



Assistive Technology Workforce Development



Report Summary

June 2007

Information:

Document Purpose	This document reports on a feasibility study for the development of an assistive technology workforce strategy.
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Consultation	Responses are welcomed on any aspect of this report.
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Definition	Assistive Technology is any product or service designed to enable independence for disabled and older people (King's Fund Consultation, 2001)

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Foreword

This study comes at a crucial point for assistive technology services. As a society we are facing significant challenges to our capacity to provide care for an ageing population, we have rising expectations for control over our lifestyle and care choices and have set ourselves a national priority to support disabled children and young people to maximise their life opportunities and well being.

Over the next decade some hard decisions need to be made about how to use our resources, both in terms of state funding and the expertise of the workforce. This is already prompting the development of new models of service provision that recognise the significant role already played by private and third sector organisations. Coinciding with the requirement to find partnership approaches to delivering services we are seeing rapid technological advances in information and data management. This can be seen in emerging services that use telecare, telemedicine, lifestyle monitoring and support, automated home environments, systems for navigating the external environment and online information networks. Used creatively and appropriately, these new technologies can support an individual to remain living in the home of their choice and to actively engage with the world.

Just as important as accommodating the potentially disruptive impact of emerging technologies, is the need to find a way for every disabled child and adult and every older person who's experiencing the effects of ageing to easily access a broad range of 'straightforward' assistive technology that supports daily life (this could be simple equipment like a bath board, a swivel seat for the car, or big button switch for the computer). Shifting the focus of services to provide timely access to assistive technology means that a much broader group of practitioners in mainstream services need to build competence and confidence with assistive technology.

At the same time there must be parallel activity to support disabled and older people, their families and friends, and particularly disabled children and young people, to build confidence and competence in choosing the right assistive technology and to learn how to sustain the use of that technology. The aim is that as a society we can embrace the potential of assistive technology to support all of us to choose how we want to live our lives as we get older and for everyone to be able to maximise our life opportunities.

This study maps how far we have to go. A key element in achieving this vision is to support the capacity of the workforce to work confidently with assistive technology. The proposal put forward in this report is that a body of good practice, common to all areas of assistive technology, can form the foundation for education and training pathways across assistive technology and through a variety of vocational and academic educational routes. Such a shared body of practice can also shape programmes to support disabled and older people to actively choose and use technology.

The approach to workforce development across assistive technology is at this stage necessarily broad brush and will require the commitment and support of assistive technology experts and practitioners, and the participation of disabled and older people themselves, to develop into a practical programme of work. What the study provides is a thoroughly researched road map showing the route forward and outlining the action that is needed.

What such an approach makes possible is the development of a skills and career framework which can improve standards of good practice across the field. It can be used to develop an approach to regulation of the workforce, creating a level playing field across the statutory, private and third sectors. Implementation of the report recommendations will increase the flexibility of the workforce to accommodate emerging technologies and will facilitate the shift of services towards a person-centred model.

The scope of application of this framework is wide, just as the potential benefits of assistive technology spread into every area of daily life. This document provides a useful contribution for consideration for further work and application. At this point neither Skills for Care nor Skills for Health can commit their organisations to this agenda, but will of course, consider it in the wider contexts of their respective strategic business plans in the future.

This report outlines the path to developing the workforce infrastructure to unpin effective services in assistive technology and to develop innovative and exciting programmes to enable disabled and older people to embrace technology as part of their plans for active living. I very much welcome this report and look forward to seeing how this work develops over the next couple of years.



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1. Introduction to the study

1.1 Report purpose

This report originates in work undertaken by FAST on behalf of the AT Forum to review the situation for the AT workforce. This work was summarised in the report 'Assistive Technology: an education, a career, a partnership' (November 2005). This recommended that investment should be made in developing a broad workforce development strategy, including the mapping of a National Occupational Standards Framework in AT.

1.2 Overall objectives of this report

The aim of this report is to examine the case for investing in a workforce development strategy in AT and to assess the extent of work that would be required. The approach is designed to:

- Describe the current and potential AT workforce
- Understand the range of service delivery settings, currently and potentially
- Identify the relevant stakeholders and activity across sectors
- Identify the case for competence development in AT, existing models and the scope of work required to develop an effective cross sector approach
- Gain consensus on supporting self-care in AT for users and carers
- Gain consensus on the most effective workforce development strategy
- Identify the work required to implement workforce development strategy
- Gain the relevant stakeholder participation and championship to progress to implementation of the report proposals.

1.3 The groups covered

AT services are relevant to disabled adults and children with a wide range of impairments; physical, sensory and cognitive, as well as people experiencing long term conditions and ill health that results in impairment. AT services are also relevant to older people and this group is usually identified separately from disabled people as it likely that a high proportion of older people do not identify themselves as disabled, although experiencing similar impairments through the effects of aging.

We used this definition in the feasibility study:

“Assistive technology (AT) is a product or service designed to enable independence for older or disabled people.” (King's Fund consultation, 2001)

We have taken the term “workforce development strategy” to include not only national occupational standards (workforce competence) frameworks but also:

- the strategy for skills escalation, embracing qualifications and career frameworks
- labour market intelligence provision
- identification of labour market needs
- the requirement for education and training provision to meet the needs of employers, practitioners and service users

1.4 Scope

- The study relates to AT services for adults and children in England in the first instance, with further work to be conducted to explore relevance and

linkage with other parts of the UK. Data collection was made relevant to England where possible, otherwise figures for the UK were used.

