearson Education Ltd
Quality Assurance Agency for Higher Education
Queen Margaret University, Edinburgh
Queen Mary, University of London
Ravensbourne College
Regents College
Research Councils UK
Robert Gordon University
Roehampton University

Royal College of Music
Royal Holloway, University of London
Royal Veterinary College
St Georges, University of London
SAP UK Ltd
School of Oriental and African Studies, University of London
Sheffield Hallam University
Southampton Solent University
Staffordshire University
Student Awards Agency for Scotland
Student Loans Co Ltd.
Sungard
Supporting Professionalism in Admissions
Teaching Agency (formerly Training & Development Agency for Schools)
The Information Authority
The Open University
Tribal
UCAS
UCISA
UKOLN
UNIAC
Unit4 Business Software Limited
Universities Scotland
Universities UK
University College London
University College Plymouth Saint Mark and Saint John
University for the Creative Arts
University of Aston
University of Bangor
University of Bath
University of Bedfordshire
University of Birmingham
University of Bolton
University of Bournemouth
University of Bradford
University of Brighton
University of Bristol
University of Cambridge
University of Cardiff
University of Central Lancashire
University of Chester
University of Coventry
University of Cumbria
University of Derby
University of Durham
University of East Anglia

University of Edinburgh
University of Essex
University of Exeter
University of Glamorgan
University of Glasgow
University of Greenwich
University of Hertfordshire
University of Huddersfield
University of Keele
University of Kent
University of Lancaster
University of Leeds
University of Leicester
University of Lincoln
University of Liverpool
University of London
University of Manchester
University of Newcastle
University of Newport
University of Northumbria
University of Nottingham
University of Oxford
University of Plymouth
University of Portsmouth
University of Reading
University of Salford
University of Sheffield
University of Southampton
University of St Andrews
University of Stirling
University of Strathclyde
University of Sunderland
University of Surrey
University of Swansea
University of Teesside
University of the Highlands and Islands
University of the West of England
University of Ulster
University of Wales Trinity Saint David
University of Warwick
University of West London
University of Westminster
University of Wolverhampton
University of York
Welsh Government
Wirral Metropolitan College

