The Future Workforce for Higher Education

A report to HEFCE by PA Consulting Group

February 2010

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Executive summary

Purpose and scope of this study

This is the report of a research study commissioned from PA Consulting by the Higher Education Funding Council for England (HEFCE) as part of the wider workforce framework programme initiated in 2006.[1] The study was remitted to:

- Analyse the longer-term future workforce requirements of the English higher education (HE) sector, and the challenges for meeting them

- Provide practical advice and tools for higher education institutions (HEIs) and sector bodies to help in securing future workforce requirements.

The study involved extensive desk research, data analysis, visits and interviews with a large sample of institutions and other stakeholders, and workshop discussions on emerging questions. We were also able to extend our institutional evidence by adding questions to an online survey conducted by Oakleigh Consultants Ltd as part of a parallel review for HEFCE of human resources management in the sector.

Future challenges for the HE workforce

The emerging environment for HEIs is more volatile and uncertain than at any time in their history. Changes in patterns of demand for knowledge and learning, the impacts of technology on the delivery of HE services, growth in the number and range of competitors for those services, and fundamental changes in public funding and policy (inter alia) are all redefining the business of higher education and the capabilities that HEIs need to succeed. This in turn implies major changes in the nature of work in HEIs, in the skills and behaviours needed from academic, professional and supporting staff, and in the ways that people work together, both with their colleagues and with students, business and other external stakeholders.

The response to these objectives at institutional and sector level is complicated by four challenges to a more dynamic and competitive HE environment.

The first of these is the increasing diversity of mission and strategy among HEIs. Some expectations within the emerging scene are common to all institutions: all will expect to balance their teaching missions with substantive research activity; all will need to be more enterprising in developing new sources of business and revenues; all will move towards more collaborative models of teaching, research and service delivery; all will seek to maintain a strong international profile; and all will encourage fair access and opportunity. However, the relative importance of these expectations and the ways in which they are realised will be very different between institutions. The increasingly competitive and multi-faceted nature of the HE marketplace will require every institution to establish its

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[1] HEFCE (2006), The higher education workforce in England – a framework for the future, HEFCE 2006/21

own distinctive identity in selected areas of the market, and to build advantageous and sustainable positions in the perceptions of different client groups.

This imperative for strategic differentiation will further extend the diversity already seen in institutions' academic/business models, and hence in the organisational capabilities needed for success. For example, an institution seeking to extend its reputation (and income) from world-class research will need quite distinct capabilities from one focused on growing its business through employer-centred learning. The second challenge is thus the diversity of future workforce requirements at institutional level (and sometimes among different schools or departments within an institution). The patterns and focus of future demand for different academic and professional skills will vary widely among institutions, and may be articulated in terms quite different from current roles and job descriptions. Since the great majority of the HE workforce in 2015 or even 2020 is already employed within the sector, this clearly implies a very substantial staff development undertaking.

The articulation of future workforce demands is further complicated by a third challenge: the continued turbulence and uncertainty of different HE markets, both public and private. In contrast to the relative stability of the historical, publicly funded model of HE, the future environment is far less predictable, comprising as it does multiple and dynamic competitive sub-markets for different services. The forces for change and long-term outlook for grant-funded research are very different from those shaping the future market for work-based learning. There is no steady-state future scenario in this world, and the business models that succeed today may be inappropriate in 10 or 15 years' time. This means that institutional strategies and business models, and the workforce capabilities needed to sustain them, will be subject to continuous challenge and review, and must embody agility and flexibility to adapt to new conditions and demands. The inherent conservatism and slow pace of workforce change in many HEIs will have to be overcome to meet this challenge.

The fourth challenge is to sector-wide workforce frameworks. The need for greater levels of agility and flexibility at institutional level starts to challenge the very notion of a single HE workforce, and certainly raises questions about the interpretation and application of sector-wide workforce structures such as the single grading and pay framework, national pay bargaining and standard terms of employment. We encountered widespread perceptions across the sector that these agreements operate to inhibit flexibility and change in workforce strategies. This is certainly not the intention (or indeed the fact) behind these measures, and there are already many examples of institutions employing local terms and conditions to support more flexible employment models. These variants can be expected to become more common in future. Nonetheless, there are workforce needs and pressures that will be common to all institutions, such as shared needs for staff development and leadership programmes, and which are best met through sector-wide responses.

Institutional strategies for workforce development

All this implies that strategic workforce management – planning ahead to ensure that the right people with the right skills can work together in new ways – is central to the future of every HEI, and must be a top priority for institutional and sector leaders.

Future workforce requirements and the appropriate strategies to meet them will be determined by individual HEIs' diverse responses to the challenges of the new world of HE. The articulation of future

demands for human capabilities and capacity, and measures for meeting them, will happen at institutional level, within a broad and open sector-wide workforce framework. The schematic below (Figure 1) illustrates the questions that individual HEIs should consider. The stages in developing an institutional workforce strategy are thus:

Determine the critical organisational capabilities needed to establish and sustain the distinctive market identity and business strategy sought by the institution.

At a high level, institutional identity is determined by the priorities and market positioning an HEI sets for itself within a portfolio of HE business streams. We characterise these streams broadly as teaching (public and/or private), research (public and/or private), academic enterprise, and other services. The desired portfolio balance, and the different conditions for success in each business stream, determines the capabilities and competitive strengths the institution seeks to demonstrate. Although almost all institutions aim to have some presence in each of these business streams, very few have the potential to excel in them all, not least because the capabilities they each require have very different workforce implications.

Figure 1: Framework for business-led workforce development

Institutional strategy
- What should be the distinctive identity of your institution within the HE sector?
- How will this be realised through the institution's academic and business portfolio ?

Contextual Factors and Conditions for Success
- What pressures and demands will shape the outlook for each area of your portfolio?
- What will be the future conditions for success in each portfolio area?

Organisational capabilities
- What are the organisational capabilities you will need to succeed in your strategy?

Workforce implications (required workforce)
- What does this mean for the type and numbers of staff you require across teaching, research, academic enterprise business support?
(spell out the implications in terms of capacity, profile, skills requirements, working arrangements, and employment structures

Current workforce alignment
- How aligned is your current workforce to the above requirements?
- Are there particular gaps in terms of capacity and capabilities?

Workforce planning
- What actions do you need to take to secure the capacity, profile, skills, working arrangements and employment structures for your future research, teaching, enterprise and business support capabilities?

Articulate these capabilities in terms of the required skills, capacity, relationships and behaviours for staff in academic, enterprise and professional/management roles, and assess current workforce strengths and weaknesses against these requirements.

Workforce roles in 21st century HEIs will mainly fall into academic, enterprise and professional support groupings, but will differ substantively from current interpretations of those categories. Even ostensibly

similar job titles, such as research academics, will entail different behaviours and skills, with much greater emphasis on cross-disciplinary collaborations and responsiveness to funders' demands for 'useful' applications and solutions. Other roles may require new kinds of skills and experience; for example, teaching for professional formation will demand people with first-hand experience of 'live' issues and practices as well as pedagogic skills. There will be expansions of relatively new roles, such as business relationship managers and commercial development officers. There will be a need for greater levels of professionalism and continuing development across all roles, including high levels of confidence with e-learning and e-business technologies.

Establish the organisational models and processes for recruiting, developing and mobilising the staff needed to sustain strategic capabilities, with the flexibility to adapt to changes in strategic priorities over time.

Implementing new workforce models will require institutions to grasp some painful cultural and industrial relations nettles. The organisational structures in most HEIs will need reform to facilitate cross-departmental research and teaching and to integrate academic management with professional services. New career paths may be needed to accelerate opportunities for younger talent in all roles, and to encourage movement between 'siloed' functions. Reward and promotion policies may need revision to encourage more enterprising and collaborative behaviours. Contract terms may need to become more flexible to enable different recruitment and career models, particularly staff interchanges between the institution and external partners. The work of academic staff in particular will need to be more actively managed to provide clarity about the expected balance and focus of individuals' teaching, research and other activities. Institutions will need to adapt their recruitment, career management and diversity policies to ensure that they attract and retain talent from a wide pool. Good examples exist already for all of these developments; the challenge is to 'mainstream' these examples into normal practices.

Provide the leadership, at all levels, to guide and motivate all staff to engage with new workforce models and to encourage high levels of commitment and performance.

Strong and effective leadership – at all levels within institutions and not just from the top – is fundamental to achieving the changes in workforce planning, development and deployment outlined here. This will entail new skills and styles of leadership in all senior management roles; in particular, HE leaders (as in other sectors) will need high levels of skill in dealing with business uncertainty, risk and ambiguity, in addition to the academic and professional standing needed to maintain their credibility with staff and stakeholders. A careful balance will be needed between the injection of business experience from outside HE (for example through selective recruitment of 'outsiders' to management roles and governing bodies) and the development of 'home grown' leadership talent from within the sector. It will not be enough to develop and recruit individuals with good leadership capabilities. Institutions, both individually and collectively, will have to address the structural and cultural constraints to effective leadership posed by outdated industrial relations policies, cumbersome decision-making procedures and the diffusion of executive authority and accountability.

Sector-wide support for future workforce strategies

Although the primary responsibilities for creating the future workforce for English HE fall to individual institutions, there is much that can be done at sector level to facilitate and support the changes needed – and to ameliorate some current constraints to them. The national pay and grading framework is generally reckoned to have been beneficial in matching academic and non-academic jobs across the sector, but needs to be interpreted flexibly to support more open career opportunities, for example between technician and teaching roles, or for professional support staff. Institutions will need to employ their discretion to set local recruitment, reward and career management policies within national frameworks to enable their diverse workforce strategies. Other shared needs that are best addressed by cross-sector arrangements include: information sharing on the workforce market and successful innovations; staff development and training schemes; and the provision of tools, frameworks and resources that can help institutions to implement their own workforce strategies.

There is of course much valuable activity of this kind already happening across the English HE sector, such as various projects within HEFCE's Leadership, Governance and Management programme and the work of Universities UK, GuildHE, Leadership Foundation for HE, Higher Education Academy, UCEA, ECU[2] and professional groups such as UPA, AUA, AHUA, BUFDG and AUDE. However, comparison with workforce developments in other sectors suggests that these somewhat fragmented activities might be more effectively co-ordinated and aligned to sector needs through a single focal point along the lines of e-skills UK, the Sector Skills Council for information and communications technologies.

Next steps: who should do what?

The agenda for workforce change outlined here (and in more detail in the full report) entails a major programme of actions on several fronts:

- Institutional leadership teams and governing bodies should consider the questions posed in Figure 1 (above) and consider their priorities for workforce development within institutional strategies

- Sector bodies should convene a discussion about their various initiatives to address the needs and issues for the future workforce, and consider how these might be better co-ordinated

- HEFCE should extend its encouragement for workforce reforms through the Leadership, Governance and Management programme, with an emphasis on supporting initiatives that offer new models for the sector.

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[2] These and other acronyms used throughout this report are expanded in Appendix A.

1   Report purpose and approach

This document is the final report for the Higher Education Funding Council for England (HEFCE) 2008 research project looking at building the higher education (HE) workforce of the future. This document provides the core research input for the HEFCE report "The higher education workforce in England – a framework for the future" due for publication in 2009, which will provide a fresh look at the future HE workforce, building on the work of a similar publication by HEFCE in 2006.[3]

The core purpose of this document is twofold:

1. *To provide an analytical assessment of the future HE workforce required to deliver HM Government's HE agenda*

2. *To provide a valuable, practical framework and supporting data for the HE sector to help higher education institutions (HEIs) and sector organisations to plan the future HE workforce.*

1.1   Key audiences

This report will be of general interest to anyone involved in workforce issues in HE. However, the report is written with a number of target audiences in mind. These audiences are:

- Central government – particularly for ministers and policy officials in the Department for Innovation, Universities and Skills (DIUS)

- Vice chancellors (VCs) and HEI senior leadership teams – the performance and reputation of HEIs are largely determined by the quality of staff who, moreover, account for over 70% of typical HEI costs; this is therefore a matter of the utmost importance for VCs and senior management teams

- Human resources (HR) directors of HEIs – given the importance and complexity of academic, professional, support administrator, technician and manual staff planning in HEIs

- Senior managers and those responsible for strategic planning in HEIs

- HE sector unions – in understanding the critical workforce issues that will affect the jobs done by their members and the working arrangements under which their members are employed

- HE sector-level organisations, such as the Universities and Colleges Employers Association (UCEA), Higher Education Academy (HEA), Equality Challenge Unit (ECU) and trade unions – organisations representing the breadth of HE and HE workforce issues have a strong interest in the future shape and needs of the HE workforce.

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[3] HEFCE (2006), The higher education workforce in England – a framework for the future, HEFCE 2006/21

1.2   Approach and methodology

### 1.2.1   Principles governing our approach

Our approach to this work was governed by the following principles:

- Informed by 'bottom up' research on the HE sector – understanding different emerging strategic choices of HEIs to the changing environment of HE

- Built on an understanding of existing research – drawing on a significant body of existing research, particularly from sector-level organisations

- Built in consultation with the HE sector – involving HEIs and sector-level organisations in the process of building the HE workforce

- An informative framework not a prescriptive plan – analysing and drawing out useful workforce management practice at sector and institutional level

- Practical and useful – providing an analysis framework that HEIs and sector organisations can apply in light of their strategic choices

- Drawing on cross-sector insights – drawing on the insights of sectors such as health and information technology (IT) to inform effective workforce management practice.

1.2.2   Framework for analysing the future HE workforce

The four interdependent elements we have included in the workforce futures framework are illustrated in Figure 2.

Figure 2: Four key elements of our framework for analysing the future HE workforce
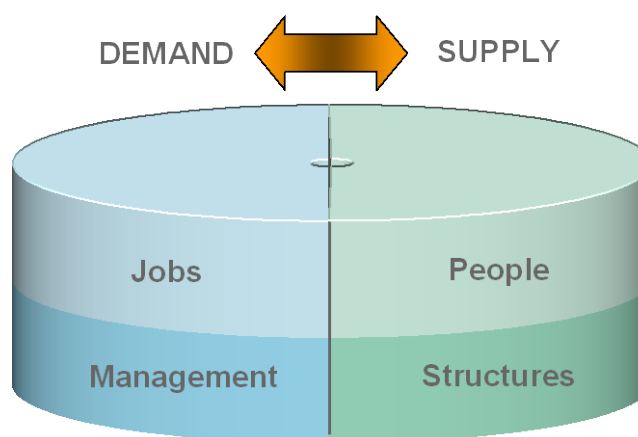
The framework encompasses the possibilities of alternative paradigms for the HE workforce in terms of:

- The numbers and kinds of people involved (People)

- The work and jobs they do (Jobs)

- The pay and conditions structures within which they work (Structures) and

- The management of people and work in HE (Management).

These four key elements form the core elements of this report, which examines first the demand side of this framework, then the supply side, and then looks at an agenda for action to address issues between future supply and demand.

1.2.3 Scope and focus of our analysis

The *primary research* question that we have addressed in this study is:

"What are the capacity, skills profile, employment structure and workforce practices required for the future workforce for higher education institutions in England in 10-15 years?"

The scope of HEIs considered in this research is all those receiving some HEFCE funding at the time of writing (2009). The study covers both academic and professional support staff.

In order that our analysis informs a practical course of action, we have sought to address the primary research question within a broader consideration of:

"What can HEI leadership teams, HR directors and sector-level organisations (including DIUS and HEFCE) do to lead and support the development of the required future HE workforce?"

1.2.4 Stakeholder engagement approach

In this research study, we involved stakeholders from both HE sector organisations and individual institutions. A full list of stakeholders engaged in this research study is given in Appendix B, and a list of the institutions visited/interviewed is provided in Appendix C.

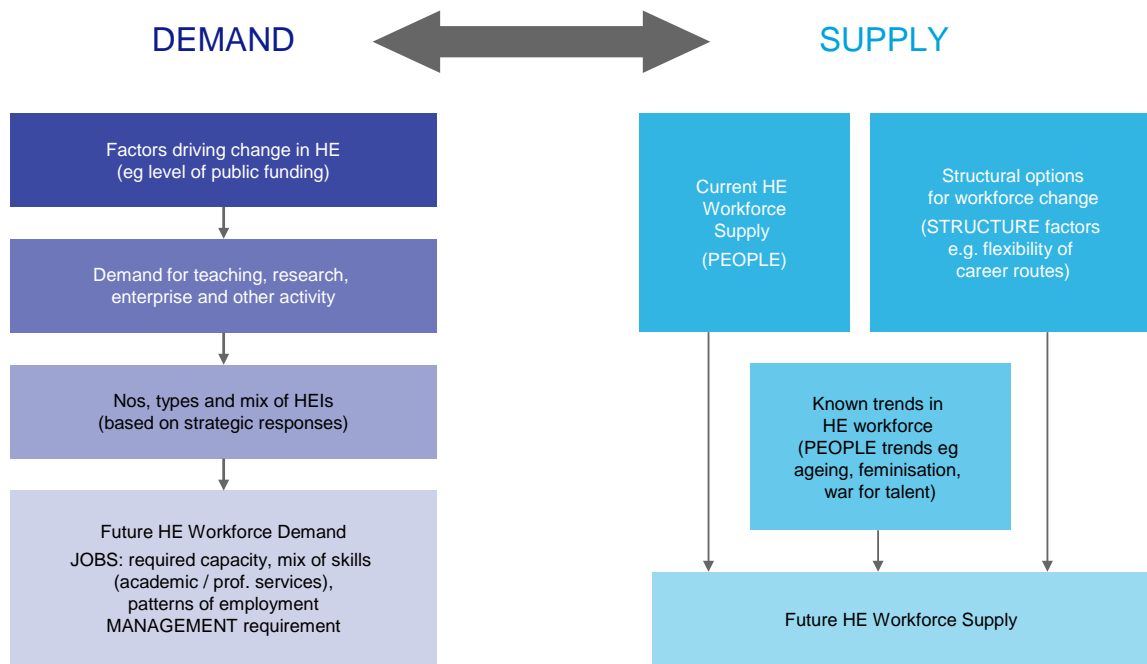We involved them in the following ways:

Sector-level organisations provided significant inputs on the trends and drivers of change affecting the HE sector, as well as on current workforce initiatives that might affect the future workforce. They also provided useful references to existing research and statistical analysis, on which we built. The detailed input from sector-level organisations was obtained through interviews with chief executives and senior managers in those organisations, complemented with review and analysis of reports produced by those organisations.

Institutions gave us detailed views on their strategic responses to the factors driving change in the HE sector. We recognised that the assessment of the required future HE workforce will be different for every university, reflecting their very different mixes of academic operations and the different strategies being pursued. Therefore it has been important for us to develop an understanding of different institutional strategies, and their workforce impact. Our input from institutions came in three forms – detailed visits to five institutions, in-depth interviews with eleven institutions and a survey of all HEFCE-funded institutions in the HE sector. The survey questions are provided in Appendix D.

1.2.5 Workforce supply/demand model process analysis methodology

Figure 3 illustrates (at a high level) the stages of modelling the future demand scenarios and then matching them against the supply side.

Figure 3: Methodology for workforce analysis

DEMAND ⟷ SUPPLY

DEMAND	SUPPLY
Factors driving change in HE (eg level of public funding)	Current HE Workforce Supply (PEOPLE) / Structural options for workforce change (STRUCTURE factors e.g. flexibility of career routes)
Demand for teaching, research, enterprise and other activity	Known trends in HE workforce (PEOPLE trends eg ageing, feminisation, war for talent)
Nos, types and mix of HEIs (based on strategic responses)	
Future HE Workforce Demand JOBS: required capacity, mix of skills (academic / prof. services), patterns of employment MANAGEMENT requirement	Future HE Workforce Supply

Our approach works through the stages shown above in the following steps:

1. Definition of the scope and focus of analysis
   (understanding the shape and nature of HE workforce in 10-15 years (2020))

Demand-side analysis

2. Identifying the factors driving change in HE
   (through interviews with HEIs and sector-level organisations, supplemented by desk research of relevant HE sector reports)

3. Creation of a framework for capturing numbers, type and mix of HEIs
   (see Section 2 for further information)

4. Drawing out the HE workforce demand implications
   (this and previous step performed via interviews/visits to spectrum of HEIs)

Supply-side analysis

5. Extraction of data about current HE workforce
   (using Higher Education Statistics Agency (HESA) database and HEIDI information interface)

6. Modelling of the shape of future workforce based on known trends
   (eg by drawing on HEFCE trends reports etc)

7. Examining different structural options and effect on supply
   (bringing in comparison sectors, good practice examples and findings from interviews).

2 The increasing diversity of HE markets and institutions

The future workforce requirements for the HE sector will be determined by the organisational capabilities needed to realise successful academic and business strategies in the future market for HE services. As the following section shows, that market will be more diverse and differentiated than in the past, demanding equally diverse and differentiated institutional strategies. Workforce demands are thus likely to vary widely at institutional level, depending on the market strategies pursued by each HEI and the critical capabilities required for the associated services mix and market positions. We explore the critical market developments and associated conditions for success for five major elements of the HE service portfolio.

2.1 Forces and directions of change in HE

The longer term outlook for higher education institutions is more volatile and uncertain than at any time in their history. A plethora of political, economic, social and technological (PEST) factors is changing the strategic and operating environment across the broad spectrum of HEIs. The breadth of factors that are shaping the future landscape of the sector is illustrated in Figure 4.

Figure 4: PEST factors driving change in Higher Education
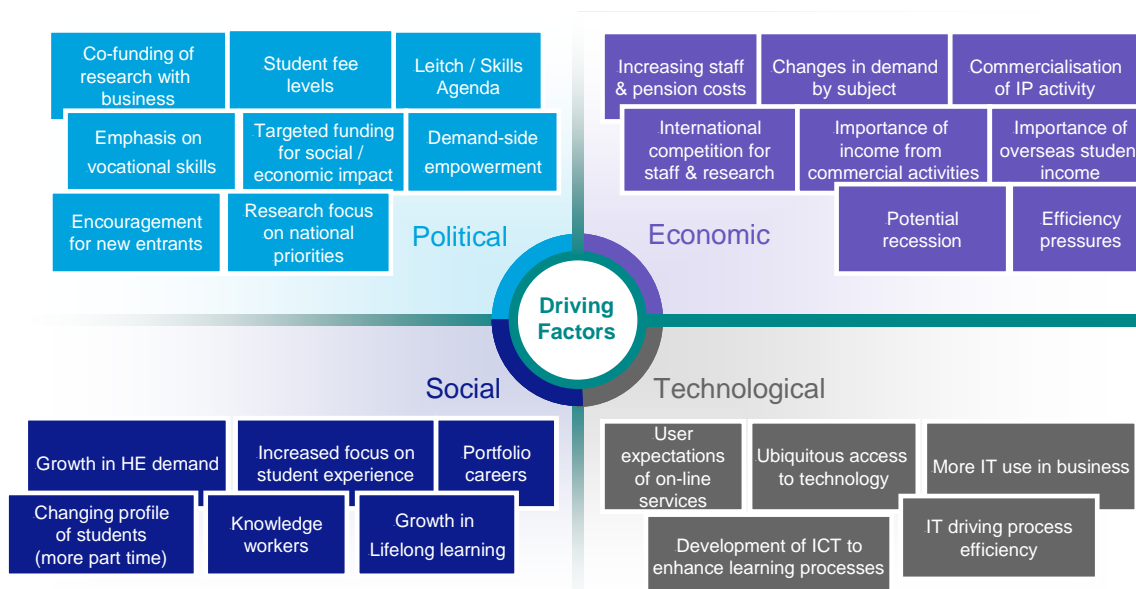
The impacts for institutions of these multiple drivers of change can be summarised in four closely interwoven themes:

- The market for higher education services will become much more diversified, instrumental and competitive. In many areas, HEIs will be one group among many competing for students, contracts and revenues (both public and private)

- Public policy and the associated funding will become proportionately less dominant for institutional success, and also much more closely tied to the impacts and benefits that HEIs can contribute to social and economic outcomes

- Patterns of demand and substantive requirements for HE services will be decided by student and business needs and preferences, and are likely to be less uniform and more volatile than in the past

- Advancing technologies and technology-based services will change public experiences and expectations for accessing and sharing knowledge, requiring all HEIs to rethink the ways in which they provide value.

2.2   Some common themes in institutional strategies

The institutions we surveyed cited four recurrent themes shaping their institutional strategies in response to these environmental trends. These are:

Reduced dependence on public grant funding. There is a widespread expectation among HEIs that, over the next 10 years or so, pressures on public expenditure will result in reduced real levels of public funding for HE provision, and increased selectivity in the distribution of such funds. This expectation applies equally to public funding for teaching, research and enterprise. In consequence, all institutions are planning for a reduced proportion of their income coming from public grants, and for at least offsetting increases in earnings from private and competitive sources (including student fees). Some institutions are already well advanced down this road, with only 25-30% of their income received from public grants and awards. However, even those institutions planning for reduced relative dependency on public funding emphasised the continuing absolute importance of these sources of revenue.

Increased levels of internationalisation. All institutions recognise that they are operating in an open, global market for knowledge, students, business links and staff. This is generally regarded as a healthy feature of the HE environment, and most institutions willingly embrace the need for an international dimension to student and staff recruitment, research relationships and institutional positioning. It does mean, however, that all English institutions are exposed to the vagaries of overseas developments, especially the growth in competition for students, staff and research revenues from universities in other countries, particularly in China, India and the Far East, but also from Europe and Australia. Building relationships with overseas institutions is an important feature of most institutions' strategies, both for research collaborations and for student and/or staff exchanges.

Slower growth in revenues and activities. Most institutions have experienced consistent steady growth of student numbers and related income in recent years, notwithstanding the constraints on public funding. Developments like the downturn in the 18 year-old age cohort over the next decade[4] are recognised as making continued growth in home student demand much less certain. Nonetheless, most institutions are planning for steady but modest overall growth (typically 4-5% p.a. in real terms) in revenues from all sources, and for moderate net operating surpluses.

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[4] Universities UK: The future size and shape of the higher education sector in the UK, UUK 2008

Strategic importance of research. Research has always been regarded as an essential element of higher education, and the feature that distinguishes HE from higher level skills training or other knowledge services. It was clear from our survey that all institutions see research continuing as an important element of their capabilities and offers in the long term, although the scale and nature of research activities varies hugely across different institutions. The results of the 2008 Research Assessment Exercise (RAE), published as our study was completing, confirmed that excellent research capabilities are to be found in almost every HEI, regardless of their business profile. Research can mean quite different things for different institutions, as we will discuss later in this report, but is clearly fundamental to any concept of 'true' higher education.