- Occupational standards documents, AT related training material and workforce planning documents from the following sectors have been sought and included in this review: health, social care, education, employment, housing, and leisure, transport, engineering and sales.
- Documents relating to the following service provision tasks (functions) have been included in this review: design, manufacture and customisation, assessment, recommendation, advice and information, sale and supply, delivery and installation, implementation, repair and maintenance, management and evaluation.
- Not included in the scope of this paper were documents relating to other parts of the UK apart from England at this stage (though some training taking place in other parts of the UK has been noted where there is an impact on provision for the English workforce).
- Not included in the scope of this paper are National Workforce Competences and National Occupational Standards relating to generic competences with no significant implications for good practice in delivering AT services. These will be required of the workforce but are available for easy incorporation into any framework that is developed for AT.

1.5 **Target audience**

- Policy makers and Government departments, Sector Skills Councils and workforce planning agencies – to stimulate investment in a workforce development strategy for AT as outlined in this paper
- Practitioners at all levels working across sectors and disciplines in AT and mainstream services – to stimulate discussion on the validity of these proposals in relation to the broad range of service settings in which they could be useful.
- Employers, managers and commissioners of services – to raise awareness of the lack of workforce support in relation to AT and to stimulate comment on the practicality of the proposed strategy
- Disabled and older people who use AT services and their voluntary sector representatives – to stimulate campaigns to gain the required investment in workforce development and the development of related self-management programmes in AT, with the aim of significantly improving AT services and maximising choice and control by service users

1.6 **Stakeholder involvement**

AT Forum members and associates represent a wide range of professions and sectors involved in the provision of AT services, including health and social care professionals, academic organisations, voluntary sector user representative organisations and industry. Membership of the Forum is detailed on the FAST website at www.fastuk.org. Dissemination of the preliminary report by the AT Forum has been widespread but further dissemination is needed. Comment on the proposals contained in this report will be incorporated into any implementation plans as they develop.

1.7 **Development group and executive team**

The Executive Planning Group advised on the approach and development of this report and underlying mapping exercise. The executive planning group consisted of the following members:

- Richard Banks, Skills for Care

- Rachel Denton, Department of Health, Care Services Improvement Partnership
- Judith Whittam, Department of Health, Care Services Improvement Partnership
- Anne Eaton, Skills for Health
- Rav Jayram and Karen Walker, Skills for Health
- Ann Harrison, Children's Workforce Development Council

The AT Forum Workforce Development Reference Group commented on the approach and development and provided factual evidence and expertise to inform the content of the report. The reference group consisted of the following members:

- Ruth Mayogoitia-Hill, CORE, King's College London
- Alan Turner-Smith, CORE, King's College London
- Maggie Winchcombe, Trusted Assessors Project
- Ann Gresswell, ACE Centre/ Keeping Pace with Technology EU Project
- Paul Doyle, Hereward College
- Joh Mears and Julia Blundell, British Healthcare Trades Association (BHTA)
- Sheila Richards and Peggy Frost, College of Occupational Therapists (COT)
- John Glover, National Association of Equipment Providers (NAEP)
- Nick Pizey, Age Concern
- Jo Greenwell, AbilityNet, Co-ordinator of Accreditation Scheme
- John Sewell, TechDis
- Anita Rush, NAEP
- Adrian Higginbotham, BECTA
- Sally Fowler Davies, York St John College
- Judith Jesky, Spinal Injuries Association
- Emlyn Williams, The Walton Centre, Liverpool
- Sue Clements, The Disabled Living Foundation
- Alan Norton, Assist UK

1.8 **Funding**

The work was commissioned by Skills for Care (SfC) and Skills for Health (SfH)

1.9 **Conflicts of Interest**

There were no direct conflicts of interest to be noted with regard to the report authors. Some of the reference group had been active in developing education and training material, activity which was noted in the report. There are no conflicts of interest arising from this activity.

1.10 **Rigour of development**

It was not possible to follow a development process for this feasibility study as it was by nature an exploratory review of a wide range of documents relevant to a variety of sectors. The process followed was agreed through consensus between report authors and the planning and reference groups.

1.11 **Evidence gathering and review process**

Two methods were used for the scoping exercise: desk research and stakeholder consultation.

- **Desk research**

The desk research for the scoping exercise included a review and comparative analysis of:

- Documents identifying workforce and users numbers
- Completed Skills for Health and Skills for Care Competence Frameworks (and those in development)
- National Workforce Competence and National Occupational Standards frameworks from other sector skills councils
- Research on good practice in AT service provision
- Documents outlining current educational provision

A full list of the publications and articles used is listed in the references at the end of each section.

- **Stakeholder consultation**

A preliminary report was prepared by the AT Forum (workforce) group and formed the basis of a consultation workshop held in January 2006. Feedback from this event informed the content of this report.

1.12 **Links between evidence and recommendations**

The links between research or data and the recommendations have been highlighted by authors and are open to comment and peer review.

1.13 **Piloting and peer review**

Consultation has taken place over the year with representatives and service providers working across assistive technology sectors. A draft report was commented on by members of the planning and reference groups and a range of associates. This feasibility study will be placed on the websites of Skills for Health and Skills for Care and FAST for comment and disseminated through the networks open to members of the AT Forum and other interested organisations. Comments received will inform the implementation phase.