Map of Participating Organisations

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Blue – HE Institutions

Pink - HE in FE Providers

Yellow – Private HE Providers

Green – Agencies and other organisations

An interactive version of this map is available on the Project website

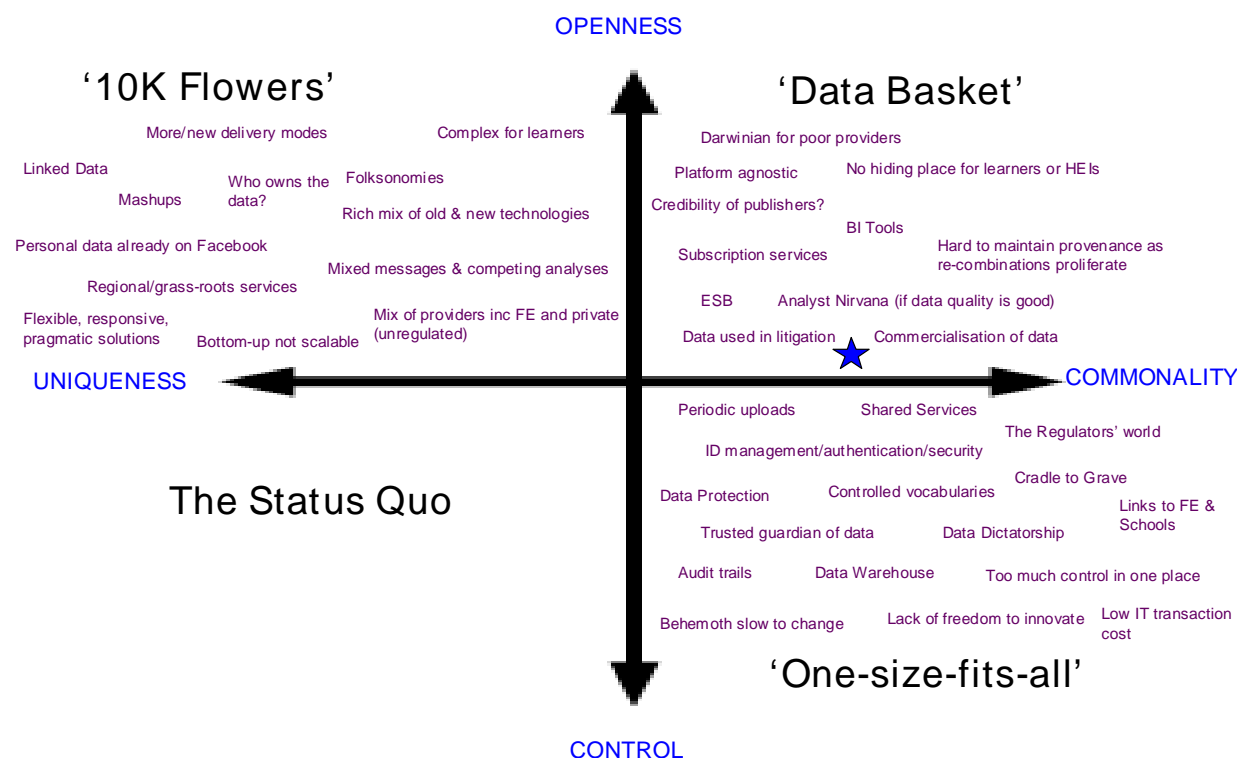
Appendix 5 Scenario Planning

The English higher education system is in a period of profound change. Uncertainties surrounding the future landscape continue and the outcome of the BIS Technical Consultation on proposed changes to the regulatory system have not been available to either the Deloitte led project - Mapping the Higher Education Funding and Regulatory System in England - or this Project, as the consultation is still ongoing. Given that the Project needs to provide a flexible, long-term solution in the face of many uncertainties scenario planning has been used to give an overview of possible future directions in the wider landscape and to avoid the risk that suggestions for improvement and change are too grounded in the present system.

The Project developed and tested scenarios with the involvement of sector and agency participants. Major trends affecting the landscape were identified and used to generate a matrix of four quadrants. Each quadrant represents a plausible future scenario that constitutes a particular type of regulatory environment with its own type of structures, services and technical characteristics.

The scenarios generated turn out to have similar characteristics to other higher education scenarios generated through other analyses. Universities UK has undertaken similar scenario planning activities through its [Scenarios Project](#) (UUK 2012) and the quadrants show a marked relationship with a 2004 European study, the [scenario sets](#) from which are presented as part of the JISC infoNet scenario planning resources.

A summary of the scenarios is shown in the diagram below.



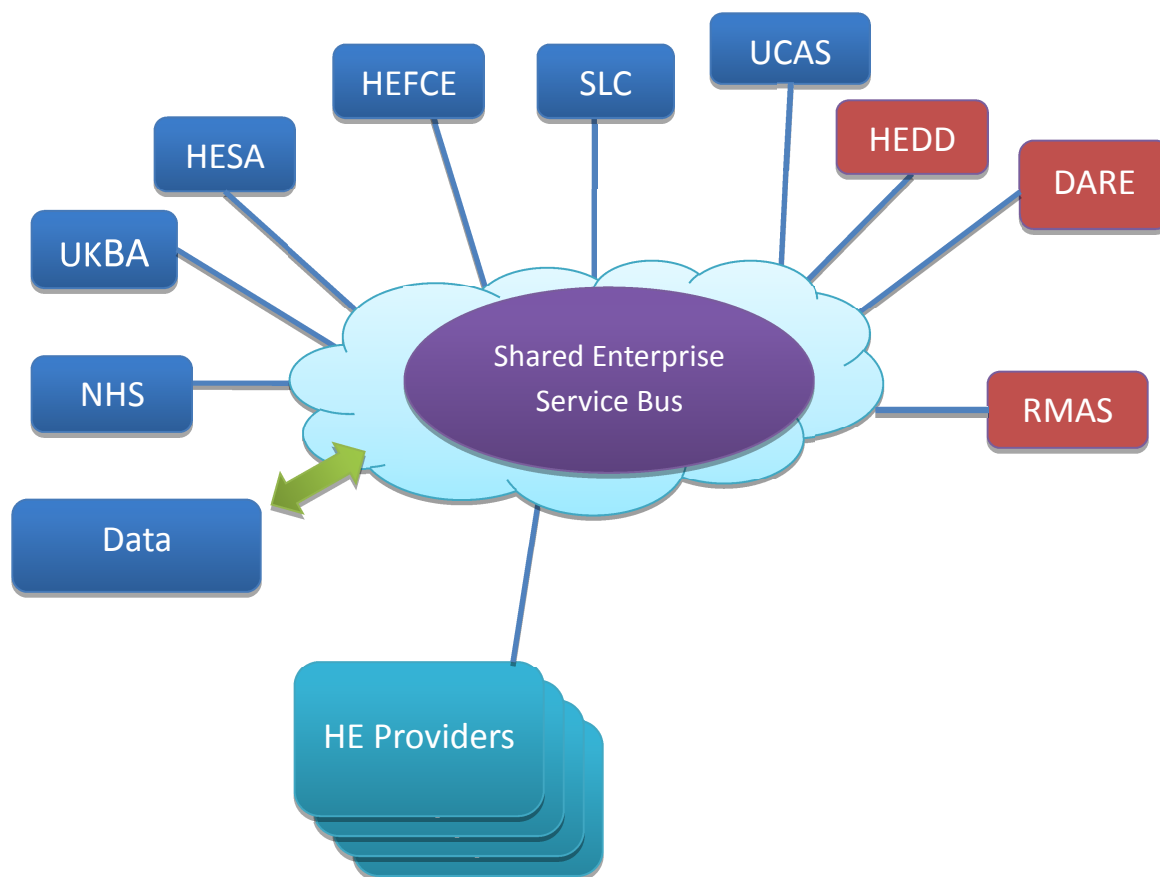
- The *status quo* acknowledged that a wide range of stakeholders are essentially 'doing their own thing' and that requirements are tightly controlled by each stakeholder or group.
- *One size fits all* implies a high degree of commonality in approach but with little flexibility to respond to changing circumstances and great difficulty for those outside a tightly controlled community of stakeholders to access data or information they might need.
- *Ten thousand flowers* implies a highly volatile environment where requirements are developed as required by stakeholders and demands on HE Providers are largely uncontrolled.
- *Data basket* implies a degree of collaboration to achieve commonality of approach and a relatively open approach to sharing and making data accessible to those who might need it.