2.3   The increased diversity of the HE marketplace

Higher education covers a wide range of very different client groups and services, so broad and diverse that the concepts of a single HE market and sector have meaning only at the highest levels of generality. Our analysis suggests that institutions' ambitions for distinctive positioning among their peers are increasingly being expressed in terms of the areas of the HE marketplace in which they believe they can best develop sustainable competitive advantage.[5] We have identified six distinct segments of the higher education market (each with associated revenue streams) which together capture the range of business opportunities for institutions, as shown in Table 1:

Table 1: The six main business streams for UK higher education

Business stream	Covering …
Publicly funded research	HEFCE QR grants and research capital, and Research Council (RC) awards
Privately funded research	Contracts from charities, industry, government departments and other agencies (including EU)
Publicly funded teaching	HEFCE T grants, TDA and NHS T contracts, LSC funding and regulated home-EU student fees
Privately funded teaching	Teaching contracts and unregulated fees (including professional qualifications, overseas and CPD students)
Academic enterprise	IP commercialisation, consultancy, knowledge transfer contracts, conferences, publishing, etc
Other services	Catering, accommodation, lettings and other revenue-generating services (excluding income from endowments, etc)

This categorisation of the higher education environment into business streams shows that HEIs are operating, not in one market, but in a multiple array of quite different markets for their services, each with different funders and clients and with different prospects and conditions for success. Table 2, below, indicates the current breakdown of sector-wide revenues from the six business streams, and

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[5] We use the terms market and business in a broad sense, to refer to the range of different client groups (Government, business, charities, students, etc), their requirements and the associated funding streams that make up the operating environment for HEIs.

also illustrates the wide variations in the proportions of revenues from each stream for individual institutions.

Table 2: Total UK sector revenues by business stream, 2006-07

Business stream	Public research	Private research	Public teaching	Private teaching	Academic enterprise	Other services
Sector income (£bn)	3.3	2.3	8.6	2.6	1.7	2.7
% of sector income	16	11	41	12	8	13
% of institutional income[6]	4.2 - 18.1	1.3 - 9.2	36.1 - 65.3	8.3 - 15.5	1.5 - 7.7	8.9 - 16.7

Source: HESA/HEFCE

As the table shows, there are wide differences in the relative importance of revenues from each business stream among HEIs, reflected in wide variations in institutions' business portfolios. These variations are even greater when account is taken of market positioning within each business area. The market positioning variants associated with each business stream are shown in Table 3:

Table 3: Demand-led market positioning among HEIs

Market positioning	Criteria
International	Demand and funding depends on global recognition for excellence in research and/or teaching, for example through international league table rankings, and relationships with international businesses and institutions
National	Demand largely from within the UK, based on recognition, market shares and league table rankings among UK institutions
Local	Demand comes mainly from regional and local economies and communities, and from regional and local development agencies (such as Regional Development Agencies)
Specialist	Demand comes primarily from specific areas of professional or business practice (such as business, medicine or music), or from special interest groups (such as oriental studies)

2.4   Diversity in institutions' market strategies

Bringing these elements – revenue/business streams, desired positioning and strategic directions – together produces a distinctive market profile for each HEI, which summarises the differentiated portfolio position that each is looking to build. Table 4, below, shows a typical profile for a large civic university looking to strengthen its international research standing and to reduce its dependence on publicly funded undergraduate teaching.

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[6] Ranges between lower and upper quartiles in each business stream for all UK HEIs. The crude ranges are much greater, but are distorted by individual institutions with unique characteristics. We are grateful to HEFCE for their help with this analysis.

Table 4: Illustrative business mix and ambitions for a large civic university

Business stream	Public research	Private research	Public teaching	Private teaching	Academic enterprise	Other services
CURRENT IMPORTANCE (% of current income)	25	10	35	5	15	10
DESIRED IMPORTANCE (% of future income)	25	15	20	15	20	5
MARKET POSITIONING	International	International	National	International	National	Local
STRATEGIC DIRECTION	→	↑	↓	↑	↑	↓

Our survey of institutions confirmed that this framework offers an effective tool for capturing the distinctive business profiles of HEIs in more depth and detail than the commonly used sector mission groups. While published revenue data can provide only a snapshot of current positions, the framework can be used for a more forward-looking understanding of institutions' strategies.

We asked a sample of institutions[7] about their plans for future growth and strategic rebalancing across the six core business streams, and received the responses summarised in Table 5:

Table 5: Institutions' plans for changes in their business mix

How do you expect the mix of activities provided by your institution to change in 10 to 15 years' time?	Grow	Maintain	Reduce
Publicly funded research	29 (67%)	9 (21%)	5 (12%)
Privately funded research	33 (77%)	8 (18%)	2 (5%)
Publicly funded teaching	21 (49%)	18 (42%)	4 (9%)
Privately funded teaching	36 (84%)	7 (16%)	0 (0%)
Academic enterprise	39 (90%)	4 (10%)	0 (0%)
Other services	19 (44%)	19 (44%)	5 (12%)

Source: Oakleigh Consulting/PA survey of English institutions

There is clearly a level of optimism in these responses which may not be justified by a more hard-nosed assessment of the potential for long-term growth in each market area. The prospects for two-thirds of institutions being able to grow their revenues from publicly funded research, for example, are debatable. It was not our brief to question institutions' declared strategies. It is, however, clear that there will be fierce competition among institutions to grow revenues and shares in each market

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[7] These questions were added to an online survey conducted by Oakleigh Consulting Ltd; 43 responses were received.

segment, making it especially important that they develop the services and capabilities needed to succeed in their chosen market strategies.

While no two institutions displayed the same business profile, even within cognate mission groups, some distinctive patterns emerged from the diversity, in terms of the relative emphasis given to the different business streams, the synergies which institutions were seeking to build across them, and the capabilities that institutions identified as critical to their success. Four examples of market profiles for particular groups of institutions illustrate the diversity of the sector (see Figure 5). While each of these groups maintains high quality provision and presence in each of the six main market segments, the relative importance of the different business streams varies greatly between them.

Figure 5: Illustrative examples of institutional market profiles
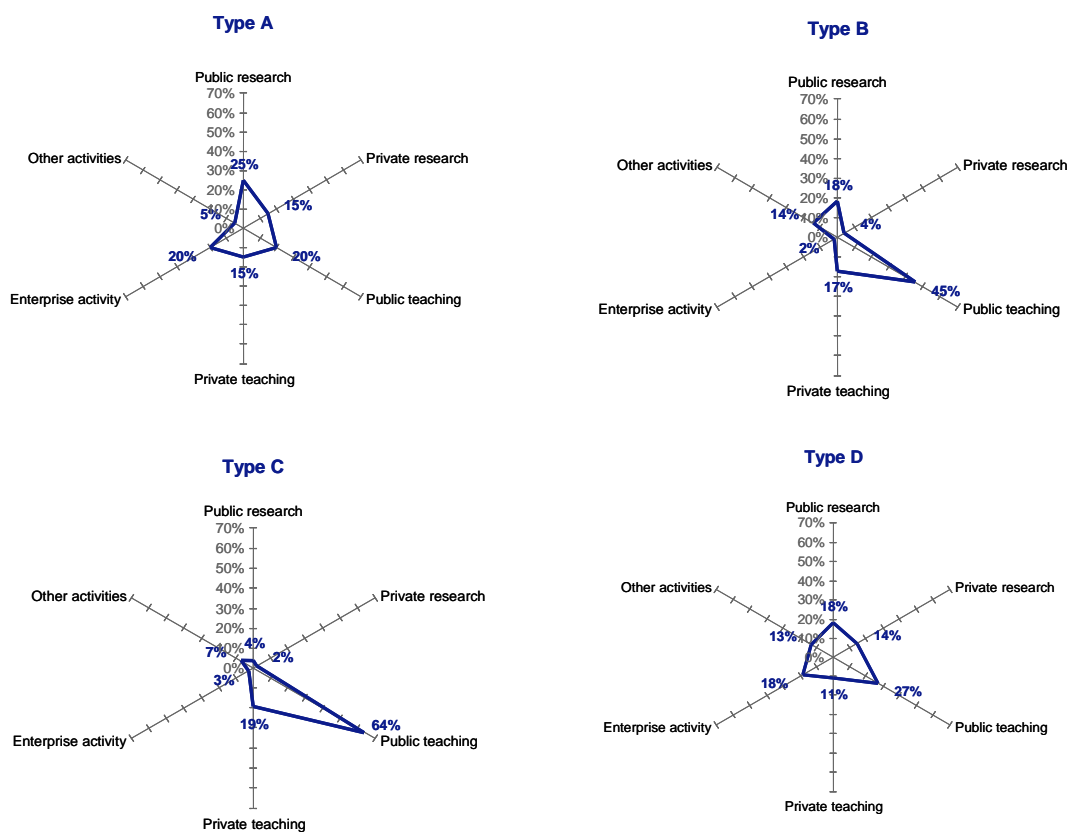
2.5   Relating activities to markets

Clearly, the kinds of activities and services funded or purchased by the various client groups for higher education (including government funding agencies) will differ greatly between the different business streams, and indeed within them. Institutions therefore undertake a diverse range of quite different activities under the broad banner of HE, each directed towards different market segments and client/stakeholder groups. As we have already seen, there is and will be great diversity in different institutional strategies, and hence in the organisational capabilities and supporting workforce requirements within this general framework. We have identified (through discussions and workshops with sector representatives) five distinct categories of HE activities, each of which maps to the core revenue streams as described here:

- Primary research – the development and dissemination of advanced research results into the public domain, contributing to the development of national and international intellectual capital; funded mainly from the public and (some) private research streams

- Research-led teaching – discipline-based undergraduate and postgraduate programmes taught by staff who are actively involved in public and private research, with the style and content of teaching strongly influenced by current research; funded mainly from public teaching sources, plus overseas student fees

- Professional formation – teaching provision explicitly geared to preparing or developing students for work in areas of professional practice, often including substantial elements of practical, work-based experience; funded partly through public teaching grants and also through private individual and corporate fees and contracts

- Research-based solutions – development of practical and commercial solutions to technically complex problems posed by business or government clients, which draw directly on advanced research findings; funded mainly from business and government clients for academic enterprise, and also some private research

- Specialist and niche provision – applied teaching (often mainly postgraduate) and research services directed towards particular areas of practice such as creative arts, agriculture or bio-medical specialities; variously funded from each of the core streams, depending on the institution.

Table 6 indicates how institutions typically match their core activities to market segments, again reinforcing the diversity of business models already seen across the sector, which we firmly believe will become even more marked over the next decade and beyond. (Note – there are wide variations in the importance of 'other (non-academic) services', but these variations tend to be specific to individual institutions rather than reflecting different business models).

Table 6: Matching of HE activities to market segments

Market focus Business focus	Public research	Private research	Public teaching	Private teaching	Academic enterprise	Other services
Primary research	✳	✳				
Research-led teaching	✳		✳			
Professional formation			✳	✳		
Research-based solutions		✳			✳	
Specialist/niche provision	✳			✳		

2.6   Building capabilities for strategic priorities

As we have stressed, most HEIs will seek to maintain some presence in each of the core market areas, although the balance and priorities will be different between institutions and sometimes between schools or departments within an institution. The challenge, therefore, is to develop the right portfolio of organisational capabilities supported by the institution's workforce, within a clearly articulated corporate identity, mission and academic/business strategy. The following tables (Tables 7-11) draw out the particular market demands that must be addressed by institutions seeking to succeed through different combinations of HE services, and indicate the crucial capabilities required to meet those conditions.

Table 7: Drivers and critical capabilities for primary research

Business focus	Critical environmental developments	Critical success factors
Primary research	- replacement of the RAE methodology - policy emphasis on STEM subjects - levels and security of QR funding - RC emphasis on collaborative and 'relevant' programmes - international competition for research talent - e-science and technology-based collaborations - open source research publication - student expectations re teacher contact, etc	- attracting and retaining world-class researchers - achieving top rankings in RAE/Research Excellence Framework (REF) and international league tables - securing very large research contracts - recruiting, developing and retaining PhD students and research assistants - maintaining links with world-class universities and research institutes - providing excellent teaching, without 'distracting' research efforts

Table 8: Drivers and critical capabilities for research-led teaching

Business focus	Critical environmental developments	Critical success factors
Research-led teaching	- decline in 18 year-old home cohort - changes in T funding criteria (emphasising widening participation, co-funding) - concentration of R funding on top performers - impacts of changes in 14-19 schools provision - uncertainties over international student demand - shifting demand away from 'academic' subject teaching - meeting expectations for student experience - costs of high-contact teaching models	- maintaining viable research capabilities across a range of disciplines - maintaining peer and professional reputation of teaching quality - providing excellent student experiences, matched to changing expectations - ensuring the academic and economic viability of taught programmes - updating learning and teaching strategies in line with current best practices - maintaining an attractive working and learning environment

Table 9: Drivers and critical capabilities for professional formation

Business focus	Critical environmental developments	Critical success factors
Professional formation	• scale and terms of public funding for employer-linked provision • levels and nature of employer demands for undergraduate and CPD provision – scope for co-funding • levels and patterns of individual demand for vocational formation • competition from private providers and further education (FE) colleges	• becoming agile and responsive to employer and professional requirements • staying abreast of current practice and developments (eg applied technologies) • providing offers and modes of delivery tailored to the diverse needs of students • developing co-productive partnerships and collaborations with employers and others • ability to remain credible in relevant areas of professional practice • organisational agility to respond to short-term nature of employment-based demands

Table 10: Drivers and critical capabilities for research-based solutions

Business focus	Critical environmental developments	Critical success factors
Research-based solutions	• government encouragement for applied R&D and innovation • growth in demand for 'useful' knowledge • globalisation of competition for knowledge services • rise in number and range of competing service providers • modular, 'bite-sized' patterns of demand • 'cross-cutting' nature of market requirements • impacts of open source technologies and networks • constraints on publication of research and IPR	• credibility in applying research-based expertise to 'real world' problems • entrepreneurial skills to identify and engage with business and government clients • agility to respond quickly to new opportunities and to combine capabilities • engagement with relevant technologies and sector-based ICT systems • flexibility to maintain long-term viability through portfolio of short-life offers • balancing business-led quality criteria with requirements for academic assurance

Table 11: Drivers and critical capabilities for specialist and niche provision

Business focus	Critical environmental developments	Critical success factors
Specialist/niche provision	• growth in creative businesses and media sectors • changing nature of agriculture/land business • increased competition for scientific research niches • pressures for large-scale research capabilities	• maintaining excellent relationships with target areas of practice • sustaining reputation for leading-edge expertise in targeted areas • minimising overheads and indirect costs through all possible means • maintaining clear and consistent market positioning, avoiding 'drift'

Business focus	Critical environmental developments	Critical success factors
	• need for enterprise culture alongside vocations • costs of small-scale, intensive teaching models • proportionally higher regulatory burden for small institutions	• adapting rapidly to changing patterns and focus of market demand

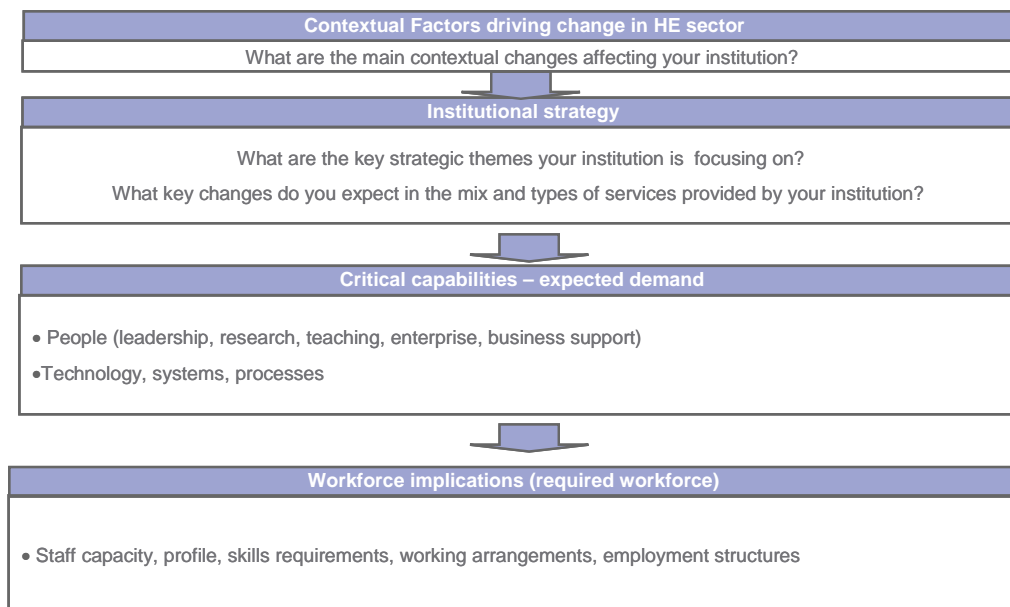# 3   The future workforce implications of different strategic models

This section looks at the demand for staff that will arise from the different strategic approaches being adopted by HEIs for the coming 10 to 15 years.

3.1   Framework for analysing workforce implications of strategic changes

3.1.1   Structure of the framework

In this section of our report we propose a structure for exploring the workforce implications of the different strategies adopted by HEIs, using the strategic template described in the previous section. The steps in the mapping of workforce implications to institutional strategies are shown in Figure 6. A particular institution will typically have one or two core strategic themes that they are focusing on in the next 5-15 years, such as becoming an international research centre of excellence or being market leaders for the student experience. These themes will then drive particular requirements in terms of capabilities, which themselves have workforce implications. These implications cover choices about the numbers (capacity) of staff and their skills, working arrangements, staff profiles and employment structures of those staff.

Figure 6: From strategy to capabilities to workforce implications

Contextual Factors driving change in HE sector
What are the main contextual changes affecting your institution?

Institutional strategy
What are the key strategic themes your institution is focusing on?
What key changes do you expect in the mix and types of services provided by your institution?

Critical capabilities – expected demand
• People (leadership, research, teaching, enterprise, business support)
• Technology, systems, processes

Workforce implications (required workforce)
• Staff capacity, profile, skills requirements, working arrangements, employment structures

3.1.2   Critical capabilities

Our key hypothesis is that over the next 10 to 15 years there will be much greater differentiation between HEIs. Institutions will adopt distinctive strategic positioning, which in turn will require critical organisational capabilities, as outlined in Table 12 below.

Table 12: Critical capabilities for different strategic priorities

Strategic priorities	Primary research	Research-led teaching	Professional formation	Research-based solutions	Specialist
Market ambition	World-class reputation for primary research (especially in STEM areas)	International recognition for research-informed education	National and sector-based development of research-informed practice	Research-based solutions for national and international clients	Development of research-informed practice focused on specific niche sectors
Critical capabilities	Assembling and developing field-leading research teams Maintaining first class research facilities Selective recruitment of most academically able students	Highly respected academic faculty with public profile Excellent student experience and results Selective recruitment of highly able students	Recognition from professional and sector stakeholders Vibrant community of academics and practitioners Provider of choice for aspiring and current professionals	'Blue chip' client list and relationships Partner of choice for innovating business organisations Maintaining flow of project-based income	Recognition as sectoral centre of excellence Excellent relationships across focus sectors Agility and foresight to avoid downturns in niche business

These critical capabilities include the different elements that an organisation needs to deliver its strategy – systems and technology, processes, management controls – and, most importantly in higher education, the people capabilities required to enable an organisation to deliver its strategy. In terms of people capabilities, these include the following:

- **Leadership, management and governance capabilities** – having the right number of leaders and managers, with the right skills and knowledge to set the direction for the future, drive the implementation of institutional strategies and ensure effective management of corporate risks

- **Research capabilities** – having the right number of staff conducting research, with the right skills and knowledge. This involves academics, but also principal investigators, research assistants, post-doctorates, and technicians and academic enterprise staff involved in research projects

- **Teaching and learning capabilities** – having the right number of staff developing and supporting teaching activities, with the right skills and knowledge. This includes academics, but also other roles such as PhD students, assistant lecturers, visiting teachers, and technicians involved in learning support

- **Enterprise capabilities** – having the right number of staff developing both academic enterprise activities and non-academic commercial activities (such as renting facilities). This includes dedicated roles, such as intellectual property (IP) lawyers and business development managers,

but also delivery of specific academic enterprise projects by the research and teaching capabilities mentioned above

- **Business support capabilities** – having the right number of staff running the internal functions of an institution, such as HR, finance, estate, libraries, student support and career advice centres, with the right skills and knowledge.

3.1.3   Five dimensions to the specification of workforce requirements

When looking at the workforce implications of institutional strategies, we have used five key dimensions:

1. **Staff capacity** – both the numbers of staff required and the strategy to ensure that those required staff numbers are in place

2. **Staff profile** – the profile of the workforce in terms of age, gender, nationality, race, religious beliefs, sexual orientations and disability

3. **Skill requirements** – the skills that are important amongst this staff group and the underlying changes required to meet the strategy (eg more business engagement skills, greater commercial awareness)

4. **Working arrangements** – changes required to the day-to-day working arrangements in order to meet the changing nature of student, business and research interaction within and beyond the institution (eg more flexible working hours, cross-discipline team working)

5. **Employment structures** – reflect the required changes in the terms and conditions and HR management structures as a result of the changing shape of the institution (eg changes in terms and conditions, reward structure, revised pension arrangements).

There is a limited range of options for addressing the changes required in staff capacity to support particular institutional strategies; responses to changing staff capacity needs have accordingly been developed under the following six headings:

1. **Recruit** – active recruitment of new staff into area of activity (eg recruitment of leading researchers in an important field of research)

2. **Develop** – focused development efforts to ensure that current staff have the required skills to operate in this area, in light of the new demands (eg leadership development activities for institutional leadership team)

3. **Retain** – incentives for key staff to remain with the given institution (this might take the form of improved career/succession planning, performance-related rewards, changes to employment structure etc)

4. **Borrow** – short-term/interim employment or use of contractors or consultants to resource time-bound area of work. It may also take the form of joint venture activity such as linking with a medical school, another institution or an external business

5. **Reduce** – planned reduction in numbers, via voluntary or forced redundancy

6. **Outsource** – development of shared services activity (eg for payroll) or outsourcing of services (eg catering). This may include a requirement to TUPE[8] staff to another employer.

3.2 Leadership, management and governance capabilities

The need for strong leadership, management and governance capabilities is a common requirement whatever the strategy, reflecting the importance of clear vision and direction for differentiating HEIs in an increasingly competitive marketplace. Leadership involves setting the direction for the future and driving implementation of future strategy, whereas management focuses on determining the best use of today's resources to fulfil the strategy; governance ensures proper accountability and transparent decision-making and risk management in the conduct of an institution's strategy.

Leadership, management and governance implications arise for four key groups:

- **Governing bodies** – HEIs will increasingly be faced with the difficult challenge of responding to a volatile market whilst remaining true to their social responsibility. To quote one vice chancellor involved in our research study: *"Leaders in higher education will have to make tough choices but responsible choices".* Proper accountability and openness in the conduct of an institution's strategy will therefore be all the more crucial. It is likely that institutions will increasingly look to recruit external governors from a range of backgrounds, not so much to reflect the diversity of the key 'markets' they serve, but more to widen the pool from which they can gather excellent governance capabilities.

- **Senior leadership teams** (VCs, deputy/pro-vice chancellors (PVCs), etc) – there will be a need for a broad strategic team at the most senior level that can shape and deliver a 5-15 year strategic plan that fits with the branding and positioning of the institution. There are many examples of the 'professionalisation' of leaders over the last decade, with senior officers needing to become better equipped to deal with complex finance, people and change management issues. Going forward, it is likely that senior leaders will be faced with the need for new skills to help them manage an increasingly volatile and complex environment, particularly in terms of being able to manage uncertainty, deal with complexity, and manage corporate risks. Equally, the importance of human capital as a key differentiating capability will put greater onus on senior leaders to look at how human behaviour (their own and that of others) affects the functioning of their institution – requiring understanding of emotional intelligence and cultural drivers, managing conflicts, and dealing with power and influence. Several HEIs we spoke to also emphasised the future role of senior managers as 'ambassadors' for their institution, with skills associated with building institutional collaborations and complex partnerships becoming increasingly important.

- **Academic leaders** (deans, heads of schools, heads of faculties) – the need for management and leadership skills amongst the senior academics responsible for setting the direction of their departmental/discipline area within the institutional strategy will require combinations of academic credibility and understanding (be it focused on practice or on scholarly activities) with resource management skills, particularly in the critical areas of people management and financial awareness.

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[8] TUPE refers to legislation for Transfer of Undertakings (Protection of Employment) Regulations 2006.

- **Heads of business support functions** (eg HR director/finance director/director of estates; function heads) – they will be characterised by a need to ensure greater alignment of their functions to institutional goals, greater financial accountability and higher levels of professionalism within the support function. We would expect this to be the continuation of current trends which have already seen more finance directors, and in some cases HR directors, reporting directly to the VC or principal, and with registrars becoming increasingly similar to chief operating officers in their ways of operating.

These skill demands might lead to a change in the traditional job profile of HE leaders, with institutions defining more posts in terms of leadership capabilities, and possibly moving to more permanent appointments (especially regarding deans/heads of department and PVCs).

We would also expect to see the current trend of leaders coming from a wider range of backgrounds to continue, with more institutions looking for leaders with proven experience and performance in other organisations – reflected in a cadre of mobile, professional managers, often moving into and out of HE. However, we do not anticipate a 'managerialisation' of HE. It is institutions' ability to combine a balance of competences across academia and business support which will be key to their success.

3.3 Key workforce implications common to all strategies

A number of workforce implications are common across all patterns of strategic development, some of them affecting academic staff, but mainly affecting professional services and support staff.

3.3.1 Academic staff

Most of the academic workforce implications we have identified are particular to academic service strategies (primary research, professional formation, etc). However, five impacts are seen as common across all strategies:

1. **General diversification of the range of activities undertaken by academic staff** – the financial pressures on institutions, and the possible removal of the cap on fees going forward, are making it essential for institutions to attract and retain students through excellence in teaching. Academics are increasingly expected to balance research, teaching and enterprise activities. This diversification in the range of academics' activities will drive more focus on workload allocation, performance management and optimal use of supporting resources and systems to maximise academic productivity.

2. **Greater alignment of academic working preferences to student demands and needs** – student satisfaction and the quality of students' learning experiences, for both national and international students, are becoming an increasingly important strategic issue for all institutions. As institutions introduce technologies to enable students to work in ways and at times that suit them, there will be pressures on academic staff to be available online outside of timetabled hours.

3. **Greater focus on interdisciplinary work, in both research and teaching** – there is a growing demand for cross-disciplinary teaching and research projects, driving a greater requirement for collaboration and cross-faculty provision and projects. This is particularly so in the application-focused services: professional formation and research-based solutions.

4. **Greater resource management of academics** – the need to align academic activities with institutional strategic priorities is likely to lead to more formal planning of academic activity, demands for greater flexibility, and increased measurement and direction of the whole balance of research/teaching/academic enterprise.

5. **More strategic approach to the equality and diversity agenda** – the last decade has seen a growing focus on the equality and diversity agenda, in particular for academic staff, much of it driven through regulatory requirements. However, the next 10 to 15 years might see more institutions looking at the 'business case' for equality and diversity. In particular, the importance of institutions investing in specific categories of staff will bring attrition rates among particular groups – women in particular – to the fore. Lowering women academics' attrition rate will be key to avoiding a loss of valuable resources. The competition for students will also put greater onus on institutions to meet the needs of a diverse student population. Disabled students, students from different ethnic groups, and gay and lesbian students all represent significant market segments. The ability of institutions to address the needs of these groups will be key to attracting them. There is also a significant reputational risk for those institutions that may not be managing these issues well.