2 The case for workforce development in AT

2.1 The workforce

2.1.1 This paper sets out the situation facing the current and prospective workforce that work with assistive technology (AT).

- The current AT workforce is characterised by fragmentation, being made up of practitioners with diverse roles and disciplines working within a range of service provider organisations in statutory, third and private sectors. Until this point there has been only a limited awareness of the existence of such a defined workforce, just as there is a varied understanding of the term and definition of 'assistive technology' across the field¹ (assistive technology was previously known as disability equipment or aids and appliances, among other terms).
- AT practitioners currently with the highest public profile with the public are probably occupational therapists in health and social services, physiotherapists in wheelchair services, rehabilitation engineers, speech and language therapists and disability employment advisers in job centres. A large range of practitioners with a lower public profile also have substantial expertise in assistive technology, particularly in social care and education and housing sectors, such as higher education disability practitioners and home improvement agency staff. We outline the current AT workforce in Appendix 6 and give details on their numbers
- Many voluntary sector organisations such as the Disabled Living Centres, Red Cross wheelchair centres, Whizz Kidz, Dementia Voice and the RNID and RNIB, provide technology and also campaign on public policy. Others provide advice and training, such as the Disabled Living Foundation, Ricability and Assist UK. Much advice, information, and training is also provided by manufacturers and retailers of assistive technology who are increasingly providing the sole face-to-face AT service for many disabled and older people.
- In this paper we will refer to 'AT practitioners' to refer to this disparate group, recognising that such clear definition will only be achieved following implementation of some of the workforce development strategies outlined in this paper. We use the term 'practitioner' rather than 'professional' as we propose that many of the future workforce will not wish, or be required, to take professional qualification but will need to have competence in AT for their work which involves supporting disabled adults and children and supporting older people.

2.1.2 An even broader range of practitioners will require support to work effectively with assistive technology over the next decade. A brief listing of such workers would include:

- learning assistants and special educational needs coordinators in schools as well as school librarians and ICT support workers, teachers and lecturers, occupational health workers, disability employment support workers;
- domiciliary care workers, personal assistants and support brokers, social workers, residential and care home workers and volunteer visitors;
- community nurses and equipment prescribers, GPs, emergency workers;

- handyman, architect, housing developers, housing managers, urban planners, builders, site engineers, electricians, home security personnel, firemen, police;
- sales reps, designers and manufacturers, product inventors;
- mechanics, transport workers, car designers, transport planner;
- shop workers and call centre staff, communications staff, advice and information workers, recreation centre staff.

2.2 The competence of the workforce

An investment in workforce development in AT is only required if the workforce does not have the capacity to enable it to meet future challenges. Though many individuals have the knowledge and skills required to provide effective services, competence in assistive technology is not supported by existing education and training. As a result of the lack of education in AT, we propose that many practitioners are not supported to be competent in effective AT service provision. This is something that has been indicated by current practitioners themselves in response to a FAST survey conducted in November 2005⁶. We would suggest the following general characteristics have to be considered in relation to workforce planning:

2.2.1 Reluctance to embrace assistive technology and to perceive it as central to many assistive technology job roles: The deployment of assistive technology is widely perceived and presented as a relatively minor part of many job roles. This does not necessarily reflect the proportion of time spent managing AT by many practitioners within their working week, or in terms of the impact on users' quality of life. We would suggest that several factors may have led to this distorted projection of the relevance of AT within role definition, including:

- reflection of the hierarchical dominance of overlapping professional models, such as medicine or teaching;
- the reduction in vocational and technology focused training which may affect women disproportionately. Despite 30 years of legislation outlawing discrimination on grounds of gender, many occupational sectors and jobs in the UK are strongly gender-segregated. IT, science, engineering and technology (SET) sectors remain dominated by men while the service sector (including health and social work and education) remain largely the province of women². It is likely that this reflects an attitude, partly internalised by women, that does not associate technology and women³.
- the relative 'unattractiveness' of the design of much AT which has not been seen as sexy or exciting and, until recently, had little relation to high-profile, branded, mainstream gadgets.

2.2.2 Reluctance to adopt new technologies: This characteristic has been reported to the authors as evident in some practitioners and may arise due practitioners concentrating on what can be provided rather than what is needed, but may also arise from lack of access to information on AT products and services. Initiatives to mainstream telecare and telehealth technologies have concluded that there may be a limit to their long-term effectiveness without a broad base of appropriately trained practitioners⁴. Similar conclusions are being presented in relation to AT for people with learning disabilities⁵.

2.2.3 Polarisation in the development of job roles and related qualifications between clinical and technical competence: Job roles across AT appear to correspond to a division between technical and person-centred competence. This may be an effective model of workforce development to meet the needs of people who use specialised, custom built AT, for whom the evidence suggests it may be necessary to use the expertise of a range of practitioners working together. It would not appear to be useful as a model for workforce development aimed at meeting the needs of the 70-80% of people who could benefit from timely provision of relatively straightforward AT. It is also a model of workforce development that can result in disabled and older people having to undergo multiple consultations and assessments to access an appropriate range of AT.

2.3 Support for disabled and older people to choose and use technology

2.3.1 There is a poor understanding of shared good practice in AT and this is reflected in a lack of cross-sector work to support self care in AT. The requirement to develop robust programmes to support self care is a key objective in the recent White Paper 'Our health, our care, our say' and is urgent in relation to AT due to: clear guidance from the MHRA on the active role required from the user in relation to the safe management of medical devices (including assistive technology)¹⁸; the increasing level of self purchase of AT; and the employment of care workers and assistants directly by disabled and older people.