The scenario that best matches most stakeholders' aspirations for the future landscape is the *data basket*. The positioning of the star in the diagram highlights the view that the maximum practical standardisation of approach is highly desirable and that openness, while also desirable, will inevitably be constrained by the sensitive and/or personal nature of much of the student data. Consideration also needs to be given to those agencies whose future business model may be dependent upon them exploiting and adding value to particular datasets. This conclusion, initially developed with the Steering Group has been tested further, with a wide range of HE Providers and other stakeholders including the major software suppliers to the sector. Whilst there may be broad consensus on the preferred future direction, the point of scenario planning is to develop flexible solutions that can work in the widest possible range of circumstances and this has been borne in mind in making the proposals in this report.

Appendix 6 Technology Infrastructure

Universities Modernisation Fund (UMF) has already invested in an Enterprise Service Bus³ (ESB) capability in the Cloud which may provide a ready-made component to help harmonise the technical infrastructure. The benefits of building on these types of technology lie both in reducing the number of different interfaces that staff in HE Providers need to master and in offering the opportunity to enhance access to datasets and linking across different datasets.

The architecture diagram below illustrates the possibilities and shows those components already in service in a proof of concept development funded by HEFCE through its Shared Services initiative.



Those components highlighted in red are already available. The Enterprise Service Bus shown is an open source product implemented by [Nexus](#) a new commercial service by [JISC Advance](#) which connects software applications to transfer data securely and efficiently between educational establishments and external partners. Partners already using the service include:

- [HEDD](#) the Higher Education Degree Datacheck operated by Graduate Prospects
- [DARE](#) an electronic transcript application including authorisation through electronic signature
- [RMAS](#) Research Management and Administration System shared service

Those components highlighted in blue indicate possibilities in relation to the scope of the Project and beyond.

³ An ESB is an industry standard model and software platform to support the exchange of data between disparate applications in a wide range of workflow related scenarios.

Appendix 7 Glossary of Terms

AoC	Association of Colleges
AHUA	Association of Heads of University Administration
ARC	Academic Registrars' Council
BIS	Department for Business, Innovation and Skills
CERIF	Common European Research Information Format
DARE	Digital Academic Records Exchange
DfE	Department for Education
DoH	Department of Health
DPA	Data Protection Act
ESB	Enterprise Service Bus
FE	Further Education
FOI	Freedom of Information
HE	Higher Education
HEDD	Higher Education Degree Datacheck
HEBRG	Higher Education Better Regulation Group
HERRG	Higher Education Regulation Review Group
HEFCE	Higher Education Funding Council for England
HESA	Higher Education Statistics Agency
IA	The Information Authority
IAG	Information, Advice and Guidance
ILR	Individualised Learner Record
IRPG	Interim Regulatory Partnership Group
ISB	Information Standards Board
JACS	Joint Academic Coding System
KIS	Key Information Set
LRS	Learning Records Service
MAC	Management and Administrative Computing Initiative
MEG	Mixed Economy Group
NAO	National Audit Office
NUS	National Union of Students
OFFA	Office for Fair Access
OIA	Office of the Independent Adjudicator
PLR	Personal Learner Record
PSRB	Professional, Statutory and Regulatory Bodies
QAA	Quality Assurance Agency
RCUK	Research Councils UK
RMAS	Research Management Administration System
SAAS	Student Awards Agency for Scotland
SHA	Strategic Health Authority
SLC	Student Loans Company
SFA	Skills Funding Agency
TA	Teaching Agency (formerly TDA)
TDA	Training and Development Agency for Schools
UCAS	Universities and Colleges Admissions Service
UCISA	Universities and Colleges Information Systems Association
UKBA	UK Borders Agency
ULN	Unique Learner Number
UMF	Universities Modernisation Fund
UUK	Universities UK