3.3.2 Workforce changes affecting all business support staff

There are several workforce implications common to all staff supporting internal business functions such as HR, finance and estates:

1. **The shift in professional service roles from transactional services to a more strategic approach to business support**

   – Higher levels of skills will be required in professional services to support wider changes across the institution. This is fuelled by the need for more efficient running of institutions and by the increasing complexity of running such institutions, with a more varied and demanding student population and a diverse and also increasingly demanding workforce. For example, in HR this includes skills in leadership development, succession planning, specialist recruitment services and different remuneration models (see Figure 7 below for an example of pressures for HR).

   – There will be an increased focus on providing a high quality service, both in terms of internal customers, such as academics, and in terms of their contributions to aspects of the student experience. This is supported by a greater focus on performance management, to ensure alignment of professional services to the strategic objectives of institutions, and to assess the 'value added' by professional services. This is particularly important among those staff most clearly aligned to core academic/business activities (eg business development staff).

   – There will be a greater movement to more strategic business partnering models, to provide a single point of contact for a department and a route to the required specialist staff, as well as to equip managers in doing their jobs, as HEIs put a growing emphasis on the concept of the 'hybrid' manager role: someone who understands key HR, finance and other business support issues, and can help to address them as part of their day-to-day role.

Figure 7: Shift from transactional to transformational role in HR[9]
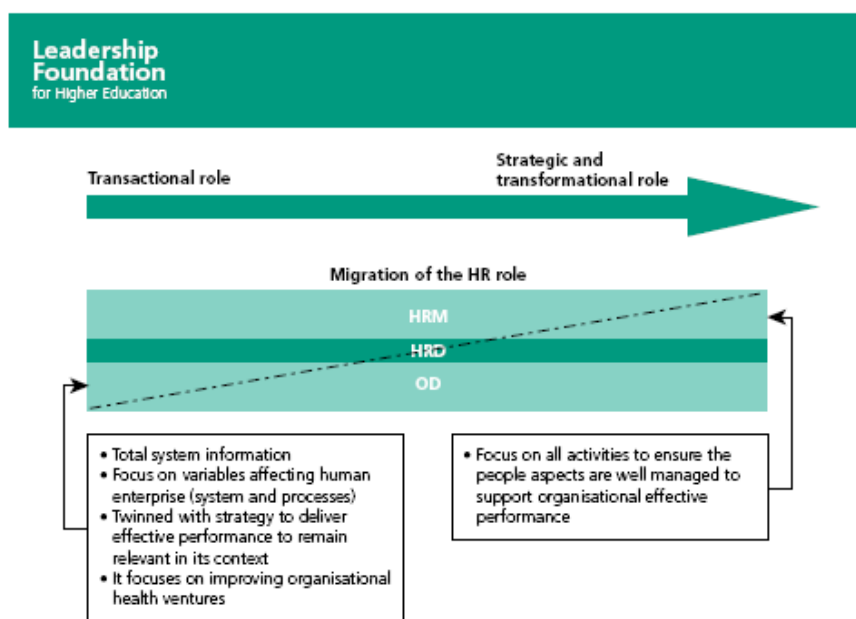
2. The importance of cost reduction in support services

– Efficiency and cost saving in support services are seen as essential, with an emphasis on 'higher quality, lower cost' as twin objectives. In parallel with the drive to diversify their income, HEIs will continue to strive to reduce their costs. In particular, they will continue to improve their internal processes through better use of technology to automate common processes such as course and student administration, in order to lower costs. Institutions will also be looking at more cost-effective ways of running support services. This is being achieved through centralisation of common resources, a growth in shared services and review of the 'make or buy' (outsourcing) decision. One institution we interviewed reported that increases in pension costs make outsourcing an increasingly attractive option in financial terms. It is likely that a greater number of HEIs will consider shared services and outsourcing of non-core services in the future.

3. Greater flexibility and business alignment of support staff to support more flexible academic and student populations

– Students' demands, particularly from part-time students, for extended access to staff and facilities and for more flexible provision such as evening and weekend classes, will continue to drive a need for flexibility in the working practices of academics and support services. Asked about what changes they expected in the way their institutions deliver their activities, 81% of respondents to the HR survey mentioned changes in mode of teaching (full-time, part-time, e- and distance) and 67% mentioned operating hours (eg extended hours). More radical changes to working patterns may arise from institutions rethinking their approach to the three-term academic year and moving towards the continuous year-round operations that their clients expect.

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[9] UPA and CIPD, 'Leading HR for high performance in HE' (September 2008).

– The working hours and ways of working of the business support staff who support both academics and students will need to become more flexible. The green agenda might also drive more flexible ways of working, such as remote working.

4. Movement of technicians into teaching and research roles

– The technician role is increasingly growing to include the demonstration of concepts and theory, and is ultimately moving towards an active teaching role, away from 'pure technicians' roles. This increased role in the learning experience will put an onus on technicians to be up to speed with latest technologies and developments in their specialist field.

3.3.3 Workforce changes affecting specific categories of business support staff

Demand for different categories of business support staff will vary going forward. Demand for specific skills will increase, particularly around the strategic management of key business functions, the management of knowledge and the administration of grants. On the other hand demand is likely to reduce for low-skilled administrative activities, which can be enhanced or replaced through process improvement and new technology developments. Equally, we are likely to see a wider use of shared services and outsourcing for 'generic' capabilities, such as payroll administration, catering and cleaning, as institutions look for ways of reducing their pay and pension bills.

We outline below the trends in the demand for specific business support categories:

- **Senior managers in business support functions** – given the focus on more strategic roles and the management of more complex processes (eg procurement), institutions will require more highly skilled business support managers.

- **Business support staff** – such as HR advisors, accountants and finance advisors will also see a greater shift in supporting business partnership, more collaborative and customer-focused ways of working, more project-based ways of working and constant adaptation to new processes. Their employment patterns are likely to become more diverse, with a greater number of institutions considering shared services (internally and possibly with other external organisations).

- **Staff supporting grants administration** – the increased requirements for accountability associated with public funding, as well as the need to support academics in the administration of a range of grant applications, will be a key area of focus for clerical staff. Roles such as grant administration officers will become increasingly important. Business-related skills, such as problem-solving and analytical skills, financial skills, writing business cases, and information and communications technologies (ICT) skills, will be increasingly important, whereas traditional administrative skills (eg typing) will become less important.

- **Staff involved in students' support** – from career advice to student financial advisors, to knowledge-related roles such as librarian and information specialists, as key 'front-line' staff the impact of their role will grow. We would expect the demand for these roles to remain stable, and their skills and working patterns to evolve as described above: more flexible working patterns to reflect changing students' demands, and higher levels of skills.

Demand for other categories of support staff is likely to be affected by a drive to enhance processes and to reduce costs:

- **Support administrators performing processes that can be enhanced through technology, or performing generic processes**, such as payroll administration, which could be shared with other organisations, are likely to see their numbers reduced and their employment patterns change, with greater use of outsourcing and shared services.

- **Manual staff**, particularly in catering, cleaning and security. One element of uncertainty going forward is how institutions will balance the drive for greater cost efficiencies with a focus on enhanced student experience. At a time when the majority of HEIs are focusing on the students' experience as a key differentiating factor, more attention might be given to the professional development of manual staff. Manual staff can represent some of the most frequent interfaces that students have with HEI staff. Their attitude and professionalism will have a key bearing on how students perceive the quality of the services provided. Equally, at a time when many HEIs are looking to maximise their estate through activities such as renting and conferencing, the professionalism and quality of services provided by manual staff will have an important bearing on an institution's success.

3.3.4   Greater diversification and permeability of roles

The growing diversification of HEIs is creating a double trend which will significantly affect the profile of the HE workforce in 10 to 15 years' time:

- **Greater diversification of roles** – given the different types of research, teaching, enterprise and business support capabilities required to support different institutional strategies, what it means to be an academic, or a technician, or a business development officer will similarly differ between an institution focused on professional formation and one focused on primary research. Therefore, there will not be one single taxonomy of roles across HE.

- **Permeability of roles** – linked to the first trend is a trend towards greater permeability of roles. Different balances of capabilities required by different business models will increase the development of 'hybrid' roles, where people combine research, teaching and enterprise activities.

3.4   Workforce implications specific to service-line priorities

In addition to these common requirements, which apply to any institutional business model and strategy, there are other workforce implications and requirements that are more specific to the different strategic models identified in Section 2. The following section explores the patterns of capabilities requirements for institutions focused around particular academic activities within their wider strategic portfolio.

3.4.1   Primary research

Peer recognition for excellence in research is crucial to success in primary research, although it is increasingly important that research is managed in more cost-effective ways and focuses on clear funding priorities.

Capacity: The main mission of institutions focused on primary research is the pursuit of new knowledge and the production of high profile research results. It will also be about maintaining peer group networks and securing substantial research funding. The success of this strategy will depend on institutions' abilities to recruit and retain the best research capabilities. This will include 'research stars', who get international recognition for the quality of their primary research and can attract and build strong research teams. It will also include the strategic 'poaching' of top research teams, the international recruitment and retention of overseas researchers, exchanges across the UK sector and internationally, and the recruitment and retention of PhD students. Equally, primary research institutions will need to attract and retain good technical support staff whose main function will be to support research teams, and who can also assist in teaching and support for junior researchers and students.

Institutions in this category are unlikely to maintain 'teaching-focused' academic roles. Teaching in these institutions will focus on research-based learning and on developing the next generation of researchers, and teaching demands will have to be balanced with research priorities.

Academic enterprise capabilities in such institutions are likely to be focused primarily on the protection and exploitation of the intellectual property rights (IPR) generated as a spin-off from this core activity rather than, say, accepting commissions to resolve external client-specified problems. Academic staff will therefore need high quality advice and support on IP management, licensing, ventures and similar activities. Ensuring cost-effective management of research resources, optimising success in bidding and contracting, and maintaining high quality research and learning/teaching infrastructures will also be key capabilities for primary research services.

Staff profile: The staff profile for primary research services will be more international in its mix, given the need to attract the best researchers. It will ideally also have a younger research-focused population, through the accelerated progression and career path for younger academics.

Skills: The ability to develop and promote the primary research of the institution, in particular the ability to relate primary research to the strategic priorities identified by Research Councils and government agencies, will be key. Financial skills and business case writing skills will also be important to support the winning of bids and grants.

Working arrangements: Whilst working arrangements of research-focused academics are likely to remain full-time a key requirement for research-focused institutions will be the ability to direct their researchers to institutional priorities – specifically to reflect external funding priorities from government agencies and private research sponsors (charities, EU, business). This will be key to the sustainability of this strategy, and will challenge the traditional freedom of research-focused academics to choose their own areas of research.

Whilst more senior academics in primary research-focused institutions typically have to commit limited hours to teaching, all of them will be required to deliver some teaching. The increased competition for students, particularly in a situation where fees might become uncapped, may require some 'star researchers' to be teaching undergraduate courses to attract and retain students.

Employment structures: Researchers, as well as senior technicians and a small group of staff dedicated to supporting the protection and exploitation of intellectual property rights, are likely to be on permanent contract, with the following characteristics:

- A clear focus on the performance management of research outputs, with 'under-performing' researchers being redeployed. It is also likely that a proportion of rewards will be linked to the quality of the research outputs. Performance models will also need to recognise and reward excellence in teaching alongside research results, given the importance of students' fees as a revenue stream

- Career progression will be associated with talent management and performance, with the accelerated progression of the most successful researchers, irrespective of age

- Due to the need to diversify income streams, research-focused institutions will be looking at ways of incentivising staff for IP commercialisation and academic enterprise activities.

3.4.2 Research-led teaching

Institutions focused on this model will sustain relatively few 'research-only' roles or 'teaching-only' roles. Most academics will be expected to do both research and teaching. The emphasis will be on balancing excellent research outputs with responsiveness to students' market demands.

Capacity: The focus will be on attracting and retaining good researchers who can deliver both research and teaching. The recruitment of academics will be targeted at the subject areas with strong teaching demand – which may lead to difficulties in sustaining some less popular subject areas. The workforce size and composition (in terms of subjects) in this model will be very sensitive to changes in students' demand.

- Research capabilities in this model will focus on producing well-cited research outputs, high research assessment scores in targeted areas, maintaining current scholarship in fields of speciality, and on securing a steady flow of research funds. Teaching will focus on developing and delivering a research-informed curriculum. Given the importance of maintaining high quality student demand, teaching will also focus on ensuring effective student interactions, and on maintaining the highest quality ratings from the Quality Assurance Agency for Higher Education (QAA) and satisfaction surveys.

- Whilst all academics will be expected to contribute to academic enterprise and business development, institutions pursuing this model will also seek to recruit dedicated knowledge exchange/business support staff, whose key focus will be on optimising research and teaching resource allocation, building the brand and market profile of the institution, supporting research grants applications and managing multiple funding streams. They will also play a key role in assessing and enhancing student services and support and in attracting students, in particular postgraduates.

Staff profile: Given the importance of teaching in this strategic model, staff – particularly academic staff – will need to understand the needs of a diverse student population, and be equipped to respond to these needs. A key condition for success will be a continued ability to attract highly able students, and therefore to recruit staff from as wide a market pool as possible.

Skills: Combining research skills and teaching skills will be key to successful research-led teaching services. In addition, collaboration skills will increasingly reflect the growth of interdisciplinary research, and the growth of demands from students for cross-discipline courses. Technicians in these institutions will need to combine leading-edge technical skills to support the development of research, and learners' support skills to support the teaching experience.

Academic enterprise staff will be supporting academics and technicians in identifying funding opportunities, in processing grants, in marketing the offering of the institution, and in developing new propositions.

Working patterns: Working time will need to become more flexible to reflect demands from students, including part-time students, for wider access hours. Given the need to combine teaching and research, workload management will become increasingly important.

Employment structure: Staff engaged equally in research and teaching will be the key differentiating factor for this type of institution – therefore such staff are likely to remain on permanent contracts – but there will be a need for greater flexibility within these contracts, particularly to react to changes in students' demands.

3.4.3   Professional formation

The main implication of this model for academics is the importance of excellence in teaching, built upon experience and knowledge of the world of practice. There are few research-only roles in this model. Research is used to inform the curriculum and to maintain presence in leading-edge practice.

Capacity: The key focus for this model is on attracting excellent teachers, who can develop the next generation of practitioners and support the continuing development of current practitioners, and who can work in partnership to develop new best practices and capabilities. This will often mean attracting teaching staff – academics, but also technicians and learner support – from areas of professional practice, often in their mid-careers (eg social work, health, architecture, civil engineering). Research in this archetype will be used to develop insights into emerging and new professional issues, and to contribute to specialist/profession literature.

One major challenge for institutions offering professional formation services is responding flexibly and rapidly to changing market demand. They will need dedicated enterprise and business development staff who can develop partnerships with key employers, to help them define their continuing professional development (CPD) needs and provide an adapted curriculum, and who can maintain relations with key professional stakeholders and enable exchanges of staff with different areas of practice.

Staff profile: The wide range of students attracted to this model – combining 'traditional' 18-21 year olds, CPD, part-timers, mature students, etc – will require a diverse workforce, across all groups of staff interacting with students: from manual staff to career advisors to technicians to academics. This is not about a simple equation of matching the background of staff to students' backgrounds. This is more about making sure that staff are equipped to understand and respond to the needs of students, which may, for example, involve language skills and cultural awareness. The diversity of the student

population will vary with the particular subjects, and also with the particular location of an institution. Abilities to fully engage with the local community – or, to use the word of one vice chancellor, the 'permeability' of institutions – will be an important element in the success of this strategy.

Skills: Key to working as an academic delivering professional formation services is knowledge and experience of the world of practice – and maintaining links with current practice. The reliance on students' fees as a primary source of income means that teaching skills are essential to ensure a good student experience. Linked to that will be ICT skills/use of new technologies to support more flexible learning.

Academics in this model will also need to have a good understanding of the needs of both students and the world of practice in order to help develop tailored offerings. They will require good collaboration skills, as many offerings will be for interdisciplinary work. Accreditation for excellence in teaching and for the 'fitness to practise' of graduates will be critical requirements.

Technicians involved in learners' support will need knowledge and experience of the latest developments and technologies in their field of practice. Their understanding of the world of practice will make them a key contributor to business development activities.

Academic enterprise staff will need to combine a broad understanding of the curriculum across the different parts of the institution with good business acumen and entrepreneurial skills. They will also need to drive collaborative working across the institution to ensure the development of an adequate curriculum.

Working arrangements: Staff in this model will have to work flexible hours, in order to meet both students' and businesses' needs. Flexible hours will also enable them to combine teaching, involvement in professional practice, and developing and maintaining relationships with key employers and professional bodies. It is likely that institutions developing this model will rely heavily on visiting teachers/part-time academics who have a dual career in academe and in business.

Employment structure: Professional formation services require new working models to support business-led delivery, in particular a flexible academic contract to allow both for adjustments in academic numbers in light of varying demands, and for rewarding academic staff for different contributions, in teaching primarily, but also in supporting academic enterprise and business.

3.4.4   Research-based solutions

Research-based solutions are delivered to meet the specific needs of national and international clients, typically working on a contract and project basis. A key challenge for this business model will be how to balance activities similar to those provided by commercial professional services operators with remaining a 'proper' higher education institution.

Capacity: This model may open opportunities for 'professors of practice', reputable in their professional field and highly responsive to specific business needs, supported by technicians with a strong experience of practice. Teaching in such institutions may focus more on action-based learning and case studies, on facilitating knowledge exchanges among students and on keeping abreast of current issues and needs. Research activities will focus on producing contract research outputs to

time and specifications, which will often involve cross-disciplinary team working. Maintaining strong links with current academic research and development will also be essential for the solutions offered to remain leading-edge and innovative in the relevant fields of practice.

One key challenge for this model will be flexing the numbers of teaching and research-related staff to the number of 'projects' won by the institution. Having a flexible resourcing model will be key to the sustainability of institutions in this area of the HE market.

Institutions focused on research-based solutions will need dedicated business support staff who understand both implications of leading research and emerging needs of businesses, and who can operate as 'account managers', establishing and maintaining relationships with a range of clients and putting together the right offering.

Staff profile: Credibility and experience in their respective fields of practice will be essential – this will often mean experienced people in their mid-careers, rather than young academics.

Skills: Key skills required for this model will be:

- Knowledge of practice – academics working in this type of institution will need to be interested in sharing their sector experience through teaching and in engaging with businesses and other customers through a range of ways, from CPD to consulting to setting up spin-offs, etc

- Learner support – the quality of the teaching experience will be key to retain and grow students; mature learners in particular often require more support

- Entrepreneurial skills – academics working in this type of institution will need to be entrepreneurial in identifying new projects and potential new clients

- Contract and project management skills – to ensure effective management and delivery of projects.

Working arrangements: Staff in this model will need to work flexible hours, with a particular focus on work-based learning. Equally important will be to develop and maintain close networks with sub-sector businesses/employers and other providers.

Employment structure: This model demands 'researcher-practitioners' who can work both for the institution and in the world of practice. Individual staff may well be employed under specific terms and conditions – working different hours, doing different types of activities. Institutions focused on this market are likely to combine a small core of permanent academics and a larger group of visiting academics paid by course/modules.

Because of the reliance on attracting new business for the sustainability of this business model, it is likely that rewards will be related to the amount of business generated by dedicated business development/academic enterprise staff, and the academics involved in academic enterprise.

3.4.5   Specialist/niche institutions

Specialist institutions are concentrated on the provision of teaching and other activities built around research-based practice, focused on a specific niche market. Attracting leading practitioners from niche sectors will be the key distinctive factor for this business model.

Capacity: In specialist institutions, research and teaching will be interdependent, with both being practice-based and focused on niche areas. Being leaders in their niche areas will be essential to the success of specialist institutions. Partnerships with sector leaders and government sponsors will also be a key driver to attract teaching and/or research funding.

Academic enterprise capabilities will focus on maintaining strong stakeholder relationships, developing cost-effective delivery and operations, and monitoring and adapting to sector/niche developments.

Profile: Specialist institutions will rely heavily on attracting leading practitioners, as both their research and teaching will take place through practice. This may therefore often mean attracting slightly older people in their mid-careers, or in early retirement.

Skills: The main challenge for this model will be remaining or becoming even more specialist as its key differentiator.

Working arrangements: As with other models, there will be a strong need to sustain flexible working arrangements that enable practitioners to combine their professional practice with work as an academic.

Employment structures: Specialist institutions have to deal with the challenges of managing often expensive, specialist facilities. This increases the financial pressure they face and means that they need particularly flexible employment structures to react to changes in demand.

4 The supply of key groups of HE staff in the coming 10 to 15 years

This section looks at the current workforce for key categories of staff as defined by HESA, which we can broadly map against the key capabilities we identified in the previous section.

We have used historical HESA data and have deliberately not extrapolated current trends to predict future supply, for a number of reasons:

- We believe that the development of new and hybrid roles will change the traditional definition of key staff groups

- Supply was felt to be an area that can be influenced by specific actions from both the HE sector and institutions – although we acknowledge that for specific groups such as PhD students there is a time lag in adjusting supply to demand, given the time required to train them.

Caveat: please note that the HESA statistics on ethnicity and disability are sometimes based on limited samples and levels of declaration as not all institutions provide complete information on these questions as part of their HESA returns.

4.1 Definition of key staff categories

The analysis of staff within this section is broken down into eight key staff groups: leaders, research focused, teaching focused, knowledge exchange focused, business support professionals, technicians, business support staff and manual staff.

We have based these on the HESA categories, as outlined in Table 13 below, in order to get reliable historical data.

Table 13: Staff group definitions based on HESA categories

Staff group	Definition
Leaders	For the purpose of this document we have used HESA's categories of 'professors' and 'professionals and managers'. We also include here additional information about VCs and PVCs from independent research studies.
Research-focused academics	For the purpose of this document we have used HESA's categories of researchers and senior researchers.[10]
Teaching-focused academics	For the purpose of this document we have used HESA's categories of lecturers and senior lecturers.[11]
Knowledge exchange/business development staff	For the purpose of this document we have included in this category roles dedicated to knowledge exchange and business development activities, such as: business development managers; IP commercialisation managers; CPD advisors etc. The main statistical source is HEFCE's HE-business and community interaction (HE-BCI) survey.
Business support professionals	For the purpose of this document we have used HESA's 'managers and professionals' category, which includes managers and non-academic professionals, such as HR/IT/finance/estates and facilities managers. Caveat: staff working in professional activities such as marketing/communications and career advisory services are currently included in another HESA category, called 'support administrators' (see Appendix F).
Technicians	For the purpose of this document we have used HESA's category of 'technicians', which includes laboratory, engineering, building, IT and medical technicians (including nurses) (see Appendix F).
Business support staff	For the purpose of this document we have used the HESA category called 'support administrators'. This category includes: student welfare workers, careers advisors, vocational training instructors, and personnel and planning officers; staff in artistic, media, public relations, marketing and sports occupations; library assistants, clerks and general administrative assistants; secretaries, typists, receptionists and telephonists (see Appendix F).
Manual staff	For the purpose of this document we have used the HESA category called 'others'. This category includes: chefs, gardeners, electrical and construction trades, mechanical fitters and printers; caretakers, residential wardens, sports and leisure attendants, nursery nurses and care occupations; retail and customer service occupations; drivers, maintenance supervisors and plant operatives; cleaners, catering assistants, security officers, porters and maintenance workers (see Appendix F).

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[10] HESA's method to classify academic staff with reference to the historical grades professor, senior lecturer/researcher, lecturer or researcher used to be based on grade information. However, a significant increase in the proportions of staff at higher grades has become particularly evident in the past few years, and the 2005-06 HESA new individualised staff records revealed an expected substantial rise in the use of locally determined grades for academic staff between 2004-05 and 2005-06. This led HESA to develop a new method of staff classification based on salary information returned in the HESA staff data collections. For more information on this classification, please see Annex A of HEFCE 2007/36.

[11] Idem

It is worth noting that there is a broad – but imperfect – matching between the eight staff categories we are using here, and the capabilities we defined in Section 3:

- What we defined as 'leadership capabilities' would cut across the HESA categories of 'professionals and managers' and 'professors'

- What we defined as 'research capabilities' would cut across three of the categories outlined above – research-focused academics and technicians and, to an extent, knowledge exchange/business development staff

- What we defined as 'teaching capabilities' would cut across teaching-focused academics, technicians and, to an extent, knowledge exchange/business development staff

- What we defined as 'business support capabilities' would cut across business support professionals, business support staff and manual staff

- What we defined as 'enterprise capabilities' would cut across knowledge exchange/business development staff and, to an extent, business support staff.

4.2   Leaders: current population

We outline below key characteristics of current leaders in terms of capacity, staff profile, current skills sets, working arrangements and employment structures.

4.2.1   Capacity

Summary: There has been a steady increase in the number of senior managers in HEIs, with the majority coming from an academic background.

The size of HEIs' senior management teams has gradually increased over the decades, with a progressive expansion of the numbers of pro-vice chancellor posts. By 2005, there were almost two and a half pro-vice chancellors for each HEI, and around half also had a deputy vice chancellor.[12] Traditionally, vice chancellors/principals and pro-vice chancellors have come from an academic background, whereas registrars have tended to come more from a business support background.

As the HE environment becomes more complex, HEIs will increasingly be in competition with other institutions and other sectors for leadership talent.

4.2.2   Staff profile

Summary: HEIs' leaders are ageing. Although diversity is slowly increasing, leaders tend to be mainly white males.

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[12] Smith, D., Adams, J. and Mount, D. (2007), UK universities and their chief executive officers: the changing role of pro-vice chancellors, Leadership Foundation for Higher Education (LFHE)

Age

People tend to reach senior leadership in higher education much later than they do in the private sector, where the average age for senior management roles is around 43. The average age for vice chancellors is 57, and the average age on appointment is 54. Higher education also seems to lag behind the civil service in terms of talent management and fast-track schemes aimed at bringing people into senior grades from their mid-30s.[13]

Senior academic leaders are also ageing, with a steep increase in the proportion of professors above 60. This is different for business support managers, who tend to be younger: the median age for managers and professionals is 43, with only 4% of this group aged 60 and over.[14]

Gender

Senior management teams in HEIs tend to be male dominated. The number of female heads of institutions is rising, with up to 19% of VCs and other institution heads in England[15]– but this proportion varies significantly by mission groups. In terms of professors, fewer than 20% of permanent professors are women.[16] The gender balance is better amongst professionals, business support and managers, with 54% women.[17]

Leaders' profile in terms of ethnicity, nationality and disability

We rely mainly on HESA data for professors and for professionals and managers, and overall the data shows little diversity across these three elements:

- Fewer than 5% of professors and fewer than 6% of professionals and managers are from black and minority ethnic (BME) backgrounds[18]

- 7% of professionals and managers and fewer than 10% of professors are non-UK nationals[19]

- Fewer than 3% of professionals and managers and professors declare a disability.[20]

4.2.3   Current skills set

Summary: Combining academic credibility and management skills is a key requirement for senior managers in HEIs.