2.3.2 Existing Self Care programmes and the recently announced programme to support Expert Carers will not equip disabled and older people to choose and use technology to maximise their independence. AT does not figure in these programmes except in relation to supporting the use of telemedicine technologies. The support provided in relation to this aspect of AT relates to good practice in healthcare but does not draw on good practice in AT service delivery.

2.4 Current workforce development in AT across sectors

The AT workforce experiences difficulties at all points in the career pathway, through education, training, entry to the field, career development within each sector, moving from one sector to another. Poor understanding of the range of skills required impacts on a lack of standardisation in job definitions which makes recruitment difficult and impedes practitioners from applying for jobs. This was the consensus of the AT Forum Workforce Sub-group and their views were substantiated by an informal survey that was carried out in September 2005. The only survey of its kind that has been carried out in the UK, the methodology of the survey and detailed findings were presented in the FAST/AT Forum report 'Assistive Technology – an education, a career, a partnership'⁶ and they are summarised here.

The survey was circulated in a relatively short time frame of August – September 2005 to members of the AT Forum (n=47), to the AT Forum e-bulletin subscribers (n=350+ at the time) and to online forums Assistech, Senit and Dis-Forum. There were 81 responses, mainly from health (n=13), social care (n=12) and education (n=33) practitioners, some private practitioners (n=4) working as consultants or in industry, and third sector practitioners (n=15). Some key survey findings:

2.4.1 **Education and qualification:**

- 47 out of 76 respondents judged that they had had no relevant qualification or educational experience
- Even when practitioners have an apparently AT related professional qualification, there no agreed level of AT competence demonstration or accreditation across professional boundaries.
- Few professional qualifications appear to provide comprehensive training and development in AT and no educational qualification appears to be appropriate for adoption across sectors.
- Most practitioners, across sectors, are unable to confirm the standard of competence at which they are working in relation to assistive technology

2.4.2 **Continuing professional development and on the job training:**

- Responses varied between sectors but practitioners working in all sectors noted concerns with the continuing professional development (CPD) opportunities available.
- AT practitioners working in the Education sector are given least support in terms of CPD or on the job training in AT, despite there being a high proportion of staff working with AT with little relevant AT education.
- AT practitioners working in industry and retail provide much of the AT training provided to their colleagues working with AT in the health, social care and education sectors.
- Most practitioners working with AT in industry have little access to 'on the job' training on the needs of disabled or older users of AT except in relation to their company's own product range.
- Overall, there was an inadequate range of courses. Respondents noted their support for proposals to develop a formal structure for accreditation of competence and their concern that the continuing need to be kept up to date on technological innovations was not being met.

2.4.3 **Entry to the field and career development**

- At the entry point, there are people unsure how to start a career in AT at a level that recognises their experience and skills.
- Respondents noted that career development across sectors was possible but difficult and this was resulting in career silos in various areas of AT practice.
- There is poor understanding of the similarities in competencies which AT practitioners can develop in a range of sectors and an increasing requirement for sector specific qualifications that reduce further the opportunities for moving across sectors.
- There are currently real disadvantages to moving jobs and to moving to another sector, reduction in pay and grade and unfamiliarity with the culture of different sectors being mentioned by correspondents.
- Practitioners recognised the benefits of establishing a multi-disciplinary and multi-sector education and training framework, not only to their own careers but also to practice standards and for the service to users, and noted that education did not currently support multi-disciplinary working.

2.4.4 Job descriptions in AT - clarity on required skills and experience

From FAST's regular review of AT vacancies posted on the internet⁶, 20 jobs in AT were reviewed for indicative trends. There appeared to be a lack of clarity on what competence was required for posts:

- In some cases this resulted in confusion regarding the professional discipline that might be appropriate and recourse to professional/academic qualification that had little bearing on the job description in content or level.
- Many of the adverts focused on the technical skills or experience that would be required but did not require experience of working with disabled people. Several adverts noted that skills and knowledge of disability issues were to be acquired 'on the job'.
- Other job descriptions were overloaded with an unrealistic range of expertise and experience required for a disproportionately low salary range.

Some comments by survey respondents on the difficulties as employers in recruiting to the field confirm these findings:

- The expectations of what a person can achieve in certain posts is too wide ranging
- generally these are very bespoke and specific, so we know what we are looking for.
- Not enough appropriately qualified personnel
- There are no 'clear standards' or staple professional quals
- Unable to identify reference points
- It's hard to recruit as you need staff with people-skills & experience in disability, as well as the IT/specialist equipment side of things. It's been hard to convince Personnel of the rarity when negotiating job descriptions/salary scale.
- Because of a lack of a recognised standard qualification by which to judge basic skills and competence, the vetting and selection procedure is perhaps more complicated.

2.4.5 We provide a detailed review of the education provision within various areas of AT practice, the competence clusters, in Appendix 3. This reveals a polarisation between unaccredited courses and post-graduation levels of education, a low number of courses and poor geographical spread across the country.

2.4.6 Workforce development activity has, until this point, been fragmented along professional boundaries. Many professional representative bodies are in a position to contribute towards such a multi-professional strategy, including the College of Occupational Therapists (COT), the Institute of Physics and Engineering in Medicine (IPEM), the British Society of Rehabilitation Engineers (BSRM), the National Association of Equipment Providers (NAEP) and perhaps the Royal College of Speech and Language Therapists (RCSLT).

These organisations and others in statutory, voluntary and industry sectors are active in providing guidance on standards of service, for example the Telecare Services Alliance (TSA), BSRM, Wheelchair Manager's Forum,

NHS Pasa, etc.⁷. Active in specific areas of AT practice and providing much valuable learning to the field, it has not been within the remit of these professional bodies and standards setting organisations to develop an AT education and training framework relevant across health, social care, education and housing services.

Occupational therapists perhaps hold the most broadly based expertise in this area and, during consultation for this AT workforce development strategy, were frequently mentioned as potentially able to provide an educational, accreditation and career pathway. The College feel that the role of the occupational therapist should not be focused on AT provision and, additionally, it would not meet the needs of many in the current and future workforce to rely solely on education, accreditation and career pathways in occupational therapy.

2.5 Future challenges

2.5.1 The demographic challenge

When considering workforce development in this area, there are some key long-term trends and challenges that will influence the decision on whether the proposals put forward in this paper should be taken forward and that will impact on the sustainability of the agreed strategy. The demographic challenge to social care services has been clearly outlined in the Wanless Review of Social Care⁸. The rapid increase anticipated in the old age dependency ratio over the next two decades requires some hard decision making in terms of how to mitigate the costs and maximise the capacity of society to deal fairly with older people, who are likely to be increasingly frail and disabled, without putting a disproportionate burden on the working population.

- A micro-simulation model of progression through healthy life, illness and disability, and death, was commissioned for the Wanless Review from Jagger and colleagues. This was used to develop three scenarios about future numbers of older disabled people. In the most optimistic of the prediction scenarios the estimate is that the number of disabled people in the over 65 age range will rise by 57 per cent in the next 20 years or so (in the least optimistic scenario the rise would be 69 per cent).
- Between 1981 and 2001, increases in healthy life expectancy did not keep pace with improvements in total life expectancy. In future, the total number of people with disabilities, and potentially in need of care, will be higher.
- Over the 20 years to 2025, the Review projects:
 - a rise in the number of older people who do not require care of 44 per cent;
 - a 53 per cent increase in those with some need;
 - a 54 per cent increase in those with a high level of need.
- Based on expert analysis commissioned for the Review, these increases reflect a future where population health improves due to moderate reductions in obesity and other 'lifestyle' conditions, as well as the introduction of effective new treatments or technologies. If these assumptions are not correct, then the proportion of older people requiring care due to impairment will increase accordingly.
- The care of older people relies heavily on informal carers. There were around 5.8 million carers in England in 2000, between 3.4 million and 4

million of whom were providing care to people aged 65 and over. Older people themselves supply a disproportionate amount of informal care; in 2000 one in six people over the age of 65 were providing some form of care. Carer support and information services do exist, but are currently received by only a minority of carers. The availability of informal care may not keep pace with increases in care needs in the future, but informal care will remain vital in supporting older people. Greater carer support is needed to relieve some of the pressures.

- The Wanless review has stated the arguments for a fundamental review of how social care is provided for the population. Two key points from the review are:
 - The government's 2008 target is to increase the proportion of those supported intensively to live at home to 34 per cent of all those being supported at home or in residential care. (62 per cent of users expressed a preference for staying in their own home with care and support from friends and family.)
 - In order to manage the impact of an increasingly ageing population on social care provision, Wanless proposes that the potential of technology and the capacity for self-care must both be exploited.

2.5.2 Technological change and diffusion

The rapid pace of technological change and of mainstream adoption of technology particularly in terms of information handling and knowledge management is challenging current service provision models and job roles. Recent examples of such services are telecare and telemedicine and, increasingly, online and web-conferencing services that can deliver some of the social services necessary to maintaining well-being in older age, e.g. online shopping and support networks. The development of future services, such as virtual reality and robotics and ambient intelligence in the public environment, may have a similar disruptive effect on service models. The reduction in cost of many information management systems is increasing their availability as mainstream products. This brings challenges to ensure the usability of mainstream design for an ageing and disabled population and to ensure such technologies are adopted and used to bring benefits to disabled and older people.

2.5.3 Changing culture

As Wanless highlights⁸, we are experiencing rising expectations of services within the population and a wish for autonomy and choice in relation to lifestyle decisions. This is reflected in initiatives to ensure social inclusion and equal life opportunities for disabled and older people⁹. Together with recognition of the inadequacy of current services to meet the demographic challenge this is prompting initiatives to create a related shift in the culture of practitioners. As a result, much recent policy supports the empowerment of health and social care service users.

2.6 Policy context

The policy context in relation to the delivery of AT services and with implications for developing a workforce strategy includes:

- The **NHS Plan (2000)** set out the Government's plan to modernise the NHS and, incidentally, brought AT provision on to the policy agenda. The Plan led to a raft of new programmes and initiatives to change the way health services are organised, delivered and the way people work in

them. One major aspect of this change management programme has been a series of directives for people working in the public sector to work more flexibly, keep up to date with technological advancements, maintain their skills and demonstrate their competence. It highlighted the importance of AT to older and disabled people and raised the issue of self-care as being one of the key building blocks for a patient centred health service. It also gave details of new investment in community equipment services and sought their integration across health and social care.