A recent report by Professor Glynis Breakwell, Vice Chancellor of Bath University, shows that in seeking vice chancellors, HEIs are looking for very similar characteristics and competences to those

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[13] LFHE

[14] HESA, reproduced in HEFCE (2008), Staff employed at HEFCE-funded HEIs: update – trends and profiles, HEFCE 2008/26

[15] David Eastwood, speaking at the ECU conference, 4 November 2008 (www.ecu.ac.uk under 'events' then 'materials' to download a transcript).

[16] HESA, op cit

[17] HESA

[18] HESA

[19] HESA

[20] HESA

sought in leaders in other spheres – with the all-important rider that a VC must have academic credibility. VCs are expected to combine academic credibility – usually based on a distinguished research career – with all the other competences expected of the leaders of any large enterprise.[21] To date, significant investments have been made by institutions in developing their leadership capabilities, particularly in the areas of finance, people and change management. To quote one of the vice chancellors consulted as part of this research study, *"The issue is not one of leadership deficit, but more one of sustaining continuous investment in leadership"*.

4.2.4 Current employment patterns and working arrangements

Summary: The use of rotating senior management roles remains important, although there are significant differences by type of institution, with post-1992 institutions relying more heavily on permanent senior management posts.

The average tenure of vice chancellors seems to be falling. On average it is now less than 7 years.[22] This is partly due to the age of the VC population, but might also be due to the use of rotating leadership roles.

David Smith's study on PVCs provides useful information on the employment of PVCs.[23] In pre-1992 institutions, PVCs tend to be part-time, fixed-term secondments, usually internal appointments by the VC and/or elected by the academic community. In post-1992 institutions, they tend to be full-time, permanent posts with defined executive responsibilities, including external appointments, made by the VC and governing body.

4.3 Research-focused academics: current population

We outline below key characteristics of current research-focused academics in terms of capacity, staff profile, current skills sets, working arrangements and employment structures.

4.3.1 Current supply

Summary: the two main sources of research-focused academics are PhD students and international researchers. There is currently a heavy reliance in the UK on both overseas PhD students and international researchers. Competition for both home-grown and international researchers, from both the private sector and overseas HEIs, is set to increase.

PhD students

The primary source of researchers is PhD students. Overall, the volume of PhD students has increased. Over a five-year period from 1999 to 2003 (latest figures), there has been a 31% increase

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[21] Breakwell, G. (2006), Vice chancellors: attributes and selection, LFHE

[22] LFHE

[23] Smith, D., Adams, J. and Mount, D. (2007), UK universities and their chief executive officers: the changing role of pro-vice chancellors, LFHE

in the number of PhD researchers expected to graduate during the calendar year.[24] However, the majority of this growth has come from significant increases in non-UK domiciled full-time researchers (+65%) and part-time UK researchers (+72%).[25] Growth of full-time UK domiciled researchers has been fairly low at 11%. Non-UK domiciled students now account for 38% of all registered PhDs.[26]

In terms of what PhD students do, slightly fewer than half of PhD graduates working in the UK (48%) remain in the education sector.[27] The majority of these (83%) are working in higher education and HEIs.

There are some uncertainties in relation to future flows of PhD students:

- Increase in students' debts – rising undergraduate debt as a result of increased tuition fees and a possible removal of the cap on fees might impact the attractiveness of undertaking postgraduate studies for home-grown students. Should the number of UK-domiciled PhD researchers remain static, or start to fall, the UK will become increasingly dependent on the supply of overseas students wanting to study in the UK, both to sustain the UK research base and to replenish the UK academic community.[28]

- Competition for PhD students with other sectors – the higher salaries provided by private sector organisations to people with a PhD often attract a significant proportion of PhDs away from a career in academe. For example, 30% of PhDs in sciences and engineering are employed in manufacturing and research industries; 42% work in research roles, in both academia and industry; and 24% are post-doctoral researchers in HE.[29] In times of economic slowdown, more PhD students might be attracted to a career in HE. However, an economic recovery beyond 2010 might see a return of the competition for PhD students by the private sector.

Flows of international researchers

Overall, there are more incoming academics than academic emigrants from the UK.[30] The latest UUK report on *Patterns of higher education institutions* (2008) outlines a net inflow of staff at lecturer, researcher and other grades, and a net outflow at senior lecturer/researcher and professorial level.

Equally, there are some uncertainties regarding the flows of international researchers, as outlined in a UUK report:[31]

- Many countries are engaged in higher education reforms that should result in more effective and efficient systems. This raises the question of whether the flows of international PhD students will remain at their current levels going forward, as more countries might try to retain them in their own systems or at least encourage them to return after a period overseas

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[24] UK GRAD Programme, run by Vitae www.vitae.ac.uk

[25] Ibid

[26] Ibid

[27] Ibid

[28] UK GRAD Programme run by Vitae www.vitae.ac.uk

[29] See footnote 28

[30] UUK (2008), Talent wars: the international market for academic staff

[31] UUK (2008), Talent wars: the international market for academic staff

- Increased research and development targets in many countries will mean increasing competition for researchers around the world.

However, as business engagement and translational research develops, it is possible that other sources of future academic researchers will include industry research groups (eg as in BT's Martlesham facility).

4.3.2   Current staff profile

Summary: The permanent researcher population is ageing. There is a slow diversification of the researcher population, but mainly at junior level. Attrition rates for women, minority ethnic and disabled workers remain high in the higher grades. There is a large proportion of the researcher population that is made up of non-UK nationals.

Age

Of permanent academic staff, 35% are aged between 40 and 49, and 33% are aged between 50 and 59.[32] Only a small proportion of researchers are over 60 years old.

Gender

For all academic grades there is a consistent increase in the proportions of staff who are female. Nearly half of the researcher population is female, but the proportion of female staff decreases as grade increases: less than a third of senior lecturers/researchers are female.[33] Women academics also tend to be under-represented in full-time employment, and over-represented in part-time employment.

The attrition rate amongst women academics remains high. In particular, anecdotal evidence suggests that women academics' career progression is hampered by the difficulty of combining the research required for progression in an academic career, and family commitments.

Ethnicity

There has been an increase in the proportions of staff from black and minority ethnic backgrounds at all academic grades across the period 1995-2006. The proportion of fixed-term researchers from a BME background increased from 9% to 19% between 1995 and 2006.[34] The proportion of permanent researchers from BME backgrounds increased from 6% to 14% over the same period.[35] The lowest proportion of staff from a BME background remains amongst professors.

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[32] HESA

[33] HESA

[34] HESA

[35] Idem

Nationality profile

There have been increases for all academic grades in the proportion of staff who are non-UK nationals in the period 1995-2006; 43% of fixed-term researchers are non-UK nationals, and 26% of permanent researchers are non-UK nationals.[36]

4.3.3   Current skills set

Summary: Skills in primary research have, unsurprisingly, been the main requirement of researchers – with teaching skills being developed 'ad hoc'. Recent developments have seen greater emphasis on translational research, teaching skills and the innovation and entrepreneurialism associated with academic enterprise.

Traditionally, research has been considered as the 'elite' activity in higher education – with limited attention given to the development of teaching skills. The skills associated with scholarly research remain at the core of researchers' skills, particularly for pre-1992 HEIs, as 89% of permanent academic staff at pre-1992 HEIs are research associated. This is true of only 26% of staff at other HEIs.[37]

However, there has been a widening of the skills required, particularly associated with:

- The development of knowledge exchange activities. The HE-BCI survey (HEFCE, 2008) shows that 90% of HEIs report an involvement of mainstream staff (teaching and research) in knowledge exchange activities. This in turn is changing the skills requirements of researchers, with a greater focus on entrepreneurship, on the ability to talk about research in lay and simple terms, and on the ability to work with a wide range of people

- The increased importance of providing high quality teaching in order to attract and retain students.

Equally, research has traditionally operated in 'silos' – the skills that have served researchers well have been individual focus and drive concentrated on specific subject areas – with little attention given to collaboration and partnership. Again, this is changing, with the growing importance of inter-institutional and international collaborative research.

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[36] HESA

[37] HEFCE (2002), Academic staff: trends and projections (2002/43)

4.3.4   Employment patterns and working arrangements

Summary: Most current researchers work full-time, but at researcher level, fewer than 25% have a permanent contract. Establishing strong research credentials has traditionally been essential to progress within academia. There is little performance management, and a focus on researchers organising their own time. In post-1992 institutions, time for research and scholarship for lecturers is guaranteed in the Smith/ACAS contract (1991-92).

Full-time vs part-time employment

86% of researchers are in full-time employment, as are 90% of senior lecturers/researchers; this is an increase since 2003, when 83% of researchers and 91% of senior lecturers/researchers were in full-time employment.[38]

There are a small proportion of researchers on low activity (ie less than two days a week). There has been a slight decrease in the proportion of all grades (except lecturers) who hold low-activity contracts (ie working the equivalent of two or less days a week).[39]

Permanent contract versus flexible contracts

90% of senior lecturers/researchers have a permanent contract – but only 22% of researchers have a permanent contract.[40] However, there is evidence that the legislation on fixed-term work has had an impact, with a move away from fixed-term contracts towards more open-ended contracts. Specific interventions, such as the introduction of academic fellowships, have aimed at encouraging HEIs to provide clear routes into academia rather than the *"bumpy ride through fixed-term contracts"*, as outlined by one interviewee.

Current structures

Traditionally, academics have been 'masters of their own time', organising themselves across teaching and research. The Smith/ACAS contract (1991-92), which covers post-1992 institutions, specifies a maximum number of hours devoted to training and related duties, and guarantees time for research and scholarship. It also influences pre-1992 institutions as it is difficult for these institutions to deviate from these conditions when competing for staff.

The traditional career path in pre-1992 institutions focuses on research credentials. Progression to senior academic posts tends to focus on excellence in research rather than excellence in teaching.

4.4   Teaching-focused academics: current population

We outline below key characteristics of current teaching-focused staff in terms of capacity, staff profile, current skills sets, working arrangements and employment structures.

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[38] HESA

[39] Idem

[40] HESA

4.4.1 Current supply of staff

Summary: The three main sources of teaching-focused academics are post-doctoral fellows, international academics and visiting teachers involved in the world of practice. There is currently a heavy reliance in the UK on both overseas PhD students and international academics.

Teaching-focused academics come from a range of backgrounds.

Post-doctoral fellows

Traditionally, a lot of the teaching has been done by temporary researchers. In addition, teaching 'post-docs' are now being offered for those who seek to focus on teaching in their careers. As outlined in the previous section about research-focused academics, the number of PhDs has increased over time, but there are uncertainties about future supply.

International academics

Again, as outlined in the previous section, there is a net inflow of staff at lecturer, researcher and other grades. There is a net outflow at senior lecturer/researcher and professorial level. The UK is particularly reliant on overseas staff in relation to science, technology, engineering and mathematics (STEM) subjects. The highest proportion of foreign staff working in the UK is language specialists. Mathematical sciences, computer science and engineering come next.[41]

Practitioners and visiting teachers

There is already a well-established tradition of visiting teachers, particularly in specialist institutions, which traditionally have a strong link with practice: eg leading musicians teaching in music colleges, leading fashion creators teaching creative arts, etc.

However, the broad trend for increased engagement with business and focus on employability is increasing the number of teaching academics who come from the world of practice. In particular, mature students from the world of business will be expecting academics with well-established business credentials.

4.4.2 Staff profile

Summary: The profile of teaching-focused academics is characterised by a continued shift in grade (towards professor), and a rise in the age profile. Whilst the representation of women has increased, the attrition rate remains high. On the whole, there is very little diversity among teaching-focused staff in terms of ethnicity, although there is an increasing reliance on non-UK nationals.

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[41] UUK (2008), Talent wars: the international market for academic staff

Age

There is a steep increase in the proportion of professors above 60. However, there is only a small proportion of senior lecturers/researchers and a very small proportion of lecturers who are above 60.[42] This trend seems relatively stable.

Gender

For all grades there is a consistent increase in the proportions of staff who are female. However, the attrition rate amongst women academics remains high. The highest proportion of women is seen in the lecturer category, where levels rose to 48% in 2006-07.[43] Just over 30% of senior lecturers/researchers are women. Fewer than 20% of permanent professors are women.[44] As mentioned earlier, the number of female VCs is rising, with 19% of VCs in England who are women[45] – but this proportion varies significantly by mission groups. Women academics tend to be under-represented in full-time employment and over-represented in part-time employment.

Ethnicity

There has been an increase in the proportions from a BME background at all levels of academic grade across the period 1995-2006.[46] The lowest proportion of staff from BME backgrounds is amongst professors.

Nationality profile

There have been increases for all grades in the proportions of staff who are non-UK nationals in the period 1995-2006; 17% of lecturers are now non-UK nationals.[47]

Disability

Following an increase in 2003-04, which can be attributed to new legislation and better recognition of disabled workers, the proportion of academics who declare disability seems stable.[48]

4.4.3   Current skills set

Summary: Research credentials have traditionally been the key to accessing lecturing posts. There is, however, growing focus on excellence in teaching.

Skills associated with primary research have traditionally been the main requirement of junior academics, with little emphasis on teaching. Recent developments have seen the emergence of

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[42] HESA

[43] HESA

[44] HESA

[45] ECU

[46] HESA

[47] HESA

[48] HESA

'teaching-only' routes, as well as greater emphasis on CPD and entrepreneurialism associated with academic enterprise.

4.4.4 Employment patterns and working arrangements

Summary: The majority of teaching-focused staff are on permanent contract, but they are less likely than any other category of academic staff to be working full-time – which might be illustrating the importance of visiting teachers for many HEIs. Employment structures are quite rigid, through statutes for pre-1992 institutions and through national teaching contracts for post-1992. There has traditionally been little collaboration across subjects, and little performance management of the work of teaching-focused academics.

Full-time vs part-time employment

The proportions for all grades of academic staff who work full-time are relatively stable across the four years since 2003. The most notable change is the decrease (3 percentage points) in the proportion of lecturers who are full-time; 71% of lecturers are in full-time employment – the lowest proportion across all categories of academic staff.[49]

In parallel, there has been a slight increase in the proportion of lecturers who hold low-activity contracts (ie working the equivalent of two or less days a week) – the proportion went up from 7.2% in 2003 to 7.6% currently.[50]

Permanent contract versus flexible contracts

Most teaching-focused staff, be they senior lecturers or lecturers, have a permanent contract. The proportion of teaching-focused staff on permanent contracts is increasing slowly but steadily.[51]

Current structures

The structures described for research-focused academics also apply for teaching-focused academics:

- The Smith/ACAS contract (1991-92) specifies a maximum number of hours devoted to teaching and related duties, and guarantees time for research and scholarship in post-1992 institutions.

- The traditional career path in pre-1992 institutions focuses on research credentials. Progression to senior academic posts tends to focus on excellence in research rather than excellence in teaching. Professor Paul Ramsden's report on *The future of higher education teaching and the student experience* reported *"a survey of over 2,500 staff showing that academics continue to believe that teaching is under-rewarded and unrecognised by universities and colleges in comparison with research. There is a real sense among many academics that formal recognition is given to teaching in name only and that promotion can be obtained on research achievement alone".*[52] However, in some HEIs, particularly post-1992 institutions, there is the emergence of a 'teaching-only' route.

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[49] HESA

[50] HESA

[51] HESA

[52] Ramsden, Paul (2008), The future of higher education teaching and the student experience

- A recent article on the career of academics outlines new types of concerns by academics in relation to their careers: *"the policy agenda at national and institutional level, if it is to be grounded in the concerns of academic staff in the English higher education sector, should be focused less on pay and bargaining structures or revisions to terms but on better recognition of disciplinary and institutional divergence; age, race and gender diversity, career planning and increasing workload"*.[53]

4.5   Knowledge exchange and business development staff: current population

We outline below key characteristics of current knowledge exchange and business development staff in terms of capacity, staff profile, current skills sets, working arrangements and employment structures.

4.5.1   Current supply of staff

Summary: The last decade has seen the emergence of new, dedicated roles that focus on knowledge exchange and business development activities. This is part of the wider emergence at UK level of a new profession of knowledge transfer practitioners. Competition for such staff is likely to increase as knowledge transfer skills become more needed in other parts of the economy.

Growth in HEIs' business and community interactions

The sustained drive from government over the last decade for greater involvement of HEIs with businesses, combined with the growing need for HEIs to diversify their income streams, has led to the development of a new infrastructure, with HEIs geared towards business and community interactions.

As outlined in the HE-BCI survey (HEFCE, 2008), HEIs have become more responsive to external demand through contact points, specialist support staff, databases, systems, policies and procedures, and facilities geared to working with external partners. In particular, the report outlined key enhancements in:

- Facilities to reach out to small and medium enterprises (SMEs) – HEIs have put physical resources in place, such as contact points, assistance to SMEs in specifying their needs, contracting and assurance arrangements

- Developing an internal consultancy capability – the HEFCE report outlined a trend in consultancy activity towards developing internal capacity, as opposed to seeking external expert advice on developing and using licensing opportunities. There is also evidence that consultancy management companies are often set up and wholly owned by HEIs, as opposed to independent companies taking on this aspect of the IP portfolio

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[53] Strike, Tony and Taylor, John, University of Southampton (2009), The career perceptions of academic staff and human resource discourses in English higher education, *Higher Education Quarterly*

- Enhancing the licensing capability – the HEFCE report outlined that over 80% of HEIs have secured the capacity to seek out licensing opportunities. There also appears to be a trend towards some HEIs looking to specialist companies to manage their IP more professionally

- Drive towards more collaborative research – there seems to be an increase in collaborative research, involving the HEI, a public funder and a third party (which could be, for example, commercial, public sector or from the third sector).

Emergence of new, distinct knowledge exchange and business development roles

These developments have led to academic staff being increasingly engaged with these activities. According to the HE-BCI survey (HEFCE, 2008), 90% of HEIs involve their mainstream staff (teaching and research) in knowledge exchange activities. Equally, the development of knowledge exchange activities has led to the emergence of new, dedicated roles in knowledge exchanges. These professionals provide specialist knowledge in new areas, such as setting up spin-out firms or licensing deals, helping businesses to understand what research can do for them. HEIs also use CPD advisors who help to promote how HEIs can support employers' investment in the development of their people. Equally, many HEIs have growing business development teams, who contribute to the commercial exploitation of academic knowledge, but also promote the other commercial activities that HEIs get involved in, such as conference rooms renting and accommodation renting. The HEFCE HE-BCI survey (HEFCE, 2008) provides a snapshot of staff levels taken in January 2007-08, which shows over 7,400 full-time equivalent (FTE) staff working at HEIs in dedicated third stream functions, an 11% increase over the previous year.[54]

Current supply

There is no reliable statistical information on the background of staff working in knowledge exchange and business development roles. A recent review by the Department of Trade and Industry (DTI, 2007) confirms the emergence of a new profession of knowledge transfer practitioners, and estimated the number of such people at nearly 10,000 in the UK.

4.5.2   Staff profile

Summary: Anecdotal evidence suggests that the profile of dedicated knowledge exchange and business support staff is broadly similar to that of managers and professionals – quite diverse in terms of gender and age, but with more limited diversity in terms of ethnic background and disability.

There is currently no reliable statistical information providing detailed information on the profile of knowledge exchange and business development staff. Anecdotal evidence from our interviews with HEIs suggests that the profile of such staff is broadly similar to that of managers and professionals – quite diverse in terms of gender and age, but with more limited diversity in terms of ethnic background and disability (see next section). A typical example of a dedicated knowledge exchange/business development unit would be a manager in their late 30s/mid-40s with strong private sector experience, supported by more junior staff, including graduates.

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[54] HEFCE (2008), HE-BCI survey

4.5.3   Current skills set

Summary: Business acumen, financial skills, tendering, contracting and IP commercialisation are among the key skills required of knowledge exchange and business support staff. HEIs seem to find it difficult to recruit staff that combine these skills with a good understanding of academia.

Feedback from our interviews emphasised the following key focus in terms of skills of staff working in knowledge exchange and business development:

- Specialist skills, particularly around the new area of IP commercialisation, but also in terms of managing bids and tenders, negotiating and contracting, and financial management

- Commercial skills – in terms of understanding economically viable opportunities

- Knowledge of academe – ability to speak the language of both businesses and academe

- Collaboration skills – meeting demands will often require the development of bespoke offerings, cutting across disciplines. Such staff often work across disciplines, and drive collaboration across the different faculties or schools they engage with

- Project management – whilst the delivery of the 'product' will be done by academics, knowledge exchange/business development staff will often project manage the development of the provision being developed in response to businesses needs.

These staff are often described as 'interfaces' between business and academe, or 'account managers', capturing businesses' requirements and liaising with academics to develop fit-for-purpose offerings. Anecdotal evidence from our interviews suggests that HEIs often find it hard to recruit people combining the skills listed above and an understanding of academia.

4.5.4   Employment patterns and working arrangements

Summary: Anecdotal evidence suggests that the majority of dedicated knowledge exchange and business support staff are permanent and full-time employees, working closely with academic staff, but on different terms and conditions.

Employment patterns

Again, there is no statistical evidence on the proportion of knowledge exchange and business development staff in terms of the proportion working full-time or part-time, and the proportion on permanent contract. Anecdotal evidence from our interviews with HEIs suggests that their employment patterns are similar to those of managers and professionals, ie mainly full-time employees on permanent contracts.

Working hours

According to the HE-BCI survey report (HEFCE, 2008), there is a growth in the number of events that HEIs design for the public as a way to bring people directly into contact with the wealth of knowledge

within UK HEIs – for example, lectures to stimulate public engagement with science and the arts, performances by cutting-edge creative groups, recitals, exhibitions, events and the like.[55] Whilst staff working in the units dedicated to knowledge transfer/business development arrange these events rather than delivering them, it is likely that these events have an impact on their time, and on the need for flexible, out-of-hours working.[56]

Reward mechanisms

The HE-BCI survey report (HEFCE, 2008) shows that a large majority (137) of HEIs directly reward staff (the report does not distinguish academics getting involved in knowledge exchange, and knowledge exchange/business development staff) for the generation of intellectual property, although this represents only 10 more HEIs than 2002-03. The rewards themselves are usually in the form of a proportion of revenue, often on a sliding scale – a typical approach may see the inventor receiving half the proceeds of income up to a level such as £50,000, but a much smaller proportion of the proceeds above that threshold.

Again, anecdotal evidence from our interviews with HEIs shows that staff dedicated to knowledge exchange/business development are often on different terms and conditions from academic staff. Their ways of working are often similar to professional services staff, with a mix of permanent salary and incentives linked to performance and to the amount of new business generated.

4.6   Technicians: current population

We outline below key characteristics of current technicians in terms of capacity, staff profile, current skills sets, working arrangements and employment structures.

4.6.1   Current supply

Summary: The technician population has been stable over the last five years or so. There is little evidence of the background of technicians, but a number come from PhD students.

Since 2003, the numbers of technicians have remained relatively stable.[57]

There is limited statistical information on the background of technician staff. However, the two main routes into this category seem to be 'traditional' technicians, who have externally acquired knowledge of a particular technology, equipment or practice and come through technical careers, and young graduates who are recruited into technical roles through vocational training.

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[55] HEFCE (2008) HE-BCI survey

[56] Idem

[57] HESA

4.6.2 Staff profile

Summary: This is quite a diverse workforce in terms of age, disability and ethnic background. However, it remains a predominantly male workforce, with only a third of technicians being women.

Disability

The proportion of support staff declaring a disability is higher among technicians than among other professionals and support staff.[58]

Ethnicity

Amongst professionals and support staff, technicians have the highest proportion of staff from BME backgrounds, at 8.1%, a small increase from 7.3% in 2003.[59]

4.6.3 Current skills set

Summary: The traditional technicians were recruited for their 'pure' technical skills, but a number of reports and anecdotal evidence from HEIs have shown greater involvement of technicians with learners' support.

A shift has begun to occur in the recruitment of technicians over the last few years, which has seen greater involvement of technicians with learners' support. A current initiative, called the HEaTED Project, aims to consolidate, promote and expand participation in professional development activities for HE technical staff, by working with both the technical and staff development communities in addressing the needs of all key stakeholders.

4.6.4 Employment patterns and working arrangements

Summary: Technicians are primarily full-time, permanent employees.

Full-time vs part-time

Technicians are the group of professional and support staff with the highest proportion working full-time (83%).[60] They are the group of professional and support staff with the lowest proportion (4%) of staff regarded as low activity (which is less than 40% of FTE).[61]

Permanent vs temporary

The proportion of technicians on permanent contracts remains the lowest, but continues to increase, to 82% in 2006-07.[62]

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[58] HESA

[59] HESA

[60] HESA

[61] HESA

[62] HESA

The median salary of technical staff has increased by 15 percentage points between 2003-04 and 2006-07, to £24,160.[63]

4.7 Business support professionals: current population

We outline below key characteristics of current managers and professionals in terms of capacity, staff profile, current skills sets, working arrangements and employment structures.

4.7.1 Current supply

Summary: The number of managers and professionals has increased. There is growing evidence of a change in the supply of managers and professional staff, with an increasing proportion coming from the private sector, and more graduates being attracted to the sector.

Since 2003, there has been growth in the numbers of managers and professionals, who now represent 21% of all professional and support staff.[64]

In terms of supply, there is no reliable statistical information on the background of staff working in HE. Evidence from the Association of Heads of University Administration (AHUA) and Association of University Administrators (AUA) is that many professionals and managers may have entered a career in HE administration 'by accident' rather than by choice. HEIs being generally considered as good employers, turnover tends to be low among business support staff, and many professionals and managers will have worked their way up.

However, anecdotal evidence from our interviews with HEIs suggests that there has been an increased recruitment from other sectors over the last decade, with work-life balance and pensions schemes playing a key role in attracting highly skilled and experienced professionals in their mid-careers to the HE sector. There is also some evidence of more graduates being attracted to the sector.

Going forward, HEIs have mentioned a number of areas of uncertainty in maintaining the supply of such staff:

- Whether HEIs will find the specialist skills they may need, particularly in terms of managing third party suppliers in shared services and outsourcing arrangements

- Whether the factors that have traditionally attracted people to the sector will be sustainable, with increased financial pressure on pension schemes and the need to operate in a more business-like and efficient way putting potential limits on institutions' ability to satisfy all requests for flexible and part-time working in business support functions.

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[63] HESA

[64] HESA

4.7.2   Staff profile

Summary: Managers and professionals are a fairly young and balanced population in terms of gender. However, only small proportions of managers and professional staff are from non-white ethnic backgrounds, or have a disability.

Gender

The number of female professional and support staff has increased since 2003. In 2006-07, 62% of professional and support staff were women. That proportion slightly decreases as grade increases: 54% of managers and professionals are female,[65] compared to 81% of support administrators.

4.7.3   Current skills set

Summary: Increasingly, HEIs are looking for highly skilled professionals who can act as strategic partners to academics, and who can act as agents of change.