- The **Supporting People** initiative was outlined in a policy framework document Policy into Practice, issued in January 2001 and aimed to improve the quality of housing related support services to vulnerable groups. A clear assessment of local need was aimed to underpin the development of a flexible range of services based around individual needs.
- The **NHS Improvement Plan (DH 2004)** proposed a cultural shift in the NHS from a service focussed on illness to one focussed on good health and it calls for 'person centred' and 'integrated' delivery. It also put forward the 'population management' model describing three categories of need; supported self-care (straightforward needs), disease management (specialist support) and case management (complex needs).
- **Standards for Better Health (2004)** The safe management of medical devices (including assistive technology) is an essential element of the Department of Health's performance framework for healthcare organisations. All healthcare organisations will need to comply with the three 'core standards' that relate to the safe use of medical devices, namely:
 - C1b 'ensure that patient safety notices, alerts and other communications concerning patient safety which require action are acted upon within the required timescales'
 - C4b 'all risks associated with the acquisition and use of medical devices are minimised'
 - C4c 'all reusable medical devices are properly decontaminated prior to use and that the risks associated with decontamination facilities and processes are well managed'.The Healthcare Commission will be undertaking regular audits and inspections of healthcare organisations and will expect the MHRA guidance on the safe use of medical devices has been followed.
- **Every Child Matters: Change for Children (December 2004) and The Children Act (2004)** has led to an extensive remodelling of services around the child and the setting up of Children's Trusts. Outcomes relate to integration of services, information sharing, sectors working together to protect children from harm and to help them achieve their goals.
- **Improving the Life Chances for Disabled People (2005)** is rooted in social, rather than health and welfare concepts. It is a broad, cross governmental document and specifically mentions the importance of timely equipment provision for disabled people. It is, therefore, the first and best opportunity that professionals within the AT community have had to highlight the role they play in supporting independent living throughout life, rather than the 'compartmentalised' approach that has evolved from health and medical systems.

- **The Preventative Technologies Grant (March 2006)** provided funding to local authorities to prepare action plans leading to implementation of mainstream telecare services. Telecare is presented as a key mechanism to support independent living for a range of vulnerable groups.
- **The White Paper Our health, our care, our say: a new direction for community services (DH 2006)** sets out the case for supporting self-care, highlighting successful case studies. The paper also recognises that the current Expert Patient Programme course needs to be able to diversify and respond better to the needs of its participants. The White Paper also recommends the establishment of whole-system demonstrator pilot sites to examine ways in which to fit services more closely to individual and local needs.
- The policy of shaping services around the person is developed in the Local Government White Paper **Strong and Prosperous Communities (October 2006)**. The vision presented is of revitalised local authorities, working with their partners, to reshape public services around the citizens and communities that use them.
- The joint DfES/ DH review **Options for Excellence (October 2006)** reported on how the social care workforce needs to develop in the future – finding new ways of working. The review highlighted the demographic challenge, changing expectations of service users and recent technological advances. It concluded that strategies were needed to support a flexible workforce, adapting traditional roles and professional boundaries or practices to address the changes in the sector.
- There is a national drive to harness the talent in volunteer organisations with the creation of a Minister for the Third Sector in the Cabinet Office. Voluntary bodies are seen to be capable of more innovation than the state sector, (**Working with the third sector (2005)** National Audit Office). In June 2006 at 'Three Sector Summit' the Government announced its vision for partnership approach between public, private and third sectors to deliver services that people want in the way that suits them¹⁰.
- In May 2007 a review of community equipment and wheelchair services - the **Transforming Community Equipment Services Review**¹¹ has proposed a business case for adoption of a retail model of provision for much community equipment. This model will require competence in AT from the voluntary and retail sector who will be selling and demonstrating AT and proposes opening up assessment to independent assessors. The premise of greater openness of the market is underpinned by mechanisms to support and monitor competence in the workforce and to support a more informed and active participation by the public in seeking out AT solutions.
- In January 2007 the Government responded to the Education and Skills Committee report on special education needs (SEN) that was published the previous October. The Government's response sets out the action it will be taking over the next three years as part of its SEN strategy. A key focus of action is on improving training, with commitment given to making special educational needs and disability a national priority for continuing professional development.
- In March 2007 the Department of Health published a **Commissioning framework for health and well-being**. This outlines steps by which commissioning will become more clearly focused on outcomes, leading to

more innovative provision, tailored to the needs of individuals and supplied by a wider range of providers.

- **Independence, Choice and Risk: a guide to best practice n supported decision making (May 2007)** sets out an approach to enable the healthcare workforce in particular rethink how to manage risk in partnership with service users.

2.7 **Implications for workforce planning**

Considering future challenges and the policy response we drew out some implications for workforce planning within three inter-related areas.

2.7.1 **Market diversification, provider development**

Initiatives to promote market diversification, aimed at providing greater choice and increase capacity in services, have been proposed with the caveat that they are only likely to be effective in delivering value for money and fairness if all services are working within a common framework of occupational and service standards and can be monitored and regulated accordingly. The business model proposed by the Transforming Community Equipment Review is founded on a greater role for the third and independent sectors, who will need to be supported to build, and to accredit, expertise in AT on an equal footing with practitioners in statutory services. The challenge will be to achieve greater diversification without compromising the requirement for the workforce to support self care and for a range of service providers to find ways of working to deliver integrated care together with the voluntary and private workforce. There is an equal need to ensure that a diverse range of service providers are offering value for money in terms of the services they provide and that end users gain maximum benefit from the AT that they obtain. This will require education and training and support to be made available to commissioners to enable them to recognise cost efficient and effective AT services and to require relevant competence demonstration.