The last few years have seen three trends emerging in terms of the skill requirements for managers and professional staff:

Greater strategic focus

First, a move from 'administration' roles, where the key focus was on compliance, towards a more strategic, transformational role as advisors to academics and other colleagues in professional and support staff (see Section 3.3.2) This is particularly visible in finance and in HR. For example, many HEIs are moving away from 'personnel' towards an 'HR business partners' role supporting leaders in every part of the institution to manage people better, and proactively supporting the implementation of institutions' strategy through targeted and enhanced recruitment, better talent management and succession planning.

Professionalisation

Secondly, a professionalisation of these roles – the increased financial pressures on institutions, and the increasing complexity of the environment they are in, have required more specialist skills in areas of professional services. For example, maximising the value of HEIs' estates is requiring different skills, in particular: greater commercial and legal awareness, and management of third parties and contractors. Equally, the likely increase of shared services and outsourcing arrangements will put a premium on the specialist skills associated with managing third party suppliers (tendering, contracting, managing service-level agreements, managing performance).

Focus on students' experience

Thirdly, the drive to deliver a good students' experience is focusing all categories of staff, including professionals and managers, on providing good 'customer service' – be it externally to students, or internally to colleagues.

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[65] HESA

4.7.4 Employment patterns and working arrangements

Summary: The majority of managers and professionals have a permanent contract and work full-time, although the proportion of full-time workers seems to be decreasing.

Full-time vs part-time employment

Managers and professionals were previously the group with the highest proportion (85%) working full-time, in 2003-04, although this figure has decreased steadily to 78% by 2006-07.[66]

Rewards

The large proportion of managers and professionals with salaries higher than £35,000 indicates that this group has substantially larger salaries than all other professional and support staff. The median salary of managers and professionals is over £10,000 higher than that of any other primary function group, at £35,790 in 2006-07.[67]

4.8 Business support staff: current population

The HESA category of 'support administrators' gathers a wide range of different staff, as diverse as secretarial and clerical staff, librarian and information specialists, HR and finance administrators. We outline below key characteristics in terms of capacity, staff profile, current skills sets, working arrangements and employment structures, based on HESA data. However, we recognise that the current profile might be different amongst the different staff groups within this large category.

4.8.1 Current supply

Summary: The Support administrator population has been stable since 2003.

Overall, the level of support administrators has remained stable since 2003. Anecdotal evidence suggests that many support administrators are recruited locally, and have been attracted to HE by competitive pay, pension arrangements and working conditions.

Interestingly, the educational level of people recruited to secretarial and clerical staff positions seems to be rising. Recent UNISON research into the position of secretarial and clerical staff shows that 27.2% of respondents cited 'degree' as their highest qualification, with a further 9.7% citing 'master degree' and 1.3% citing 'PhD'. Only 3% had no qualification.[68] This rising skill level might encourage more HEIs to develop their clerical and secretarial staff and make best use of their skills.

4.8.2 Staff profile

Summary: On the whole this is a slightly younger population than other groups of professionals and support

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[66] HESA

[67] HESA

[68] UNISON (2007), Research into the position of secretarial and clerical staff within the UK higher education system

staff, with a median age of 40. This group is predominantly female, with little diversity in terms of disability and ethnicity.

4.8.3   Current skills set

Summary: Anecdotal evidence suggests that the skills associated with compliance and administrative support have become less important, in favour of greater emphasis on analytical, bid support and student support skills.

Anecdotal evidence from HEIs suggests that the traditional skills of support administrators have been associated with compliance and administrative support. Anecdotal evidence also suggests very hierarchical structures in institutions, with secretarial and clerical staff being 'confined' to specific roles rather than developed into taking on larger roles.

However, the increased accountability and quality requirements associated with public funding over the last decade have seen an increase in clerical support related to that specific area – particularly in those institutions heavily reliant on public funding.

4.8.4   Employment patterns and working arrangements

Summary: Most support administrators are permanent members of staff, but only two-thirds are working full-time, reflecting the wide range of flexible working within this group.

Full-time vs part-time

Only 61% of support administrators work full-time; 15% of support administrators are low activity – higher than most categories of professional and support staff apart from 'other'.[69]

Rewards

Overall, there is only a small proportion of support administrators earning more than £35,000, at 4.2%. The median salaries of clerical staff have increased by 16 percentage points between 2003-04 and 2006-07, to £19,670.[70]

4.9   Manual staff: current population

4.9.1   Current capacity and supply

Summary: Manual staff tend to be a stable workforce, mainly sourced locally.

Over the period 2003-2007, the levels of manual/other staff have remained relatively stable[71] (please see Appendix F).

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[69] HESA

[70] HESA

Evidence available from existing reports and interviews with HEIs suggest that this workforce is mainly local. The majority of manual staff are recruited from similar trades outside of HE, such as hotel and restaurants for catering staff. Therefore HEIs are competing with local organisations for manual staff. The 2005 UCEA recruitment and retention survey showed that the group with the highest incidence of employers experiencing problems 'usually' was manual workers. The two groups of support staff in which the largest numbers of reports of difficulties were seen in both recruiting and retaining staff were cleaning and catering; 59 institutions reported difficulties recruiting, and 55 institutions difficulties retaining, cleaning staff.[72]

Stable employment opportunities and competitive pension schemes attract people to the sector. Turnover is low and people tend to move out of HEIs to gain promotion rather than to seek an equivalent job elsewhere.

4.9.2   Staff profile

Summary: Manual staff represent a slightly older population compared to other professional and support staff. They are fairly balanced in terms of gender, but there is little diversity in terms of disability and ethnic background. Only a small proportion are non-UK nationals.

Gender

In 2006-07, 62% of professional and support staff were women. Manual staff were reasonably balanced, with 49% of staff who were female.[73]

Nationality

The highest proportion of non-UK nationals is found in the 'other' group, at 10% for 2006-07 – an increase from 6% in 2003-04.[74]

4.9.3   Current skills set

Summary: The groups associated in the HESA category cover a very wide range of skills, usually associated with manual work (eg cleaning, catering, security).

A majority of HEIs are focusing on the students' experience as a key differentiating factor. Manual staff will be amongst the most frequent interfaces that students have with university staff. Their attitude and professionalism will have a key bearing on how students perceive the quality of the services provided by HEIs. Equally, at a time when many HEIs are looking to maximise their estate through renting, conferencing etc, the professionalism and quality of service provided by manual staff will have an important bearing.

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[71] HESA

[72] UCEA (2005), Recruitment and retention of staff in higher education 2005

[73] HESA

[74] HESA

4.9.4 Employment patterns and working arrangements

Summary: Almost all manual staff are on permanent contracts, but fewer than half work full-time.

Full-time vs part-time

Only 46% of manual staff are working full-time, the lowest proportion amongst professional and support staff.[75]

They are the group of professional and support staff with the highest proportion (18%) of staff regarded as low activity,[76] which is less than 40% of FTE – some of these are likely to be shift workers.

Permanent vs temporary

However, they also have the highest proportion, at 95% in 2006-07, of staff on permanent contracts.[77]

Rewards

The lowest salaries of professional and support staff are in the primary function of 'other', where, in 2006-07, 0.4% of staff earned salaries greater than £35,000. Their median salary for 2006-07 of £13,520 has experienced the largest percentage change from 2003-04, of 20 percentage points.[78]

4.10 Considerations for matching supply and demand for critical capabilities

This section outlines possible issues emerging when matching supply and demand for each area of capabilities that institutions will be seeking to develop. We explain below the approach we adopted for carrying out 'readiness assessments'. We then provide a summary of the readiness for each main service type, and the specific workforce issues that they HEIs may have to address. Section 6 suggests an agenda for action to help both sector and institutions to address these issues.

4.10.1 Carrying out 'readiness assessments'

Given the current supply of workforce described earlier in this section, it is important to assess how 'ready' the current workforce is to meet the capabilities and requirements identified in each institution's particular strategic business model.

We have therefore compared the key elements of supply and demand for the core capabilities required by the different academic service models: leadership capabilities, research capabilities, teaching capabilities, enterprise capabilities, and business support capabilities. We have then outlined the key questions and issues arising from this analysis.

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[75] HESA

[76] HESA

[77] HESA

[78] HESA

The following tables provide a readiness assessment for each model.

Please note that the description of 'supply' is the same for all service models, whereas the description of 'demand' focuses on the people capabilities which are specific to each model.

4.10.2 Readiness assessment for the primary research workforce

Table 14: Readiness assessment for the primary research workforce

Primary re**search**	Leadership capabilities	Research capabilities	Teaching capabilities	Enterprise capabilities	Business support capabilities
SUPPLY	• Ageing population • Traditional leadership coming from academe • Little diversity in terms of profile • Increased competition for leaders	• Ageing population • Slow diversification in profile • Large pool of researchers, but limited access to continuous employment and academic roles • Reliance on overseas PhD students and international researchers • Increased competition with private sector and overseas • Traditional focus of PhDs' skills on primary research – little business-related skills • Few researchers/technicians from the world of practice • Diverse workforce: permanent contracts; temporary; open-ended contracts • Limited performance management	• Ageing population • Large pool of researchers to pick from, but no formal development of teaching skills • Greater use of technicians in learner support • Range of administrators providing student support • Limited diversity in terms of profile • Working hours becoming more flexible – but majority on permanent contract • Limited performance management	• Growing pool of knowledge transfer professionals, but increased competition as such skills become more needed in other parts of the economy • Difficult to find people combining commercial skills and understanding of academia • Increased involvement of academics in academic enterprise • Drive to maximise revenue from facilities	• Growing proportion of graduates and skilled people from other sectors • Stable population – career for life • Vast majority on permanent contracts • Skills changing towards more strategic roles • Competition with other sectors for highly skilled professionals • Competition with local employers for support administrators and manual staff • Pensions and working conditions key factor in attracting staff
DEMAND	• Leadership and clear strategic positioning • Academic credibility	• Maintaining peer group networks • Securing substantial research funding	• Balancing teaching demands with research priorities • Promoting research-based	• Ensuring cost-effective management of research resources	• Strategic advice • Drive to increase efficiency and reduce

Primary research	Leadership capabilities	Research capabilities	Teaching capabilities	Enterprise capabilities	Business support capabilities
	important • Need new type of skills to manage uncertainty and complexity	• Delivering high profile research results • Excellent RAE/REF results	learning • Developing next generation of researchers	• Optimising success in bidding and contracting • Maintaining high quality research and learning/teaching infrastructures	costs • Flexible working patterns
KEY ISSUES	• How to ensure a new supply of leaders? • How to equip leaders for a volatile and uncertain environment? • How to open alternative routes to becoming VCs and PVCs – in particular through the development of management competence?	• How to ensure a healthy flow of PhDs? • How to attract and retain the best researchers, including international ones? • How to continuously enhance excellence in research? • How to successfully implement workload allocation whilst preserving academic integrity? • How to open research careers to a wider range of backgrounds?	• How to provide good quality teaching capabilities when the main focus is on research? • How to professionalise the learner support provided by technicians?	• How to flex contracts to allow researchers to get involved with a range of activities? • How to compete for knowledge transfer/business development staff? • How to recognise and reward contributions to winning research funds?	• How to attract highly skilled business support professionals? • How to align ways of working of business support staff to meet needs of research, teaching and academic capabilities? • How to identify and manage core resources and non-core resources?

4.10.3 Readiness assessment for the research-led teaching workforce

Table 15: Readiness assessment for the research-led teaching workforce

Research-led teaching	Leadership capabilities	Research capabilities	Teaching capabilities	Enterprise capabilities	Business support capabilities
SUPPLY	• Ageing population • Traditional leadership coming from academe • Little diversity in terms of profile • Increased competition for leaders	• Ageing population • Slow diversification in profile • Large pool of researchers, but limited access to continuous employment and academic roles • Reliance on overseas PhD students and international researchers • Increased competition with private sector and overseas • Traditional focus of PhDs' skills on primary research – little business-related skills • Few researchers/technicians from the world of practice • Diverse workforce: permanent contracts; temporary; open-ended contracts • Limited performance management	• Ageing population • Large pool of researchers to pick from, but no formal development of teaching skills • Greater use of technicians in learner support • Range of administrators providing student support • Limited diversity in terms of profile • Working hours becoming more flexible – but majority on permanent contract • Limited performance management	• Growing pool of knowledge transfer professionals, but increased competition as such skills become more needed in other parts of the economy • Difficult to find people combining commercial skills and understanding of academia • Increased involvement of academics in academic enterprise • Drive to maximise revenue from facilities	• Growing proportion of graduates and skilled people from other sectors • Stable population – career for life • Vast majority on permanent contracts • Skills changing towards more strategic roles • Competition with other sectors for highly skilled professionals • Competition with local employers for support administrators and manual staff • Pensions and working conditions key factor in attracting staff
DEMAND	• Leadership and clear strategic positioning • Networking and	• Flow of well-cited research outputs • Maintaining current scholarship in	• Developing/delivering research-informed curriculum • High quality of student	• Excellent student services and support • Managing of multiple	• Strategic advice • Drive to increase efficiency and reduce costs

Research-led teaching	Leadership capabilities	Research capabilities	Teaching capabilities	Enterprise capabilities	Business support capabilities
	partnership building important • Need new type of skills to manage uncertainty and complexity	fields of speciality • Securing steady flow of research funds • Good RAE/REF results	interactions • Maintaining highest quality ratings from QAA and others	funding streams • Optimising academic resource allocation	• Flexible working patterns
KEY ISSUES	• How to ensure a new supply of leaders? • How to equip leaders for a volatile and uncertain environment? • How to open alternative routes to becoming VCs and PVCs – in particular through the development of management competence?	• How to balance the requirements of teaching and learning? • How to sustain and reward excellence in research?	• How to adapt capabilities to changing student numbers? • How to sustain flows into STEM and strategically important and vulnerable subjects (SIVS)? • How to change working patterns to meet students' demands? • How to sustain and reward excellence in teaching?	• How to flex contracts to allow academics to get involved with a range of activities? • How to compete for staff? • How to compete for knowledge transfer/business development staff? • How to recognise and reward contributions to winning funds/attracting students?	• How to attract highly skilled business support professionals? • How to align ways of working of business support staff to meet needs of research, teaching and academic capabilities? • How to identify and manage core resources and non-core resources?

4.10.4 Readiness assessment for the professional formation workforce

Table 16: Readiness assessment for the professional formation workforce

Professional formation	Leadership capabilities	Research capabilities	Teaching capabilities	Enterprise capabilities	Business support capabilities
SUPPLY	• Ageing population • Traditional leadership coming from academe • Little diversity in terms of profile • Increased competition for leaders	• Ageing population • Slow diversification in profile • Large pool of researchers, but limited access to continuous employment and academic roles • Reliance on overseas PhD students and international researchers • Increased competition with private sector and overseas • Traditional focus of PhDs' skills on primary research – little business-related skills • Few researchers/technicians from the world of practice • Diverse workforce: permanent contracts; temporary; open-ended contracts • Limited performance management	• Ageing population • Strong tradition of visiting teachers • Greater use of technicians in learner support • Range of administrators providing student support • Limited diversity in terms of profile • Working hours becoming more flexible – but majority on permanent contract • Limited performance management	• Growing pool of knowledge transfer professionals, but increased competition as such skills become more needed in other parts of the economy • Difficult to find people combining commercial skills and understanding of academia • Increased involvement of academics in academic enterprise • Drive to maximise revenue from facilities	• Growing proportion of graduates and skilled people from other sectors • Stable population – career for life • Vast majority on permanent contracts • Skills changing towards more strategic roles • Competition with other sectors for highly skilled professionals • Competition with local employers for support administrators and manual staff • Pensions and working conditions key factor in attracting staff
DEMAND	• Leadership and clear strategic positioning • Links with professional	• Contributing to specialist/profession literature • Early insights into emerging and	• Development of next generation of practitioners • Continuing development of	• Developing partnerships with key employers • Maintaining relations with	• Strategic advice • Drive to increase efficiency and reduce

Professional formation	Leadership capabilities	Research capabilities	Teaching capabilities	Enterprise capabilities	Business support capabilities
	stakeholders important • Need new type of skills to manage uncertainty and complexity	new professional issues • Selection for high profile studies and reports • RAE/REF results in selected areas	current practitioners • Partnerships to develop new best practices and capabilities	key professional stakeholders • Enabling flexible movement and exchanges of staff	costs • Flexible working patterns
KEY ISSUES	• How to ensure a new supply of leaders? • How to equip leaders for a volatile and uncertain environment? • How to open alternative routes to becoming VCs and PVCs – in particular through the development of management competence?	• How to ensure knowledge of leading-edge practice? • How to maintain nexus between teaching and research? • How to recognise and reward teaching?	• How to attract more practitioners? How to enable dual careers? • How to best integrate different teaching staff? • How to build bridges for technicians towards academic roles? • How to develop and enhance excellence in teaching? • How to equip staff to manage diverse student body? • How to support interchanges between HE and other parts of the economy?	• How to develop relationships with key professional stakeholders? • How to ensure that individuals' involvement in enterprise provides benefits to both the individual and the institution? • How to recognise and reward different contributions?	• How to attract highly skilled business support professionals? • How to align ways of working of business support staff to meet needs of research, teaching and academic capabilities? • How to identify and manage core resources and non-core resources?

4.10.5 Readiness assessment for the research-based solutions workforce

Table 17: Readiness for the research-based solutions workforce

Research-based solutions	Leadership capabilities	Research capabilities	Teaching capabilities	Enterprise capabilities	Business support capabilities
SUPPLY	• Ageing population • Traditional leadership coming from academe • Little diversity in terms of profile • Increased competition for leaders	• Ageing population • Slow diversification in profile • Large pool of researchers, but limited access to continuous employment and academic roles • Reliance on overseas PhD students and international researchers • Increased competition with private sector and overseas • Traditional focus of PhDs' skills on primary research – little business-related skills • Few researchers/technicians from the world of practice • Diverse workforce: permanent contracts; temporary; open-ended contracts • Limited performance management	• Ageing population • Strong tradition of visiting teachers • Large pool of researchers to pick from, but no formal development of teaching skills • Greater use of technicians in learner support • Range of administrators providing student support • Limited diversity in terms of profile • Working hours becoming more flexible – but majority on permanent contract • Limited performance management	• Growing pool of knowledge transfer professionals, but increased competition as such skills become more needed in other parts of the economy • Difficult to find people combining commercial skills and understanding of academia • Increased involvement of academics in academic enterprise • Drive to maximise revenue from facilities	• Growing proportion of graduates and skilled people from other sectors • Stable population – career for life • Vast majority on permanent contracts • Skills changing towards more strategic roles • Competition with other sectors for highly skilled professionals • Competition with local employers for support administrators and manual staff • Pensions and working conditions key factor in attracting staff
DEMAND	• Leadership and clear strategic	• Maintaining links with current R&D	• Action-based learning and case studies	• Co-ordinated and responsive account	• Strategic advice • Drive to increase efficiency

Research-based solutions	Leadership capabilities	Research capabilities	Teaching capabilities	Enterprise capabilities	Business support capabilities
	positioning • Business acumen important • Need new type of skills to manage uncertainty and complexity	• Cross-disciplinary team working • Producing contract research outputs to time and spec • Intellectual property specialists	• Facilitating knowledge exchanges among students • Keeping abreast of current issues and needs	management • Contract and project management skills • Ensuring flexible resource mobility	and reduce costs • Flexible working patterns
KEY ISSUES	• How to ensure a new supply of leaders? • How to equip leaders for a volatile and uncertain environment? • How to open alternative routes to becoming VCs and PVCs – in particular through the development of management competence?	• How to enhance innovation and creativity? • How to evaluate both excellence in teaching and excellence in research? • How to implement matrix structure? • How to maintain nexus between teaching and research?	• How to attract and integrate practitioners? • How to support interchanges between HE and other parts of the economy?	• How to incentivise staff in matrix structure? • How to reward different contributions?	• How to attract highly skilled business support professionals? • How to align ways of working of business support staff to meet needs of research, teaching and academic capabilities? • How to identify and manage core resources and non-core resources?

4.10.6 Readiness assessment for the specialist institution workforce

Table 18: Readiness assessment for the specialist institution workforce

Specialist	Leadership capabilities	Research capabilities	Teaching capabilities	Enterprise capabilities	Business support capabilities
SUPPLY	- Ageing population - Traditional leadership coming from academe - Little diversity in terms of profile - Increased competition for leaders	- Ageing population - Slow diversification in profile - Large pool of researchers, but limited access to continuous employment and academic roles - Reliance on overseas PhD students and international researchers - Increased competition with private sector and overseas - Traditional focus of PhDs' skills on primary research – little business-related skills - Few researchers/technicians from the world of practice - Diverse workforce: permanent contracts; temporary; open-ended contracts - Limited performance management	- Ageing population - Strong tradition of visiting teachers - Large pool of researchers to pick from, but no formal development of teaching skills - Greater use of technicians in learner support - Range of administrators providing student support - Limited diversity in terms of profile - Working hours becoming more flexible – but majority on permanent contract - Limited performance management	- Growing pool of knowledge transfer professionals, but increased competition as such skills become more needed in other parts of the economy - Difficult to find people combining commercial skills and understanding of academia - Increased involvement of academics in academic enterprise - Drive to maximise revenue from facilities	- Growing proportion of graduates and skilled people from other sectors - Stable population – career for life - Vast majority on permanent contracts - Skills changing towards more strategic roles - Competition with other sectors for highly skilled professionals - Competition with local employers for support administrators and manual staff - Pensions and working conditions key factor in attracting staff
DEMAND	Leadership and clear strategic positioning	Leadership in sector-specific needs and issues	Developing next generation of practitioners	Maintaining strong stakeholder relationships	- Strategic advice - Drive to increase

Specialist	Leadership capabilities	Research capabilities	Teaching capabilities	Enterprise capabilities	Business support capabilities
	• Academic credibility important • Need new type of skills to manage uncertainty and complexity	• Partnerships with sector leaders and govt. sponsors • Practice-based research in niche areas	• Research-informed professional development • Close links and engagement with current practice	• Developing cost-effective delivery and operations • Monitoring and adapting to sector/niche developments	efficiency and reduce costs • Flexible working patterns
KEY ISSUES	• How to ensure a new supply of leaders? • How to equip leaders for a volatile and uncertain environment? • How to open alternative routes to becoming VCs and PVCs – in particular through the development of management competence?	• How to involve practitioners? • How to ensure knowledge of leading-edge practice?	• How to attract and integrate practitioners? • How to develop excellence in teaching in niche areas? • How to support interchanges between HE and other parts of the economy?	• How to develop relationships with key professional stakeholders? • How to stay ahead of developments in that specific niche? • How to recognise and reward different contributions?	• How to attract highly skilled business support professionals? • How to align ways of working of business support staff to meet needs of research, teaching and academic capabilities? • How to identify and manage core resources and non-core resources?

4.10.7 Summary of key challenges and potential barriers for the future workforce

A number of key workforce planning challenges and potential barriers emerge from this analysis of supply and demand.

Key challenges:

- Ensuring a steady supply of key groups of staff

- Focusing research, teaching, enterprise and business support capabilities on key strategic differentiators

- Building leadership capacity and capabilities in a volatile environment

- Enabling more flexible working, both in terms of combining different ranges of activities, and in terms of hours and ways of working

- Potentially managing different business models – and therefore groups of staff on different terms and conditions

- Diversifying workforce profile whilst meeting the requirement for excellence.

Potential barriers:

- Low staff turnover – which makes renewal of people capabilities a slow process

- Limited availability of routes into academia and into senior leadership roles – which limits the ability to attract different profiles of staff to meet different strategic positioning

- Lack of clear career paths for business support roles – which may limit the ability to attract and retain experienced and highly skilled professionals

- Limited flexibility in rewards below senior management level – which may impede institutions in providing tailored packages to attract the core capabilities they need to deliver their particular strategy

- The single pay framework can be enforced rigidly at a time when institutions are becoming more diverse – this may call for the pay framework to be implemented more flexibly whilst still ensuring equity and fairness across staff groups

- Lack of sustainability of pension arrangements in the longer term – which may call for different remuneration packages going forward

- Limited performance management – which may limit institutions in focusing their capabilities on their key strategic differentiators.

Section 5 provides information on how the IT and health sectors have dealt with some similar issues. Section 6 outlines a proposed agenda for action for both individual HEIs and sector organisations.

5 Cross-sector comparisons

In this section, we have examined initiatives that seek to address workforce issues from other sectors that are comparable in different ways to the workforce issues in higher education. This section links particularly to the workforce issues drawn out in the previous section, and seeks to raise insights drawn from these cross-sector comparisons in addressing them. For each comparison sector, the similarities and differences between the sector and HE are highlighted in order to clearly bound the potential usefulness of these comparisons. Each of the cross-sector comparisons was informed by one or more interviews with a workforce sector expert alongside appropriate desk research.

5.1 UK IT sector workforce[79]

5.1.1 Overview of IT cross-sector comparison

The UK's IT and telecoms industry includes over 109,000 businesses and employs around 888,000 staff in the industry itself.[80] It is a sector that is highly knowledge-intensive and strongly dependent on the skills of the underlying IT workforce. With trends such as outsourcing and off-shoring, the UK-based workforce is increasingly focused on activities that combine IT knowledge with improvement of business operations and customer value-adding activities.

The key similarities between the UK IT workforce and the English HE workforce are summarised in Table 19.

Table 19: Similarities and differences between UK IT and English HE sectors

Similarities	Differences
• Increasingly international agenda – at highest levels, competition for staff internationally, growth of outsourcing requiring multi-national teams • Workforce increasingly interacting with wider business – IT is increasingly important to business strategy and IT staff are increasingly part of main business staff teams. HE is increasing its involvement with business and enterprise • Dealing with more business and commercial issues – in order to interact more with business, IT staff need to pick up more business and commercial skills (as does HE) • Dealing with changes in UK demographics and education – fewer IT-qualified students as a result of lower attraction of IT degrees. Similarly, HE is attracting more overseas than UK students in academic development path	• Particular focus on accreditation and professionalism – workforce has had less clear qualification route in IT than HE in past and this is now being addressed

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[79] IT sector comparison was informed by interview with the Professional IT Skills Development Executive at e-skills UK, Terry Hook; e-skills UK is the Sector Skills Council for IT and Telecoms.

[80] e-skills UK (2008), Technology counts: IT & telecoms insights 2008

The focus of the cross-sector comparison with IT was on the workforce initiatives launched and co-ordinated by the IT and Telecoms Sector Skills Council, e-skills UK. The role of e-skills UK is to unite the agenda of employers, educators and government leaders (for the IT and telecoms sector) in the development of the technology skills base vital to the success of IT in this sector. The focus of their work is around three core areas of workforce development:

1. Future workforce development – making the sector attractive to young people and ensuring that technology-related education prepares students for successful employment

2. Existing workforce development – realising the potential of the existing workforce through analysing the skills gaps in the existing workforce and ensuring appropriate educational development

3. Raising the IT (user) skills of the wider workforce.

Under each of these three areas, a number of specific workforce initiatives have been developed to achieve the goals set for and by e-skills UK. For the purpose of comparison, it was only the workforce initiatives that fall into the 'existing workforce development' category that were perceived as being relevant. Four comparisons have been drawn with the IT sector. They are:

4. Use of apprenticeships in IT – illuminates how graduates could be 'apprenticed' through professional support roles and for technicians aspiring to teaching roles

5. Development of IT national occupational standards and skills framework – illuminates how clear skill definitions, career structures and education would support technician development

6. Masters programme for IT professionals (IT Professional Development Programme) focused on fast-tracking IT graduates in industry – illuminates how professional doctorates and masters that are undertaken by academics during their development into lecturer and research roles can be better aligned to the needs of industry and academic enterprise activity

7. The role of a sector skills organisation (e-skills UK) in supporting the workforce development needs in the IT sector – illuminating the role of sector-level bodies such as HEFCE, Lifelong Learning UK, Leadership Foundation for HE and others in supporting development of the future HE workforce.

5.1.2   Apprenticeships in IT and application to areas of HE

Summary: The Sector Skills Council, e-skills UK, has put in place two levels of apprenticeship that support initial progression into technical and management roles in IT and a higher apprenticeship that leads to a foundation and a higher honours degree. In HE, such an apprenticeship approach could be adopted for those moving through professional support areas (such as HR) and for technicians – potentially drawing them up to higher qualification levels whilst continuing their employment in HE.

The Sector Skills Council has set up two levels of apprenticeship for the IT industry:

- A higher apprenticeship, which includes a foundation degree and leads on to a full honours degree

- Progression into new job roles, such as management and technical specialists.

Apprenticeships provide a foundation from which young people can progress into management roles, particularly where the apprenticeship frameworks are aligned to a company's management development programmes. Apprentices learn while they work, so their knowledge is up to date, and because their training is on the job, the practical skills they gain are the ones that are right for the organisation's business.

There is the opportunity for an apprentice to gain a degree if they have the motivation and ability. This is a 'fast-track' apprenticeship to a full honours degree via a foundation degree. The apprenticeship includes high quality work-based training and development activity set to high standards. It aims at raising the skill levels of people available to the ICT industry to degree level. The scheme covers:

- Students at schools or sixth-form/FE colleges with A Levels or equivalent educational attainment, including GNVQ, Baccalaureate, relevant level 3 IT-related technical qualification

- Advanced apprentices wishing to progress further

- Employees with A Levels or equivalent educational attainment

- Employees who have worked in the industry for a number of years and demonstrated to their employer that they have a reasonable expectation of achieving the stated outcomes.

These apprenticeship schemes are seen as important in an industry with such a strong knowledge and skills base. Similarly, HE needs professional support people who are continuing to develop strongly throughout their career. For instance, an HR apprenticeship scheme might support the continued professional development of HE HR staff, particularly as they grapple with the shift from transactional to transformational HR. Similarly, many technicians who seek to broaden their career into academic teaching or research work might have an apprenticeship scheme, provided that enables them to raise their levels of academic qualification alongside continued employment in their HE technician role.

5.1.3   IT integrated skills and educational framework – PROCOM

Summary: PROCOM is a single, integrated skills and educational framework that establishes a sector-wide language for describing IT disciplines (career areas), links these areas to levels of career professionals, provides a basis for assessment at each level (based on the Skills Framework for the Information Age (SFIA)) and links development at each stage to national occupational standards. HEIs can learn from the IT sector with regard to the importance of integrated skills and educational frameworks for staff to be able to follow career paths even when moving across employers.

e-skills UK's PROCOM is an industry-recognised training framework for organising courses and qualifications by the disciplines of the IT profession. Built on IT professional national occupational standards, PROCOM defines knowledge, understanding and competencies for seven broad disciplines (and their sub-disciplines) at five levels of progression, incorporating technical, business and personal skills. This structure enables employers to identify relevant qualifications and to plan training and development based on a self-assessment of needs or on an SFIA-defined job role. PROCOM helps providers of education and training to develop new courses to meet the needs of different IT disciplines, and is the basis for e-skills UK's work to reform and simplify the qualifications map for IT professionals.

Figure 8: e-skills UK PROCOM framework – education and skills framework for IT professionals
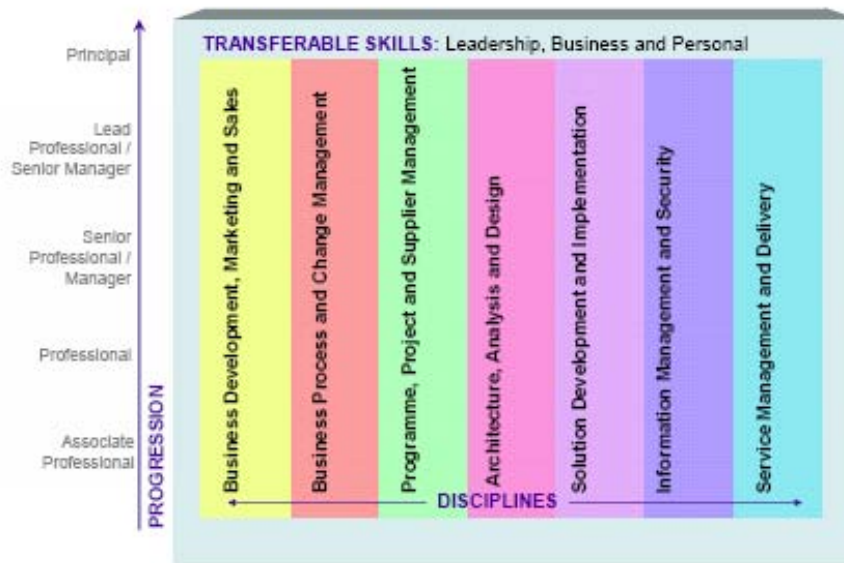
As the training framework for the IT profession, e-skills UK's PROCOM:

- Establishes a common, sector-wide terminology for describing IT professional disciplines

- Sets out what IT professionals should know and be able to do at each level of competence

- Provides a simple, fit-for-purpose structure against which to organise courses and qualifications which are valued by employers.

The key objectives are to:

- Make it easier for employers to identify relevant training and development

- Make it easier for individuals to achieve recognition of their skills

- Increase the availability and uptake of training that meets employer needs.

In HE, we have already highlighted earlier in this report professional areas where there is a lack of clear career and development structures both within individual HEIs and at sector level. For instance, it would be of great benefit to highlight career routes for technicians in HE, showing routes that can be taken for technicians into academic research and teaching (in terms of competence development) and the required educational development (in terms of qualifications and highlighted experience).

5.1.4   Business-related qualification – masters for IT professionals

Summary: e-skills UK has launched a masters programme for IT professionals (IT Professional Development Programme) focused on fast-tracking IT graduates in industry in partnership with HEFCE and a number of HEIs. The HE sector can learn from this by understanding how professional doctorates and masters that are undertaken by academics during their development into lecturer and research roles can be better aligned to the needs of industry and academic enterprise activity.

e-skills UK has launched a development programme to fast-track the careers of new IT professionals. This masters-level programme has been designed with employers and will be delivered through universities and participating employers. It is supported by HEFCE.

The programme addresses a real and important challenge for the UK – ie the fact that, due to the impact of globalisation, new IT professionals must progress rapidly to higher level roles without access to the traditional 'entry-level' jobs that would help them to build their skills and experience. The IT Professional Development Programme will enable new IT professionals to rapidly build a strong foundation of competence in the early years of their career. The programme will be modular, with modules covering technical, business, project management and communication skills, among others.

The programme has strong employer and university support. Employers representing a quarter of all IT and telecoms professionals in the UK are already backing the programme. E-skills UK is well placed to make this happen – building on its successful track record in uniting employers with education in programmes that make a real difference to skills development.

This masters shows a strong partnership between business and educational providers (in this case, HEIs) in building a workforce that is well versed in industry challenges and IT academic theory. If academic lecturers and researchers qualified through professional doctorates, masters and degrees that had the active involvement and sponsorship of employers, then it would greatly enhance the academic enterprise and business engagement capabilities of institutions, eliminating the criticism of academics who have 'never left academia'.

5.1.5   The role of the Sector Skills Council, e-skills UK

Summary: The Sector Skills Council in IT, e-skills UK, acts as a bridge between three important groups of parties in IT. These parties are employers, government and educational providers. The skills council has four foci in supporting these three parties: existing workforce development, future workforce, increasing sector attractiveness and influence (hearing the voice of employers in workforce development). The HE sector can learn from this by looking at the remits of existing HE sector organisations and how they map onto these four foci.

The IT sector is fortunate in having a Sector Skills Council, e-skills UK, with a strong reputation for supporting employers and government through effective skills development, ultimately delivered by a variety of IT educational providers. This alignment role in the IT industry is especially important in an industry that has a significant skills shortage (less than 25% of the required annual intake into the IT workforce will be delivered through students graduating in IT subjects).

Figure 9: Role of Sector Skills Council (e-skills UK) as a bridge between employers, government and education providers

Sector skills council (e-Skills) acts as a bridge between 3 areas

Educational Providers

Employer Needs

Government
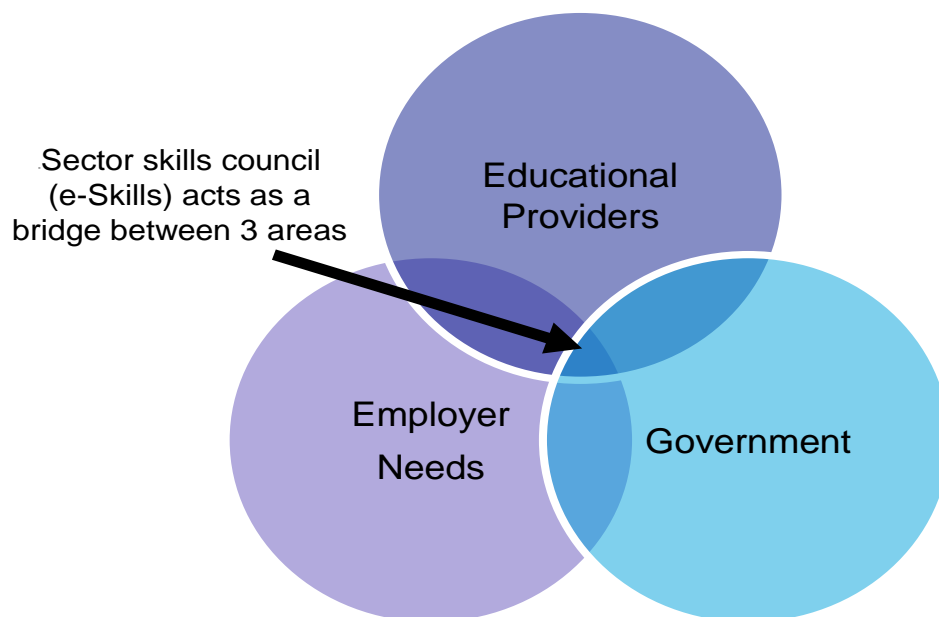
E-skills UK delivers this tripartite agenda in four ways:

1. **Sector attractiveness** – improving the appeal of technology careers to young people

2. **Future workforce** – ensuring that technology-related education prepares students for successful employment

3. **Existing workforce** – realising the potential of the existing workforce to exploit technology for improved business performance and productivity

4. **Influence** – placing the voice of employers at the heart of qualifications reform and government policy on skills.

The HE sector can draw insights from the role played by e-skills UK in the following ways:

-   Identifying what sector bodies are representing what areas of these three overlapping circles. For example, DIUS represents government, LFHE offers educational provision for leaders, and UCEA represents university employers. Who is then responsible for aligning these agendas (eg HEFCE, Lifelong Learning UK (LLUK))?

-   Identifying what types of activity each of the sector bodies is undertaking (such as the four examples given) and how such activity aligns in achieving the overall goal of delivering the future HE workforce.

5.2 Health workforces – managing a workforce with multiple employers[81]

5.2.1 Overview of health cross-sector comparison

The health sector is frequently cited as a useful comparator for the higher education sector, for a number of reasons. In particular, the UK NHS workforce has many similarities to the HE sector workforce because there is a large, specialist workforce that is employed by over 650 distinct employers. The similarities and differences between the two workforces are summarised in Table 20.

Table 20: Similarities and differences between UK NHS and English HE sectors

Similarities	Differences
Many employers – over 650 distinct NHS employers (mainly trusts) in UK whilst HEFCE-funded institutions number over 180.	Regional-level planning – the NHS has regional and national workforce planning bodies (Dept of Health and Strategic Health Authorities) that have no direct equivalents in higher education.
Lack of direct control – NHS Strategic Health Authorities influence the shape of the workforce, but employees are typically employed by trusts. Similarly, HEFCE does not directly employ HE workforce, institutions do.	
Different types of workforce – there is a distinct divide between the academic and managerial HE workforces, and the NHS has a similar divide between medical, clinical and managerial workforces.	
Restrictive policy/industrial relations – both sectors have strongly unionised workforces and national pay agreements.	

The NHS is undergoing major transformational change with significant workforce implications, particularly in light of the recent publication of the *Next stage review*.[82] There are therefore a significant number of potential areas to learn from within the transformation of the NHS workforce. We have picked out three areas of learning that have parallels to the HE sector. They are:

1. **Planning the workforce around patient pathways** – healthcare is moving towards an 'end to end view' of the patient journey for a specific health issue (such as stroke) and aligning skills and roles to ensure best quality care along these pathways. Higher education may be able to learn through understanding how skills and roles can be best aligned to the delivery of effective research and teaching experiences (that vary according to the HEI archetype). In addition, there is learning from understanding the role of the sector-level organisation (Strategic Health Authority) and local organisations (Primary Care Trusts) in ensuring this alignment.

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[81] This analysis was informed by an interview with the head of workforce planning for NHS London, Julie Screaton.

[82] A detailed overview of the workforce implications of this programme of change is given in the Department of Health publication (30th June 2008), A high quality workforce: the next stage review.

2. **Modernising Medical Careers** (MMC) – Modernising Medical Careers is a programme of radical change that aims to drive up the quality of care for patients through reform and improvement in postgraduate medical education and training. Higher education might draw on this learning through understanding how the training of roles such as research-focused academics can be better aligned to the needs of the institutions in which they will be working.

3. **Polyclinics** – are an example of how drawing together staff required in meeting common needs in a single location can better serve their end clients. Higher education can learn by integrating different staff groups in a single location (eg teaching academics, support staff, technicians) to serve their student population more effectively. Examples might be locating business partners in an academic department, and common location of academic and support staff around areas of student interest (eg a well-known US HEI has an IT director masters programme that brings together academic staff from multiple disciplines and has dedicated business support staff to manage students through their masters study).

5.2.2   Planning the workforce around patient pathways

Summary: Healthcare is moving towards an 'end to end' view of the patient journey for specific health issues (eg stroke care) that requires the involvement of multiple healthcare providers. This involves aligning skills and roles, regardless of particular provider, to ensure best quality care along these pathways. HE can learn from looking at the alignment of teaching or research provision along the 'student teaching pathway' or 'research process'.

On 11 July 2007, the report *Healthcare for London: a framework for action*, written by Professor Lord Darzi (a government minister), was published by NHS London. The proposals in this report focus on services from a patient's point of view. They look at what needs to change to make services safer and more accessible. And they look at what needs to be done to make Londoners healthier.

NHS London has worked with the 31 London Primary Care Trusts to turn the ideas in this document into a reality. In particular, *Healthcare for London* is looking at improving healthcare along key 'patient pathways'; they have already looked at six pathways and the intention is to look at 10 pathways. These pathways cut across organisation boundaries and hence address the need for co-operation between different organisations (eg GP practices, acute care, public health). They also maintain a primary focus on the patient experience over the internal focus on the providers of a particular step in healthcare delivery.

The 'flow of patients' diagram (Figure 10, below) shows one of the early patient pathway models, the stroke pathway, for which a preliminary strategy and pathway have been delivered.[83] The strategy examines the most appropriate patient pathway for the treatment of strokes and then considers its implications from a number of angles. These angles are workforce, information/IT, infrastructure, transfer of care, linkages and finance (see Figure 11 below, reproduced from strategy).

Aligning the workforce involves defining workforce roles, skills, capacity, working arrangements and employment structure across the different organisations to ensure alignment to the patient pathway.

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[83] Preliminary acute stroke strategy for London, available at http://www.healthcareforlondon.nhs.uk/projects/stroke/strategy.asp

HE can learn from this alignment between the workforce and the key customer (patient) interaction paths with the organisations that deliver the service.

Figure 10: Patient pathway for acute stroke treatment
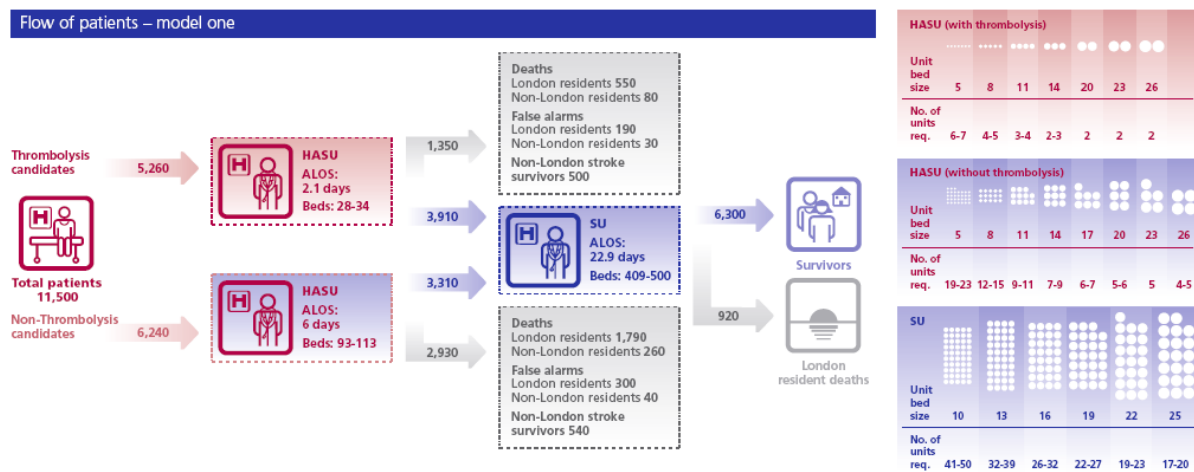
Note: HASU – hyper-acute stroke unit; ALOS – average length of stay

Higher education may be able to learn through understanding how skills and roles can be best aligned to the delivery of effective research and teaching experiences (that vary according to the HEI archetype). For instance, in the professional formation archetype, students are typically taking higher education as part of their career and professional development and need to be supported through 2+ years of this development by the HEI. When the HEI aims to provide a high quality learning experience during this period, it will rely on effective organisation of learning materials and periods (via business support staff), high quality teaching periods (via teaching academics) and a close relationship with their employer (via business development/account management). However, staff can often think in isolation and not see this whole 'student learning pathway'.

Figure 11: Summary of capability challenges in implementing the stroke pathway

Key challenges

Challenge	Summary	Poor practice	Good practice
Workforce and skills	Need for skilled multi-disciplinary team to deliver 24/7 cover	Lack of specialists e.g. stroke consultants	Good co-ordination of out-of-hours resources by a few
Information and IT	Appropriate information not available at key points in pathway	Information to assess quality of care not routinely available	Sentinel audit data collection
Infrastructure	Appropriate equipment to deliver high-quality stroke care	Stroke unit beds not being used for full length of stay	24/7 access to imaging in some units
Transfer of care	Transfer within hospital settings or to other care settings	Patients remain in hospital much longer than required	Inreach or outreach for early supported discharge
Linkages	Cross-organisational working to overcome complexity of system	Co-ordination varies and in some cases is limited	Networks helping to implement good practice by area
Finance	Tracking true costs for stroke more complex than needs to be	TIA clinics do not have appropriate cost/tariff structures	One area identifying true TIA costs and local tariff

Note: TIA – transient ischaemic attack

In addition, there is potentially some learning from understanding the role of the sector-level organisation (Strategic Health Authority) and local organisations (Primary Care Trusts) in ensuring this alignment. Mission groups might consider cross-institutional projects that consider how to ensure high quality student experiences and the maintenance of high quality research delivery capabilities.

5.2.3   Modernising Medical Careers

Summary: The NHS has moved to an integrated training path for medics that aims to drive up the quality of care for patients through reform and improvement in postgraduate medical education and training. Modernising Medical Careers is a programme of radical change that aims to drive up the quality of care for patients through reform and improvement in postgraduate medical education and training.

Higher education might draw on this learning through understanding how the training for roles such as research-focused academics can be better aligned to the skills profiles required by institutions in which they will be working and also the timeliness of delivery of people with these skills.

In February 2003 the four UK Health Departments published a policy statement on Modernising Medical Careers[84] setting out the principles underpinning major reform of postgraduate medical education and training. An independent inquiry into its implementation was led by Professor Sir John Tooke, and its report was published on Monday 8 October 2007. The report outlined 45 recommendations for the future structure, governance of and recruitment to postgraduate medical training in the UK from 2009. The Inquiry Panel proposed action to resolve issues in eight areas:

1. Developing clear shared principles for postgraduate medical training that emphasise flexibility and an aspiration to excellence

2. Consensus on the role of doctors by the end of 2008, with better acknowledgment of the service contribution of trainees

3. Strengthening of Department of Health (DH) policy development, implementation and governance in relation to MMC and medical workforce issues

4. Integrating workforce policy objectives with training and service objectives. The inquiry advocates the revision of the DH medical workforce advisory machinery

5. Developing mechanisms for providing coherent professional advice on matters affecting the medical profession

6. Reviewing the accountability structure for postgraduate training and funding flows

7. Merging the function of the Postgraduate Medical Education and Training Board with the General Medical Council

8. Modifying the structure of postgraduate training to provide a broad-based platform for subsequent higher specialist training and increased flexibility.

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[84] For more information on Modernising Medical Careers, please see http://www.mmc.nhs.uk/medical_education.aspx

The most important function of the review and the subsequent implementation was radical changes to the way doctors are trained, the speed and quality with which they are trained, and the end product of that process. Training has been streamlined and made more flexible. The objective is to better respond to the Department's skills needs, to avoid such situations as a potential surplus of consultants and gaps in the number of GPs, which would create a significant misalignment between the spending of public money and the needs of the sector, and which would ultimately impact on the delivery of healthcare service.

Figure 12: Modernising Medical Careers – revising the medical career route
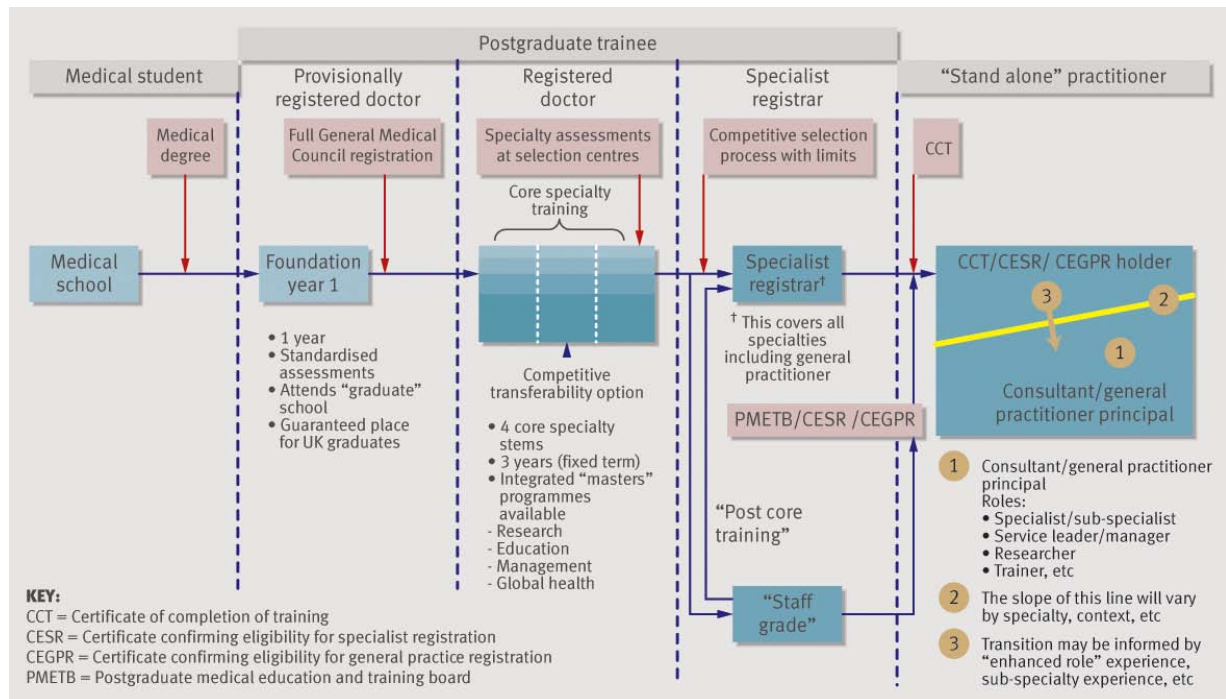
The MMC review ensured that doctors were fully qualified (registered) earlier, specialist training was more flexible so that doctors could move more easily across specialisms, and that training was better aligned to doctors' career paths and patient requirements. Higher education might draw on this learning through understanding how the training for roles such as research-focused academics can be better aligned to the skills profiles required by institutions in which they will be working and also the timeliness of delivery of people with these skills. HEIs are in the unusual position of typically being both the employer of academic staff and also the education provider (through PhD provision). However, this does not necessarily prepare academic staff for a career across the HE sector – there is therefore potential opportunity for a 'Modernising Higher Education Academic Careers' report and associated career structure, along the same lines as the MMC review undertaken by Professor Sir John Tooke.

5.2.4   Polyclinics

Summary: Polyclinics draw together staff required to meet common needs in a single location (eg provision of minor surgery at same location as a GP). Higher education can learn by integrating different staff groups in a single location (eg teaching academics, support staff, technicians) to serve their student population more effectively.

The NHS is considering plans to enhance some doctors' surgeries with groups of 'polyclinics'.[85] These are smaller than a hospital, but more focused, bringing together professionals to reduce waits and inappropriate use of the hospital sector. Trials have begun in new centres in London which house GPs alongside other health professionals under the same roof. If successful they could become commonplace across the country. Much of the inspiration for these arrangements is being drawn from other European countries where similar arrangements have been operating for a while, particularly France and Germany. These have evolved into integrated regional 'complete care networks' as shown in Figure 13.