2.7.2 **System management, regulation and standards**

There is a foreseeable need to regulate the statutory, third and private workforce who are, and will increasingly be, providing AT services to disabled and older people. At the moment there is no method to distinguish competent from incompetent AT practitioners and no mechanism to regulate the workforce. Though the move towards regulation is clear, the approach that will be adopted is not. It is likely that, initially at least, a 'light touch' regulatory approach, relying on self regulation by organisations will be the chosen route. There is precedent set within the field for standards relevant at an organisational level, relating to approach, ethics, processes, etc, e.g. the Quality Assessment Frameworks for Home Improvement Agencies, and the Codes of Practice developed by the Telecare Services Association and British Healthcare Trades Association. It is also likely that individual practitioners will be required to demonstrate a level of competence relating to their role. Competence demonstration and related regulation may initially be developed on an ad hoc basis but there will rapidly be pressure to ensure such training is eligible for public funding and it will therefore need to sit within a Sector Qualification Strategy (SQS) and relate to relevant National Occupational Standards. Some contextual issues relating to regulation need to be borne in mind.

- In response to the NHS Plan (2000) among other policy directives, regulatory systems have been reviewed and updated¹², leading to more rigorous standards for registration with relevant bodies such as The

Health Professions Council (HPC) or the General Social Care Council (GSCC). The recently published White Paper 'Trust, Assurance and Safety: The regulation of health professionals'¹³ sets out a range of measures to improve and enhance clinical governance in the NHS. Registration with the appropriate Council is mandatory for anyone wishing to be employed as a professional with a 'protected' job title. The drive for regulation in the health sector, aimed at safeguarding patients, is mirrored in social care and within children's services by increased requirements for regulation to protect vulnerable individuals.

- Though regulation does not, as yet, affect much of the AT workforce, particularly those working in third sector provider organisations or in support practitioner roles, it is clear that some form of registration and regulation will soon be a requirement for anyone working with disabled and older people in their own homes. Any move towards regulation would require operationalised standards against which to regulate. There are two additional issues to be considered here, firstly whether the AT workforce development strategies proposed in this paper will result in an informal use of a title such as 'AT practitioner' or 'AT supplier' which may require registration at some future date and, secondly, whether the competence in AT of practitioners who are separately regulated by the HPC or GSCC, for example, will come into question.
- The flip side of regulation is the incentive offered to services that can demonstrate a level of quality service that is required by primary care commissioners. A clear demonstration of competence by practitioners within an organisation may be a requirement of a service level agreement at local commissioning level.

2.7.3 Integration to ensure person-centred services and to enable choice

- One element, much talked about in policy papers, which this workforce development strategy has to enable, is integration between health and social care and, for AT, with education, employment, housing and many mainstream services. This will require a broadening of the competence base of many practitioners and will be a challenge to existing ways of working, practitioner roles and traditional hierarchies within disciplines. It is likely that new roles will develop along the lines of assistant practitioner, generic support worker and care broker, who will be supported by more experienced staff to take on less complex or more routine work. It is likely that qualified staff will be able to extend the boundaries of what they do and will need to respond to a team culture where responsibility is distributed throughout the team.
- The framework for AT competence also needs to reflect the broad range of functions which are relevant across the AT field. As person-centred services become more clearly modelled, practitioners working in health, for example, will require training and support to build competence to assess and address social and environmental issues in relation to the take up and implementation of AT services. An example of this is the requirement of practitioners to consider not only the personal capacity and preferences of someone requiring assistance with stair climbing, the reasons why stair climbing or access are required and the appropriateness of assistive technology within the home but also, for example, the reliability of the lifts within a tower block, the suitability of a range of transport options, the availability of social support networks within the community, and the options relating to rehousing.

- Practitioners working in housing or education will require training and support in areas of competence which have been considered to be the remit of health professionals, such as assessing loss of function and the likely progress of illness conditions and impairments and to judge the requirement for expert assessment. These competences in relation to assessment are already required by housing staff who are undertaking person-centred Support Planning in response to the Supporting People initiative.
- Similarly many practitioners are likely to need support to build skills in areas that have been seen to be the remit of private retailers and the third sector, such as provision of comprehensive advice on options outside their own service area, signposting to alternative sources of information and equipment, selling AT and providing financial advice to clients. Service remodelling will mean that many practitioners will be required to demonstrate competence in these area themselves and all practitioners will need to recognise good practice in partnership organisations, particularly in third and private sectors, in order to appropriately inform clients of reputable sources of information and equipment.

2.7.4 **Self-improving systems**

2.7.5 There has been a recent focus on developing self-improving systems rather than setting top-down targets to drive change. This change is to be driven by clinicians, practitioners and managers responding to the needs of their patients and the public (practice based commissioning)¹⁴. Redesigning services and investing in new community services to meet local needs will require a flexible and responsive workforce in statutory, third and private sectors. Relevant education and training shaped by the evidence on effective practice is likely to increase productivity of the workforce, resulting in practitioners being able to go direct to information, creating leaner processes by supporting single point assessments and informed referral to specialist services. Learning processes themselves will become leaner, moving from those dominated by cascaded learning and peer education to those that enable direct access to information.