Figure 13: Extension of polyclinics into a complete care network in Germany
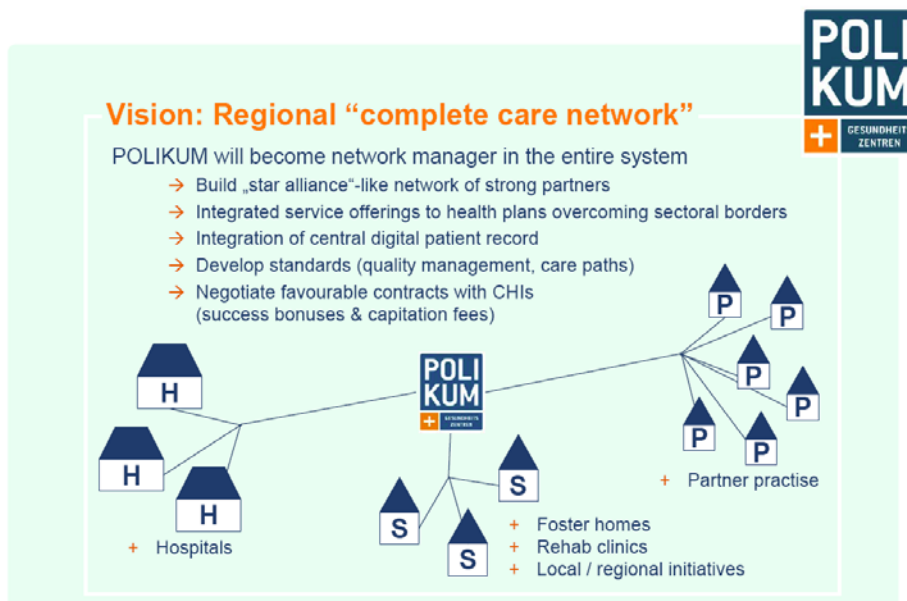
Many of the services to be offered are currently only available in hospitals. They would include district nurses and rehabilitation teams working alongside GPs as well as 'community matrons', who provide sick or disabled elderly people out of hospital with care in their own homes. The potential benefit of such centres is that commonly used services that might normally be located in distant hospitals or other centres are all located in a single location with strong, local accessibility.

HE may draw learning from this significant example of co-location of key healthcare workers required to address common patient needs. An example in an HE setting might include co-locating (HR, finance) business partners within an academic department so that specialist professional support is available to academics and students where it is required. An alternative example could be the common location of academic and support staff around areas of student interest. For instance, some US HEIs (and some English) have chosen to draw together academic staff from multiple departments around a common business theme such as environmental studies/management.

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[85] An overview of polyclinics was reported in the Times – see details at
http://www.timesonline.co.uk/tol/news/uk/health/article3380852.ece

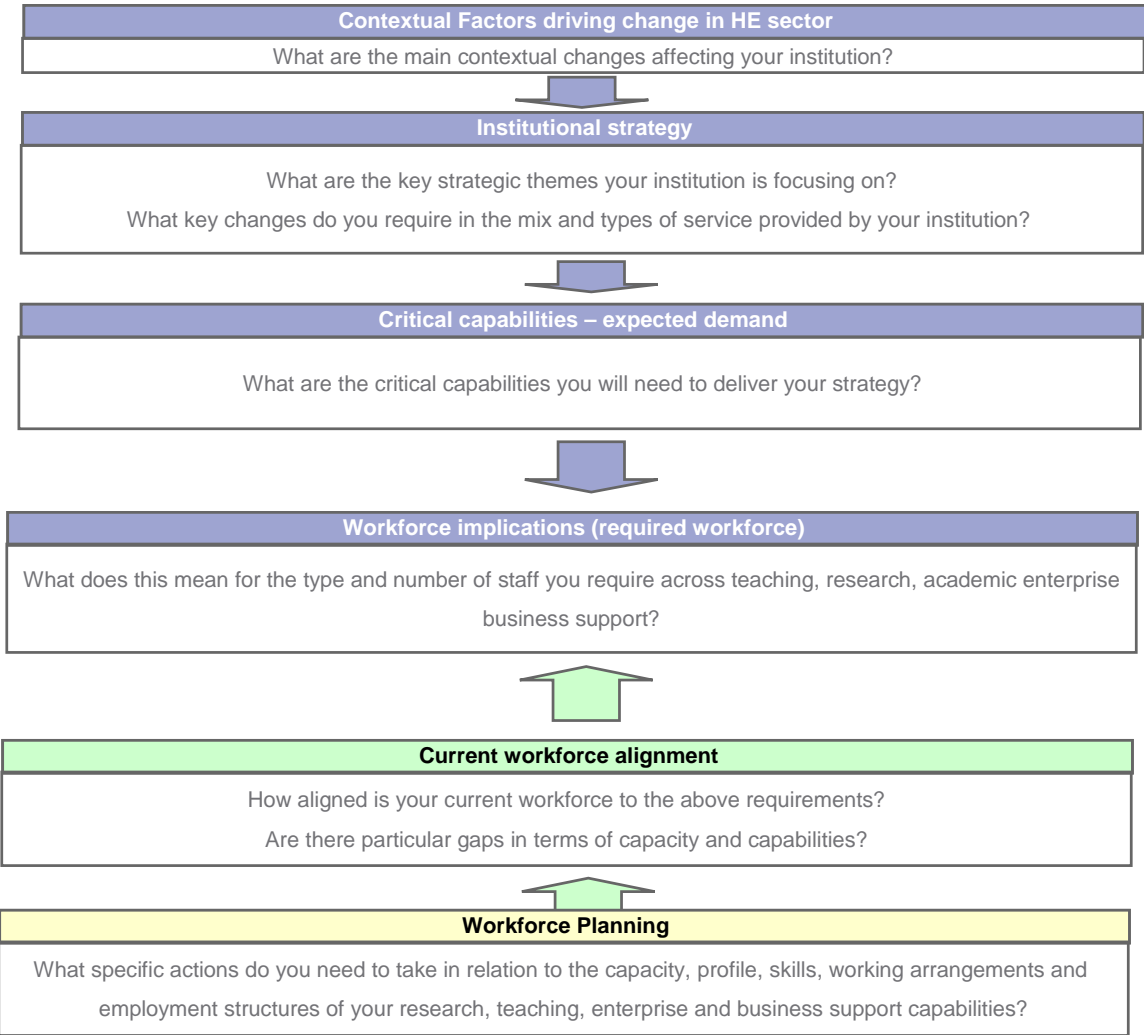# 6 An agenda for action: the future HE workforce

The 2008 Oakleigh Consulting report entitled *Evaluation of the impact of public policy and investments in human resource management in higher education since 2001* outlined the progress made since 2001 across HEIs in building their HR management capabilities. The challenge is to build on these developments to address the future workforce challenges – and in particular move beyond strategic HR management towards strategic workforce planning and human capital management. To quote a vice chancellor consulted as part of this research study: *"The future is not about doing more of the same, it is about doing different things"*.

The central message of this report is that HEIs and HE sector bodies need to take a strategically driven approach to planning HE workforce capability over the next 10-15 years and this section outlines how this can be achieved. This section outlines an agenda for action for individual HEIs and HE sector bodies in addressing the questions posed for this review (as described in Section 1.2.3). The following sub-sections offer a presentation of the potential actions that institutions and the HE sector may want to consider in ensuring adequate matching of HE workforce capability (supply and demand) in the next 10 to 15 years.

6.1 Institutions need to adopt a strategic approach to planning HE workforce capability

Having clarity around strategic direction is the foundation of effective workforce capability planning. It is by looking at their strategic positioning that institutions can define the key capabilities they need, and the specific workforce implications arising in terms of capacity, profile of the workforce, skills, working arrangements and employment structure. We recognise that no institution will perfectly fit the business models described in this report. However, we hope that by looking at the mix of markets and services that apply to them, individual institutions can draw some useful conclusions in terms of the workforce implications. We outline below a possible template that institutions may want to use when defining their own strategy, key capabilities and future workforce requirements.

Figure 14: Aligning workforce planning to causal chain of HE workforce demand

Contextual Factors driving change in HE sector
What are the main contextual changes affecting your institution?

↓

Institutional strategy
What are the key strategic themes your institution is focusing on?
What key changes do you require in the mix and types of service provided by your institution?

↓

Critical capabilities – expected demand
What are the critical capabilities you will need to deliver your strategy?

↓

Workforce implications (required workforce)
What does this mean for the type and number of staff you require across teaching, research, academic enterprise business support?

↑

Current workforce alignment
How aligned is your current workforce to the above requirements?
Are there particular gaps in terms of capacity and capabilities?

↑

Workforce Planning
What specific actions do you need to take in relation to the capacity, profile, skills, working arrangements and employment structures of your research, teaching, enterprise and business support capabilities?

As part of adopting a strategic approach to their workforce planning, institutions need to ensure that their key people management processes are fully aligned to the chosen strategy. In particular:

- **Recruitment** – recruitment should be targeted at the specific type of people required by a particular strategic positioning. For example, building on our service models, institutions focused on professional formation should aim their recruitment of academics on practitioners who are interested in developing the leading practitioners of tomorrow, rather than seeking to attract leading researchers from a primary research background, as these would not thrive in the professional formation environment, nor would they bring the relevant skills and knowledge required by this specific strategic positioning.

- **Resource management** – how institutions use their existing resources should be done in line with strategy. Institutions should look at maximising people's skills – across all levels of skills, focus on people's strengths and delegate or share particular elements of work where appropriate, and build bridges across different staff groups. The key focus should be on doing what will make the strategic positioning most effective, not on limiting people's roles and activities to their particular grade or job title.

- **Reward and performance** – people should be rewarded for the key contributions they make to the institution's strategic priorities, combining for example institution-wide bonus and individual bonus. For example, staff engaged in primary research should be incentivised to optimise new research awards, while those engaged in professional formation might be rewarded for employer contracts secured and delivered.

- **Learning and development** – whilst progress in providing greater access to learning and development across all staff categories is to be welcomed, institutions should think strategically about how they invest in learning and development, targeting specific skills needs required by their strategy, and providing tailored training adopted to specific categories of staff, rather than 'blanket training' to everyone.

A number of institutions are already adopting a more strategic approach to workforce planning, as outlined by Oakleigh Consulting's recent report on the *Evaluation of the impact of public policy and investments in human resource management in higher education since 2001*. To quote this report: *"One theme of note (and this reflects findings reported from HEFCE's 2008 Conference) is that building a cohesive and aligned institutional culture is now an increasingly overall objective"*.[86]

6.2   Build strong leadership, management and governance capabilities to drive HEI strategy delivery

Leadership, management and governance capabilities are essential given the importance of a strong strategic positioning for institutions' ability to survive and grow in an increasingly competitive environment. Institutions and the sector as a whole, through the Leadership Foundation for HE, have already made significant investment in building such capabilities – even to the point where some would described leadership as a 'tired concept'.

The challenges for the next 10 to 15 years will be about sustaining the development of leadership, management and governance while reflecting the more volatile and uncertain environment context leaders, managers and governors have to deal with. We outline below possible actions at both institutional and sectoral level to help to address some of these challenges.

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[86] Oakleigh Consulting Ltd (2008), Evaluation of the impact of public policy and investments in human resource management in higher education since 2001

6.2.1 Institutional responses to the leadership challenges

Clearly defining leadership roles and the skills associated with them

Whilst every institution needs its senior management team to combine academic credibility and leadership, management and governance skills, different strategies need their own balance of such skills. A primary research focus might require leaders who can demonstrate strong research credentials, in order to drive the right research culture and make the right choices in terms of research areas, as well as management skills to run the institution as effectively as possible. Conversely, a focus on professional formation may not need senior leaders to have a strong academic background, but rather to have strong understanding and links with the world of practice, as well as again management skills to run the institution on the business-like lines expected by its major clients.

It is therefore important for each institution to clearly define senior management roles in terms of key accountabilities, skills and knowledge, to ensure the right combination of academic credentials and leadership and management skills. The rapid changes in HE and more volatile environment mean that what has served current leaders well may not serve them so well going forward – the typical 'role description' of senior leaders in institutions will focus increasingly on dealing with uncertainty and managing complexity, as well as building partnerships at home and overseas.

Equally, institutions may need to look at enhancing their governance capabilities, potentially gathering paid and unpaid executives on governing bodies to ensure that they are best equipped to assess and where necessary challenge the strategic choices and the management of corporate risk.

Institutions may also have to review their corporate structure and decision-making processes to ensure effective and responsive decision-making – potentially moving to structures that are both more devolved and leaner.

Clearly defining alternative career routes

Given the importance of strong management skills for senior management jobs, institutions may want to consider different progression routes for their most talented individuals: a route leading to senior management roles for those individuals who combine specialist knowledge (be it on the academic or business support side) and leadership and management skills; and a 'specialist knowledge' route, which would lead to senior positions but not to senior leadership roles, for those individuals who demonstrate excellence in their particular field but do not display the leadership and management skills required for senior leadership roles. People progressing through the specialist knowledge route would provide a pool of experts, who would provide advice to senior leaders in their area of speciality.

These career paths should be based on transparent promotion criteria and processes. This might help to bring through younger senior leaders, whose progression to these senior roles would not be solely based on research credentials and age, but on their ability to become effective leaders.

Ensuring the effectiveness of senior management teams

Whilst organisational structures within HEIs will continue to differ significantly, the need to drive the implementation of institutional strategies may lead institutions to put in place a more permanent academic management structure, based on specific role descriptions and skills and on well-defined management career paths as outlined above. This would enable continuity and ownership in both the definition and implementation of particular strategies. This would also give leaders time to grow in their roles and enable them to operate at their best.

Institutions may also want to look at the effectiveness of their senior management team in the ways it works and makes decisions – specific learning and development might be provided to enhance the skills of individual members, as well as the collective ability of a senior management team.

Identifying and developing potential leaders

Embedded, devolved leadership is the antidote to too much managerialism.

Nurturing talents and ensuring effective succession planning will be increasingly important for institutions, given the ageing of the current HE leaders population. Institutions may want to create their own talent development strategy, where individuals from across an institution who have the potential to perform senior leadership roles are identified and developed One potential difficulty, however, is the risk of losing high-potential individuals where opportunities to get promoted are limited by a lack of vacancies (the 'dead men's shoes' syndrome). An alternative might be to ensure that the development of talents focuses not just on upward promotions but also uses a range of less linear progression routes, particularly in terms of experiential learning, when talented individuals are stretched and developed outside of their particular field of expertise.

Proactively supporting leaders as they take up new roles is also essential to help them adapt and operate effectively, and as quickly as possible, in their new role – initiatives such as induction, shadowing, mentoring and coaching might provide valuable support to these newly appointed leaders.

Empowering leaders to manage performance

We have mentioned the importance of aligning all aspects of institutional behaviours to the chosen strategy. Leaders need the ability to take decisions and to manage people's performance in line with the strategic objectives. This may entail greater empowerment of department heads and heads of

services in directing staff priorities. It might require institutions to review some of the provisions within their university statutes, which might have become redundant given the development of employment legislation and may act as an unnecessary hindrance to managers' ability to make decisions about people's performance. At line management levels, institutions may want to consider defining line managers' roles more clearly and provide any necessary support, particularly in terms of setting a clear direction for their team, ensuring that people are clear about what is expected of them, providing positive or negative feedback on performance, taking time to listen and providing genuine opportunities for involvement.

6.2.2   Sectoral responses to the leadership challenges

The Leadership Foundation for Higher Education has a leading role in supporting the development of leadership capabilities within institutions, by forecasting skills needs of future leaders and developing adequate development provisions, and by advising institutions on the best way to create effective management career routes. The LFHE is already proactive in these areas. Going forward, potential areas of focus could include:

- Supporting the formal accreditation of leadership and management skills

- New types of leadership development offerings, away from the typical 'MBA' type courses, and focusing more on action learning to help senior leaders to master the complexity of the VC/principal job – for example through panel discussions, peer exchanges and roundtables

- Working with other organisations to look at the other capabilities required beyond the people capabilities, in particular technology. Organisations such as BECTA (British Education Communication and Technology Agency) and the Joint Information Systems Committee (JISC) are keen to build the 'e-confidence' of institutional management, and their ability to use IT and information systems more strategically

- Looking at HEIs' boards, and whether their composition and ways of operating should be changed to better reflect the diversity of key 'markets' – in particular to include stronger representations from students and businesses – and to contribute to and challenge where appropriate the strategic choices made by institutions

- Working with HESA to improve the collection of statistical information about leaders and managers, so that it can help to inform workforce planning.

6.3   Build core research and teaching capabilities as a key differentiating factor

The combination of research and teaching capabilities is what makes HEIs significantly different from training providers. The particular balance of research and teaching capabilities, and the specific skills and knowledge within each, is what will make each institution different in terms of its strategic positioning.

6.3.1 Institutions should focus on the research and teaching capabilities that make them unique

We outline below suggestions for how institutions may want to build the specific core research and teaching capabilities that will make their specific strategy a success.

Creating a sustainable and fit-for-purpose flow of postgraduates

Institutions can use their limited resources to invest in the specific research and teaching capabilities they need. In particular, they may make specific investments in the way they develop their PhDs and postgraduate students to ensure that they equip them with the type of skills their particular strategy requires. For example, institutions focused on professional formation may develop professional PhD programmes that develop students' advanced business skills and give them exposure to the world of practice through a series of practice-based projects.

Targeting recruitment policies in line with strategy

As we outlined in the earlier description of the strategic models, different institutional strategies will imply different types of research and teaching capabilities. Each model will also provide a specific experience in terms of the nature of the work and the type of culture. Every institution needs to clearly define the type of people they need, and what makes them a unique place to work. We outline below potential 'unique selling points' of research and teaching-related careers for different service activities:

- **Primary research** – providing opportunities for ground-breaking research and international recognition

- **Research-led teaching** – providing opportunities for 'capacity builders', ie people interested in building an institution's reputation in a specific field through attracting both research grants and students

- **Professional formation** – providing opportunities for people who are passionate about communicating research to a wide audience, and about teaching excellence

- **Research-based solutions** – providing opportunities for 'academic entrepreneurs', people interested in working on a range of different projects and branching out in other activities, particularly IP commercialisation

- **Specialist institutions** – providing opportunities for people interested in specialist fields and who want to develop the next generation of leading-edge practitioners in that field.

Rewarding people differently for different contributions

The need to attract specific types of individuals in support of the institutional strategy may lead institutions to develop more individualised remuneration packages, including financial and non-financial packages, focusing on the specific needs of specific individuals. This might become all the more important if the lack of sustainability of current pension arrangements brings the higher education sector closer to the private sector, with potentially higher salaries and lower benefits in terms of pensions and holiday entitlements.

Across all types of institution, it is clear that academic-related staff will be expected to contribute to both research and teaching, and also to academic enterprise, within strategies to optimise the mix of revenue streams. This might lead institutions to consider making greater use of performance-related pay and incentives, linked to the overall strategic objectives:

- Primary research staff objectives may be linked to the number of published research outputs, to the number of research funds attracted to the institution, and to the revenue from IP commercialisation

- Research-led teaching staff objectives may be linked to the number of research outputs, and to the overall growth in revenue in terms of both research funds and students' fees

- Professional formation staff may get rewarded for the growth in student numbers, for the institution achieving higher ranking in teaching league tables, for the achievement of professional qualifications in teaching, and for specific academic enterprise projects. Institutions may consider initiatives such as teaching prizes to reward excellence in teaching

- Research-based solutions staff may be paid on a project basis, and receive further incentivisation for growth in specific accounts to encourage the building of long-term relationships with key clients.

At the University of Exeter, a system of performance management which links pay to performance has been running since 2004. All staff now have a Performance Development Review at least once a year; staff are eligible for two types of performance-related awards.

Individual merit awards (determined at departmental level) recognise outstanding contributions made by individual members of staff, and a university bonus – paid annually – gives all staff an equal share from a bonus pool, the size of which is determined by a balanced-scorecard assessment of the University's performance against a set of pre-determined key performance indicators (KPIs). The University is currently exploring the possibility of creating a third bonus, at school level, based on KPIs for schools. Feedback from staff has been positive, as outlined in the latest staff survey: 93% of respondents said that they had an appraisal in the last 12 months, 84% said that they understand the reward system, and a similar proportion said that they believe the reward system is fair.

Developing and managing HE careers

Proactively assessing research and teaching capabilities and identifying the most talented individuals is important for institutions to retain and develop their best assets, rather than lose them either through lack of continuity of employment, or through people being attracted to other places of work.

Effective performance management should become a key area of focus for all institutions, irrespective of what particular system is adopted. People need to be able to see the direct contribution they are making to a particular strategy. For example:

- For primary research staff, effective performance management should be based on research outputs. The key criteria would be quality and innovation, which could see young academics promoted quickly

- For research-led teaching staff, performance management should be based on the combination of good research outputs and the provision of a good learning experience for students

- For professional formation staff, performance management should be based on both the quality of the teaching and its currency in relation to developments in the world of practice

- For research-based solutions staff, performance management should be based around the ability to provide innovative, research-based solutions and individuals' contribution to maintaining a flow of project-based income

- For staff in specialist institutions, performance management should be based around maintaining and growing reputation as a centre of excellence in their particular niche sector.

Supporting this focus on performance should be:

- A focus on equipping managers to deal with both good and poor performance. We referred earlier about the need to empower leaders to manage poor performance, and to clarify the role of line managers

- A focus on maximising people's skills. Institutions need to clearly link their talent management, succession planning, performance management, promotion and learning and development strategies, providing everyone with an opportunity to build on their strengths and widen their skills and knowledge.

6.3.2 Sector organisations play an important role in supporting the supply of research and teaching capabilities

We outline below a range of actions which for the most part already take place at HE sector level, and should be continued.

Supporting a healthy supply of postgraduates

Sectoral organisations, such as Research Councils, HEFCE and LLUK, have a key role to play in ensuring a healthy flow of PhD and post-doctorate students and equipping them with a wide range of transferable skills, to best equip them for a range of career options within academe, and outside.

One particular challenge is that the length of time required to train PhD students creates a 'time lag' in the adequacy of supply and demand. Actions taken now in relation to the formation of PhDs will influence the type of academics in five to seven years' time.

Diversifying the supply of academics

The Research Councils can play a key role in supporting a widening of career routes into HE, such as supporting independent research fellows in developing their research careers, with institutions equipping them with a wider skills set (teaching, research grants etc) – this would provide an easier entry into academic life than the traditional PhD to doctoral post to lectureship. Easing and accelerating such transitions might help to attract more people into academia.

Sustaining investment in strategically important and vulnerable subjects

At a time when institutions are increasingly driven to follow patterns of demand in their provisions, sectoral organisations have a key role to play in identifying potentially vulnerable subjects and supporting the promotion of such subjects among students, as well as helping HEIs in their funding of such provisions. The work that HEFCE has done in monitoring and providing financial support to SIVS is essential and should be continued.

Creating bridges across careers

The single pay spine that resulted from the Joint Negotiating Committee for Higher Education Staff (JNCHES) negotiations is an opportunity to formalise greater movements between academic and professional staff, particularly in terms of technicians. An institution we spoke to described using the single pay spine to enable principal technicians who had undertaken a PhD in parallel to their work to move across to assistant lecturer role.

Supporting more flexible reward packages

Many institutions are introducing greater flexibility in rewards to recognise scarcity of talent in particular areas (eg STEM subjects and senior leadership) and those who have contributed most strongly. The sector has a role in highlighting areas of good practice in building on the existing national pay framework with flexible benefit and reward packages and marketing of the non-financial, lifestyle benefits of a career in HE.

6.4 Create new capabilities in academic enterprise, and non-academic commercial activities

6.4.1 Institutions need to define roles and careers for the new capabilities they require

Defining new roles and new career paths

The need for HEIs to diversity their income streams will continue to support the development of new roles in academic enterprise and non-academic commercial activities. Institutions need to define clearly the role of these staff, how to best attract and reward them, and how to enable them to progress within an institution – and beyond.

With the creation and dissemination of knowledge at the core of their activities, HEIs should be at the leading edge of providing attractive employment opportunities for knowledge workers.

Derby University has Workforce Development Fellows, who are part of the Academic group, and who act as 'middlemen' between businesses and academics to ensure that the University provides a continuous professional development offering that meets business demands. It also has a business-to-business arm, the University of Derby Corporate (UDC), which provides consulting services to businesses. The work of the Workforce Development Fellows and of UDC is structured around different business models, with different contracts and reward schemes for academics and support staff involved in these activities.

Integrating new roles in the existing structures

One challenge for institutions will be how to integrate this new workforce with both academic and business support staff. Supporting the use of project work, which would gather people from different parts of an institution, ensuring that all staff have part of their pay linked to project or overall institution performance, might help to foster collaboration and team spirit.

6.4.2 Sectoral organisations can support better understanding and professionalisation of these new roles

Enhancing data collection

Through its HE-BCI surveys, HEFCE is already capturing very valuable information on these emerging roles. Sector organisations, and LLUK in particular, should continue to work with HEFCE to constantly refine ways of measuring the development of academic enterprise and non-academic commercial activities, and the new roles resulting from them.

Supporting the professionalisation of new roles

Sectoral organisations have a key role to play in developing occupational standards for these emerging new roles, in collaboration with other industries. This will enable transferable skills, making supporting HE enterprise an attractive career. HEIs, which are characterised by the production of knowledge, should be at the leading edge of developing clear standards for these new roles, and providing attractive employment opportunities for them.

6.5 Focus on how business support capabilities can add value to HEI activity

### 6.5.1 Institutions need to focus on their core business support capabilities

Defining and enhancing core business support capabilities

As described earlier in this report, all institutions need their business functions to operate more strategically and contribute to an effective running of the institution. When defining their core business support capabilities, institutions may want to look at two key dimensions:

- **Strategic contributions** – how business support skills can both influence the development of a clear strategic positioning, and support the implementation of this strategy. In particular, institutions will be looking to business support staff to equip managers to deal effectively with key HR, finance and estate issues.

- **Value-added** – how business support capabilities can enhance the value of academics' work, and/or how they can improve the experiences of students and learners. What this means will differ across institutions' different business areas: for primary research, adding value might be about maximising the success rate of bids; for research-led teaching, adding value will involve supporting the administration of research grants and funding requests and the recruitment of students; in professional formation, adding value might be about supporting a flexible student experience, for example by ensuring 24/7 access to the campus, efficient IT systems, etc; in research-based solutions , business support capabilities will often be in direct contact with clients and will therefore need the ability to work as one with research and teaching staff, and provide a coherent student experience; in specialist institutions, business support capabilities will need to deal with the challenges of managing often expensive facilities and supporting very fluid and diverse research and teaching capabilities.

Figure 15: Using a grid such as the one outlined below can help institutions define their core capabilities
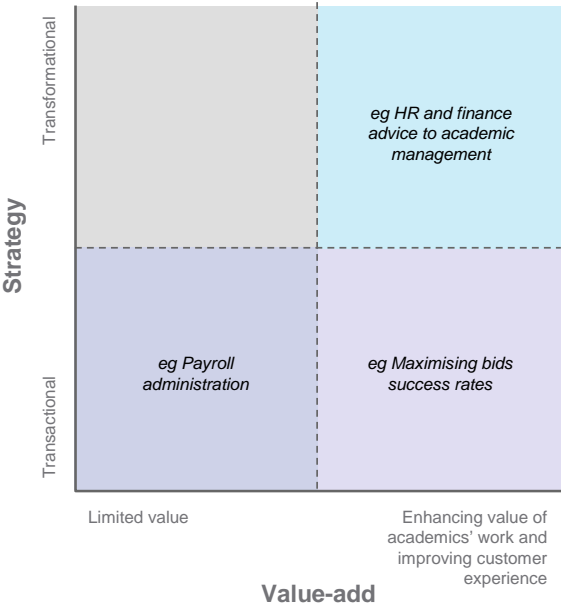
For such core business support activities, the focus should be on attracting, retaining and maximising the use of such skills and knowledge, by making a career in HE business support an attractive career.

Making a career in HE administration an attractive career

Both AHUA and AUA have emphasised the need to make a career in HE business support a 'career of choice'.

A key element will be defining clear career paths in business support, as suggested below:

Table 21: Potential HE business support career paths

Business support career path	Key 'selling' points
The professional specialist path	• Managing complex issues – eg large workforce, diversified income streams, large and often multi-site estates – in a complex and changing environment • Opportunity to move into senior leadership role for individuals with strong leadership and management skills. Alternative career route includes following the 'specialist knowledge' route mentioned earlier (eg senior accountant), and becoming a trusted advisor to senior leaders
The para-technician path	• Opportunity to develop expert knowledge in particular technology, equipment or practice, and provide essential support to both research and teaching • Opportunity to widen skills and experiences by supporting academic enterprise activities and by receiving CPD or doing PhD • Possible move to an academic career for talented technicians who achieve postgraduate qualifications and have strong experience of both research and teaching activities
The operations support path	• Key role in enhancing the value of academics' work and in improving the experience of students. In particular, key role in ensuring effective management of operations, particularly in terms of resource management.

Institutions may also want to look at the way they reward experienced business support staff. Potential actions include:

- Using fewer but more highly skilled professional staff, and providing higher rates of pay that can compete with other sectors

- Offering different ways for graduates to experience the richness of the role, through placement, internship and possible graduate apprenticeships

- Including elements of performance-related pay, aligned to the strategic goals of the institution, to outline the direct contribution that business support staff can make to institutional success.

Leveraging non-core business support capabilities

For non-core business support activities, the focus should be on efficiency, leveraging them internally and potentially externally through process improvements, rationalisation, centralisation, shared services or externalisation. In looking at the use of shared services or outsourcing, institutions will need to consider the new capabilities they will require, particularly in terms of effective contracting and management of third party suppliers.

6.5.2 Sectoral organisations can support the professionalisation of business support

Supporting the professionalisation of business support

Sectoral organisations have a key role to play in supporting the professionalisation of business support staff, particularly through the development of occupational standards, such as new standards for para-technicians.

Sharing experience on widening career paths

Sectoral organisations can also help to share best practice across institutions on the range of possible career paths offered within business support, and potential bridges into more academic-related roles where appropriate.

Building knowledge and expertise in shared services

Few HEIs have yet adopted the shared services model that has been widely adopted elsewhere. As more institutions contemplate shared service models, sectoral organisations can help by looking at the experience of shared services in other sectors, and by sharing best practice and advice. Some sector organisations might even lead the way by setting up and offering their own shared services.

6.6 Create an agile organisation

By 'agile' organisations, we mean organisations that are able to respond to strategic needs. Both institutions and sectoral organisations have a role to play in facilitating such responsiveness, whilst avoiding casualisation of people working in the sector.

6.6.1 Institutions need to look at different ways of adapting to changing demands whilst retaining key capabilities

Making all capabilities more flexible to meet demands

Responding to students' demand for a more flexible offering requires institutions to look at how to make their critical capabilities more flexible:

- Systems and technology should be used as an enabler, for example allowing more staff to work remotely

- Processes – some processes may need to be adapted to ensure that they provide an extended range of services.

- People capabilities – all staff, not just academic-related staff, need to work more flexibly. The strong tradition of visiting teachers and the great variety of contracts already provide some flexibility. Institutions may want to look at how they best harness that flexibility with effective workforce planning systems. Equally, it could be that institutions need to look at how they make categories of staff who work closely with students more flexible, for example librarians and students' support. This will require more flexible and more complex rotas.

Making workload management more explicit and more flexible

Institutions may want to look at how to make optimum use of their resources, and therefore become more explicit and more directive in their workload management. For example, the demands on teaching and research staff in institutions heavily engaged in academic enterprise activities might vary considerably depending on the number of commercial projects sold; where their time is not committed to teaching or research, they could be directed to developing existing accounts and new client relationships.

At Derby University, workload allocation for academic staff is a greater consideration than before. The University has recently started to publish fixed timetables to provide more certainty and give mature students the opportunity to plan their higher education around their family and professional lives, three years in advance.

Equally, institutions need to move away from restrictions on numbers of hours for research and teaching – and make workload management more flexible. To quote a 2008 report by Professor Paul Ramsden on *The future of higher education teaching and the student experience*,[87] *"an assumption that academic work will always be in the same proportions of teaching, research and knowledge exchange is also limiting to quality – there is no logical reason why a staff member should not be involved 100 per cent in teaching during one year and 100 per cent in research in the next"*.

Supporting interchanges between HE and other parts of the economy

Interchanges between HEIs and other parts of the economy are essential for institutions to be responsive in both the content and the type and level of resources they use. We illustrate below how such interchanges might work with regard to different HE service lines:

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[87] Ramsden, P (2008), The future of higher education teaching and the student experience

- For primary research, interchanges might involve providing bridges into academic research for highly talented researchers from other sectors

- For research-led teaching, this might involve using scholarships to attract people from specific fields – eg international relations – to work as academics

- For professional formation, interchanges might involve using part-time or retired people who have extensive experience of particular practice

- For research-based solutions and specialist/niche services, this might be about providing opportunities for dual careers between academe and practice.

This need for interchanges between HE and other parts of the economy is echoed in Professor Paul Ramsden's report on *The future of higher education teaching and the student experience*:

"Universities and Colleges, supported by national professional associations for academics, should develop more flexible employment contracts that recognise different patterns of work. We should recognise that the academic workforce is part of wider workforce; increased fluidity and transferability between sectors is desirable, not only for research purposes but also to ensure high quality teaching and a common understanding of the connections between higher education and employment skills."

Managing different business models within an institution

In practice, whilst institutions might lean towards a particular service emphasis, they are also likely to combine elements of other academic service lines. For example, an institution might focus primarily on professional formation, but also maintain specialist primary research capabilities in selected areas. This means having to manage different types of staff, potentially employed under different terms and conditions. A key challenge will be creating a coherent overall identity and strategy without destroying the essential diversity of institutions.

There are different options for HEIs to explore: some may choose to use a range of different contracts for different groups. Others may want to explore the possibility of a single contract, but with a heavy focus on performance management, and flexible reward mechanisms enabling the reward of people for different things.

Combining meeting business needs and responding to people's demands

Whilst traditionally HEIs have accommodated all requests for flexible working, the increased need to operate more corporately and efficiently may bring them closer to private sector organisations, ie exploring all possibilities for flexible working but within the constraints of running a successful operation.

6.6.2   Sector organisations can help to explore new types of contracts to support greater agility of institutions

Exploring new types of contract to create continuous relationships but enable responsiveness

Sector organisations, in particular UCEA, UUK and trade unions organisations, can help institutions by exploring new types of contracts. In particular, they should look at how to move from a current

situation of a two-tiered workforce, with on the one hand rigid employment structures for some, and ad hoc and often casual employment for others, towards a situation where HEIs can build a continuous employment relationship, but a flexible one. As a minimum, contracts should enable institutions to assign people flexibly to different activities, as per Professor Paul Ramsden's quote above. Institutions may also consider sharing some resources, with for example an academic being in a continuous employment relationship with a pool of institutions, with a minimum number of hours guaranteed, but flexible in terms of where and when these hours might be delivered.

6.7 Sector organisations need to identify and enable HEIs to address sector-wide issues

Planning for the future HE workforce is a challenge that very much lies with higher education institutions. Each institution will have a particular set of workforce challenges emerging from its strategic choices.

A number of sector-level stakeholders can also have an influence on institutions' workforce planning. These stakeholders include:
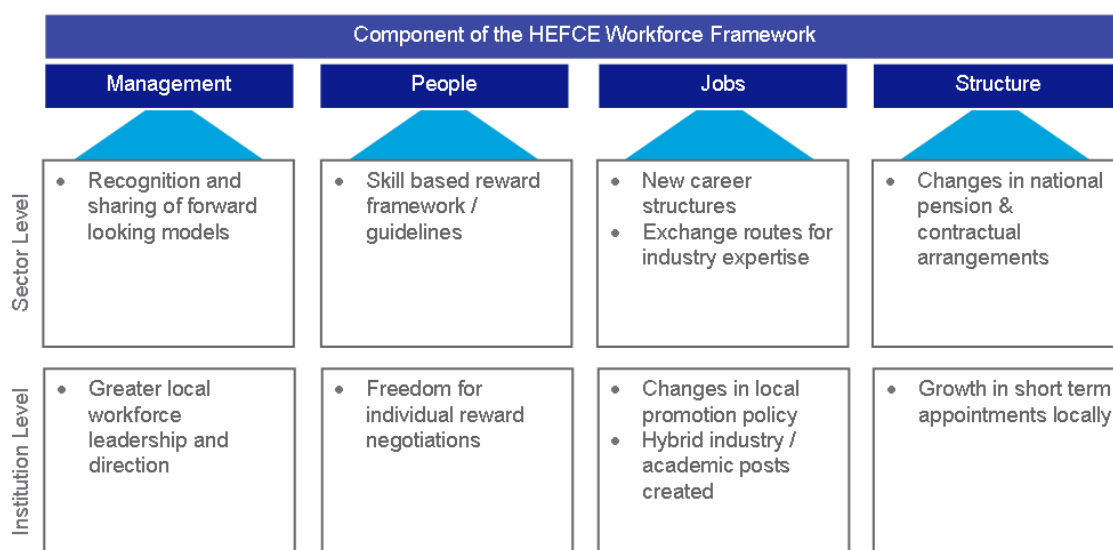
- **HE sector representatives** – in particular UCEA, trade unions, HEA, LLUK, Committee of University Chairs (CUC), LFHE, ECU, UUK

- **Government** – and its funding arm HEFCE

- **Students** – whose voice is becoming increasingly important given the growing reliance on fees

- **Employers** – and their representatives, including Sector Skills Councils.

Many sector-level initiatives, such as Rewarding and Developing Staff in HE and the pay framework, have provided a basis for addressing a sector-wide issue (reward and development) whilst allowing institutions to make specific, locally appropriate decisions (eg around specific areas of development) within a sector-wide framework. It is essential that sector-level organisations co-ordinate two specific strains of sector-level activity:

1. Clearly evidenced identification and specification of sector-wide systemic issues

2. Well-defined sector-level interventions that provide individual HEIs with frameworks, tools, expert support and relevant data to address issues within the local context (see following section for more detail on this).

Figure 16 below gives some examples of what such action might look like in practice. For instance, good practice guidance and sharing of best practice examples of strategic institutional leadership, supplemented by relevant leadership development, is a potentially useful sector-level intervention to support the development of strong HEI leadership teams. The development/highlighting of career paths/structures for technicians is a way in which sector-level organisations could help institutions to develop the capability of technicians to take on more active teaching and research roles if required as part of the HEI's particular strategy.

Figure 16: Aligning action at sector and institutional level

Component of the HEFCE Workforce Framework			
Management	**People**	**Jobs**	**Structure**
Sector Level			
• Recognition and sharing of forward looking models	• Skill based reward framework / guidelines	• New career structures • Exchange routes for industry expertise	• Changes in national pension & contractual arrangements
Institution Level			
• Greater local workforce leadership and direction	• Freedom for individual reward negotiations	• Changes in local promotion policy • Hybrid industry / academic posts created	• Growth in short term appointments locally

6.8 Sector organisations need to have clearly defined roles in addressing sector-wide issues

Sector organisations can enable the addressing of sector-wide workforce issues (such as institutional leadership) through taking on a variety of roles. The main roles that such organisations take on are:

1. **Workforce analytics** – providing HE workforce data (such as the HESA data), information and statistical analysis of workforce trends (such as those contained in many of the HEFCE workforce reports) to enable identification of sector-wide workforce issues

2. **Leadership, technical and management development services** – to directly address capability gaps and deficiencies across the HE workforce (such as those services provided by the Leadership Foundation for HE)

3. **Advisory and consultancy services** – to support institutions in finding good practice approaches to addressing institutional workforce issues

4. **Tools, frameworks and resources** – to provide common sets of tools and resources that would be of benefit across multiple institutions (eg a strategic workforce planning toolkit)

5. **Alignment of sector-level support** – bringing together and aligning HE workforce development across the differing interests of government, institutional employers and HE staff.

In reviewing the roles taken by sector organisations and reviewing the research with many of these organisations during this study, the following actions would be of benefit:

• Clearer definition of the roles, aims and targets of sector organisations

• A single HE sector organisation that supports the alignment of HE workforce development initiatives. In the cross-sector comparison example from IT, this role was played by e-skills UK, the IT Sector Skills Council. A similar body that ensured clear definition, alignment and target setting for sector bodies would ensure more consistent and appropriate support to the sector

- Management and measurement of the effectiveness of sector-level organisations and the interventions provided by such organisations.

6.9 Equality and diversity: widening the pool from which to get excellent staff

6.9.1 Institutions should adopt a strategic approach to equality and diversity

Linking the equality and diversity agenda to overall strategy

With the growing importance of fees as an income stream, all institutions will be looking to align the profile of their staff population to the profile of their students' population, whilst at the same time ensuring that they recruit the right quality of people for their particular strategy. Institutions should be changing their quality criteria – their focus should be on recruiting the best people. But they may want to consider widening the pool from which they can recruit excellent staff. This might be increasing their international recruitment, but also recruiting from hard to reach communities and fighting attrition of particular groups.

Monitoring of attrition rates for specific groups, and targeted actions to address it

Supporting them in this should be an actual monitoring of the experience of minorities. Institutions need to go beyond statistics, and understand the reality of the experience of different minority groups. They should implement targeted actions as a result of this assessment, bearing in mind the need for all actions to be aligned to overall institutional strategy.

6.9.2 The sector can support this strategic approach

ECU has been working with HEIs to share best practice in terms of equality and diversity, and to help them integrate the equality and diversity agenda in their strategic planning. Going forward, ECU has a key role in advising institutions on how best to widen their recruitment pool to recruit more diverse talents. ECU has also a key role in assessing complex issues across the sector: for example, an individual institution may not feel equipped to assess the current expectations and satisfactions of specific groups such as gay and lesbian students. Equally, where institutions face particular challenges in terms of managing a diverse student body, such as dealing with students of different religious beliefs, ECU can provide independent and objective advice, building on good practice.

Acronyms used in this report

AHUA	Association of Heads of University Administration
AUA	Association of University Administrators
AUDE	Association of University Directors of Estates
BECTA	British Education Communication and Technology Agency
BME	Black and minority ethnic
BUFDG	British Universities Finance Directors Group
CBI	Confederation of British Industry
CPD	Continuing professional development
CUC	Committee of University Chairs
DIUS	Department for Innovation, Universities and Skills
DTI	Department of Trade and Industry
ECU	Equality Challenge Unit
EU	European Union
FE	Further education
FTE	Full-time equivalent
HE	Higher education
HEA	Higher Education Academy
HE-BCI	Higher education – business and community interaction
HEFCE	Higher Education Funding Council for England
HEI	Higher education institution
HEIDI	Higher Education Information and Data Service
HEPI	Higher Education Policy Institute
HESA	Higher Education Statistics Agency
HR	Human resources
ICT	Information and communications technologies

IP/IPR	Intellectual property/intellectual property rights
IR	Industrial relations
IT	Information technology
JISC	Joint Information Systems Committee
LFHE	Leadership Foundation for Higher Education
LLUK	Lifelong Learning UK
LSC	Learning and Skills Council
NHS	National Health Service
PEST	Political, economic, social and technological
PVC	Pro-vice chancellor
QAA	Quality Assurance Agency for Higher Education
QR	Quality research (HEFCE grant)
RAE	Research Assessment Exercise
RC	Research Council
REF	Research Excellence Framework
SIVS	Strategically important and vulnerable subjects
SMEs	Small and medium enterprises
STEM	Science, technology, engineering and mathematics
TDA	Teaching and Development Agency for Schools
UCEA	Universities and Colleges Employers Association
UPA	Universities Personnel Association
UUK	Universities UK
VC	Vice chancellor

Appendix A: Stakeholders consulted

Individual interviews:

Stakeholder name	Organisation
Andrew Cubie, Chair of Napier University Court and Chairman of CUC	Committee of University Chairmen (CUC)
Ewart Woolbridge, Chief Executive	Leadership Foundation for Higher Education (LFHE)
Nicola Dandridge, Chief Executive	Equality Challenge Unit (ECU)
Jocelyn Prudence, Chief Executive Helen Fairfoul, Deputy Chief Executive	Universities and Colleges Employers Association (UCEA)
Mike Moore, Vice Chair of UPA and Director of HR at University of East London	Universities Personnel Association (UPA)
Alison Wild, Chair of AHUA and PVC Admin at Liverpool John Moores University	Association of Heads of University Administrators (AHUA)
Alice Hynes, Executive Secretary	GuildHE
Sean Mackney, Deputy Chief Executive, and Helen Thomas, Assistant Director	Higher Education Academy (HEA)
Alison Robinson	Association of University Administrators (AUA)
Alison Twiney	Lifelong Learning UK (LLUK)
BUFDG London Committee	British Universities Finance Directors Group (BUFDG)
David Malcolm, Head of Social Policy	National Union of Students (NUS)
Dr Iain Cameron, Head, Research Careers and Diversity Unit (with input from BBSRC, EPSRC and AHRC)	Research Councils UK (RCUK)
Malcolm Keight, Head of HE and Industrial Relations, and Jane Thompson	University and College Union (UCU)
Jon Richards, Senior National Officer	UNISON

Participants to Scenario Workshop 1 (8 October 2008):

Name	Institution
Amy Norton	HEFCE
Alison Johns	HEFCE
Rex Knight	Deputy Vice Chancellor and Registrar at Oxford Brookes University, and a member of the AHUA Executive
Lizzi Holman	CBI
Mike Conway	Russell Group
Fiona Belton	Middlesex University, and a representative of the Million+ group
Keith Herrmann	Council for Industry and Higher Education (CIHE)
Dr Jay Kubler	Association of Commonwealth Universities (ACU)
Professor Geoff White	UCEA
Mary Luckiram	HR Director at St George's Hospital Medical School, and representing UPA
Steve Outram	HEA
Chitro Ghose	LLUK
Dr Geoffrey Copland	Former Vice Chancellor of the University of Westminster, and former chair of the Universities and Colleges Employers Association
Julie Davies	Association of Business Schools
Laura Brooks	Oakleigh Consulting

Participants to Scenario Workshop 2 (30 October 2008):

Name	Institution
Amy Norton	HEFCE
Paul Marshall	1994 Group
Maxine Penlington	Secretary and Registrar at Birmingham City University, and a member of the AHUA Executive
Janice Leung	UUK
Mike Conway	Russell Group
Brian Henry	Director, LLUK Northern Ireland
Peter Brook	HR Director of University Alliance
Helen Goreham	LFHE
Alison Robinson	AUA
Mary Luckiram	HR Director at St George's Hospital Medical School, and representing UPA
Helen Thomas	HEA
Gillian Slater	Head of Personnel at the University of Worcester, representing GuildHE
Rachel Libby-Chia	HR Director, St Mary's University College, GuildHE
Dr Geoffrey Copland	Former Vice Chancellor of the University of Westminster, and former chair of the Universities and Colleges Employers Association
Julie Davies	Association of Business Schools
Helen Ellis-Jones	Head of HR Strategy and Change, University of Hertfordshire
Laura Brooks	Oakleigh Consulting

Appendix B: HE institutional visits and interviews

HEIs	Group
University of Derby	Million+
Cranfield University	Non-aligned
Warwick University	Russell Group
Bradford University	University Alliance
Exeter University	1994
Bedfordshire University	Million+
Arts Institute of Bournemouth	GuildHE
Leeds College of Music	Specialist
Goldsmiths College	1994
University of Northumbria	University Alliance
Sunderland University	Million+
Birmingham City University	Million+
Leeds Trinity and All Saints	GuildHE

Appendix C: HEI survey questions

Section 6: Future workforce: looking ahead to 2020

This section asks questions about your views on:

- Your institutional strategy – recognising that future workforce needs are likely to be different for every higher education institution, reflecting their very different mixes of academic operations and the different strategies being pursued in 10 to 15 years' time

- The implications of your institutional strategy in terms of future demand and supply of staff.

What is your institution's current income, and what is your target in terms of income going forward?

Current income (2008)	Drop down menu including: Less than £50m £50-100m £100-200m More than £200m
Future income (2020)	Drop down menu including: Grow by more than 25% Grow by less than 25% Maintain

Please state how you would expect the mix of activities provided by your institution to change in 10 to 15 years' time?

	By 2020 (grow/maintain/reduce)
Publicly funded research (eg research grants, research council awards)	[Drop down menu for all: Grow Maintain Reduce]
Privately funded research (eg by businesses, government organisations, charities, overseas organisations etc)	[Drop down menu]
Publicly funded teaching (eg teaching grants and regulated fees)	[Drop down menu]
Privately funded teaching (eg unregulated fees from students (eg international), contracts from businesses, government organisations, charities, etc)	[Drop down menu]

	By 2020 (grow/maintain/reduce)
Academic enterprise (eg consultancy, knowledge transfers, conferences, publishing)	[Drop down menu]
Others (catering, accommodation, lettings, etc)	[Drop down menu]

What key changes would you expect in the way your institution delivers its key activities?

	By 2020 (grow/maintain/reduce)
Changes in the mode of teaching – full-time, part-time, e- and distance, experiential	[Drop down menu for all: Grow Maintain Reduce]
Links with schools, colleges	[Drop down menu]
Operating hours (eg extended hours)	[Drop down menu]
More campuses or partnerships (a) regionally	[Drop down menu]
More campuses or partnerships (b) internationally	[Drop down menu]
Other [open text]:	

Staffing impacts of strategic changes

Academics: What would be the impact on academic staff (including teaching, research and academic enterprise staff) of the changes mentioned in questions 35 and 36 above (eg in terms of required capacity, mix of skills, patterns of employment, etc)? Please list the 3 main impacts you would anticipate.

[Open text]

[Open text]

[Open text]

Professionals and support: What would be the impact on professionals and support staff (including administrative/professional, technical, clerical and manual staff) of the changes mentioned in questions 35 and 36 above (eg in terms of required capacity, mix of skills, patterns of employment, etc)? Please list the 3 main impacts you would anticipate.

[Open text]

[Open text]

[Open text]

Leadership: What would be the impact on the leadership skills and types of leaders you will need of the strategic changes mentioned in question 35 above? Please list the 3 main impacts you would anticipate.

[Open text]

[Open text]

[Open text]

What changes would you expect regarding the supply of staff in 10 to 15 years' time?

How would you expect your current workforce to change in the next 10 to 15 years (eg ageing certain categories of staff, greater diversity, increased competition for talents, specific shortages, etc)?

Please list the 3 main changes you would expect to see in your current workforce.

[Open text]

[Open text]

[Open text]

What structural changes (eg regarding career paths, reward and recognition arrangements, etc) would help you meet your future workforce requirements? Please list the 3 main structural changes that would be needed.

[Open text]

[Open text]

[Open text]

Appendix D: Reference reports

(April 2008), I-graduate international student barometer

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Association of Graduate Recruiters (2005), What do PhDs do?

Breakwell, G. (2006), Vice chancellors' attributes and selection, LFHE

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HEFCE (2002), Academic staff: trends and projections, HEFCE 2002/43

HEFCE (2006), The higher education workforce in England – a framework for the future, HEFCE 2006/21

HEFCE (2007), Staff employed at HEFCE-funded HEIs: update – trends and profiles, HEFCE 2007/36

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HEPI (July 2005), Demand for higher education to 2015-2016

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HEPI (2008), The Bologna process and the UK's international student market

HEPI (2009), The academic experience of students in English universities

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LSC (2005), Employers skills survey

Oakleigh Consulting Ltd (2008), Evaluation of the impact of public policy and investments in human resource management in higher education since 2001

Ramsden, Paul (2008), The future of higher education teaching and the student experience, HEA

Smith, D., Adams, J. and Mount, D (2007), UK universities and their chief executive officers: the changing role of pro-vice chancellors, LFHE

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UCEA (2005), Recruitment and retention of staff in UK higher education

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UNISON (2007), Research into the position of secretarial and clerical staff within the UK higher education system

UUK (2007), Higher education pay and prices index

UUK (2008), Future business models for universities in the UK: issues and challenges

UUK (2008), The future size and shape of the HE sector in the UK

UUK (2008), Patterns of higher education institutions in the UK (8th report)

UUK (2008), Talent wars: the international market for academic staff

Whitchurch, C (2008), Professional managers in UK higher education: preparing for complex futures, LFHE

Appendix E: HESA staff categories

Managers and professionals:

|	
1	Managers
2B	Non-academic professionals

Technicians:

3A	Laboratory, engineering, building, IT and medical technicians (including nurses)

Support administrators:

3B	Student welfare workers, careers advisors, vocational training instructors, personnel and planning officers
3C	Artistic, media, public relations, marketing and sports occupations
4A	Library assistants, clerks and general administrative assistants
4B	Secretaries, typists, receptionists and telephonists

Others:

5	Chefs, gardeners, electrical and construction trades, mechanical fitters and printers
6	Caretakers, residential wardens, sports and leisure attendants, nursery nurses and care occupations
7	Retail and customer service occupations
8	Drivers, maintenance supervisors and plant operatives
9	Cleaners, catering assistants, security officers, porters and maintenance workers
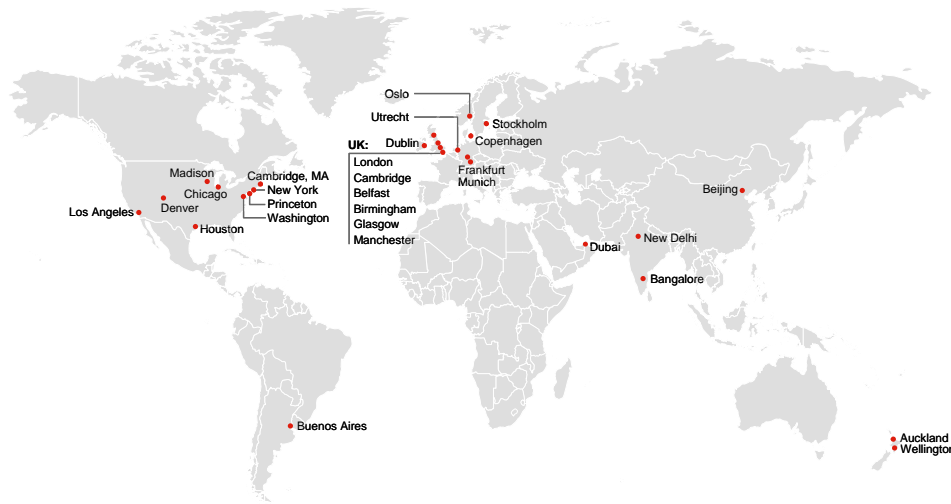
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