2.8 **Review of options**

2.8.1 Some of the initiatives relevant to this area which are indicating the future shape of service provision models are characterised by:

- greater openness in thinking about new ways of working, focusing on outcomes rather than delivery mechanisms and challenging traditionally defined job roles;
- regulation through the adoption of clearly understood, sector wide standards which can be monitored by service users;
- looking to third sector to think creatively about solutions, often through examining pilot or local schemes to address a shortfall in state provision;
- looking at existing resources and proposing strategies to use specialist workforce knowledge and state funding where most effective and to build the capacity of the voluntary workforce;
- building on the evidence base of good practice;
- looking to focus service provision and research towards greater benefits in terms of stimulating innovation and bringing well designed products to market;

- supporting mainstream design towards inclusive practice (such as for public spaces and household products).

2.8.2 Various options were considered when developing these proposals:

- Option a) Doing nothing.
- Option b) Tidying up the situation in relation to existing occupational standards for a limited set of AT job roles or settings.
- Option c) Developing a more comprehensive occupational standards framework that could be applicable to a limited number of key AT areas.
- Option d) Establishing a broad workforce strategy that develops a framework of National Occupational Standards with potential application to all AT services and that also addresses supplementary issues, such as supporting self care, that will affect the workforce.

2.8.3 An assessment of the challenges facing the workforce, coupled with a review of the capacity of the workforce, leads to a requirement for:

- action to support independence for an ageing and increasingly disabled population (ruling out Option a);
- a strategy that provides flexible working across sectors and between job roles to allow new ways of working and to create a coherent framework for benchmarking and regulation against AT good practice (ruling out Option b);
- building capacity within the workforce to encompass and address rapid technological change in relation to which new AT services are emerging (ruling out Option c);
- the development of education and training pathways that can enable mainstream design and service provision to become as inclusive as possible (ruling out Option c);
- a shift in working practice towards supporting disabled and older people to choose and use AT that will require a change of focus within existing standards and some new standards (again ruling out Option c).

2.8.4 Which leaves Option d):

Establishing a broad workforce strategy that develops a framework of National Occupational Standards with potential application to all AT services and that also addresses supplementary issues, such as supporting self care, that will affect the workforce.

2.9 A framework for National Occupational Standards in AT

2.9.1 Skills for Health note¹⁵ the following definitions:

- Competences are descriptors of the performance criteria, knowledge and understanding that are required to undertake work activities. They describe what individuals need to do, and to know, to carry out the activity – regardless of who performs it.
- Competences are classified as National Workforce Competences (NWCs) or National Occupational Standards (NOSs). The only difference is that NOSs are additionally approved for use in qualifications.

- Individual competences are grouped together according to how they are developed. It is very unlikely that all of the competences within a group will be appropriate for any individual or team.
- 2.9.2 The competences developed by Skills for Health can be used by individuals, employers and education providers for a number of purposes including:
- individual development / appraisal
 - team development
 - role design
 - role re-design
 - service design e.g. new build/service
 - education programme / curriculum design
- 2.9.3 There are different template approaches across sector skills councils and, at this stage, it is proposed to develop the AT National Occupational Standards framework using the Skills for Health template.
- 2.9.4 There is a lack of infrastructure in terms of an agreed framework of National Occupational Standards which are accepted as relevant in the very different settings in which AT is managed and used. There will be some challenges in making the development of a National Occupational Standards framework for AT relevant within fields of practice that have little awareness of AT or its potential contribution to delivering the outcomes required within each field.
- 2.9.5 Such a framework for National Occupational Standards in AT can be used to develop:
- A shared body of good practice;
 - Stand alone qualifications (e.g. for practitioners in private sector or those with unrelated qualifications);
 - ‘Add-on’ training modules to supplement existing practitioner qualifications for the current workforce and for those of the future workforce with qualifications and experience in a related area that need educational support and accreditation in a specific area of AT practice.
 - A benchmark against which to assess the relevance of existing education and training across the field.
- 2.9.6 Consensus on the core skills and knowledge required of an AT practitioner and the development of a framework of education and accreditation offers the opportunity to:
- Significantly improve service delivery and provide greater value for money from the existing workforce
 - Enable greater integration in service delivery
 - Provide a framework for monitoring, regulating and commissioning workforce competence in a range of organisations on an equal basis
 - Provide a cross-sector foundation of good practice to allow for service remodelling
 - Provide career flexibility and development for practitioners with greater ease of access into the workforce and between areas of competence in AT
 - Provide a flexible labour pool for employers
 - Provide greater access to effective services for users
- 2.9.7 A framework that outlines the effective provision of service will also underpin the development of self care programmes. Such programmes will be complementary to the workforce development strategies, will address the

shortfall in workforce availability and will create a shared understanding of joint procedures such as assessment for technology.

2.10 Framework development and shape

Our approach to drafting a competence framework for AT was to first look at the evidence-base for effective AT service delivery.

- 2.10.1 We based the framework on a programme of research within Europe¹⁶, the HEART study, which drew together existing good practice on generic AT service delivery into a care pathway describing the essential functions of a service. The framework also draws on the Trusted Assessor Competence Framework drawn up in 2005 by a UK collaborative group led by Assist UK¹⁷. This persuasively makes the case for supporting practitioners to build knowledge and understanding of a range of issues to enable effective assessment for AT and to underpin all aspects of working with people who require AT. This has highlighted several shortfalls in current training, including the need to support practitioners to develop competence to address social and environmental issues in the use of AT.
- 2.10.2 We then looked at the requirements for equipment management as laid out by the MHRA in the latest device bulletin on managing medical devices¹⁸. This provides clear guidance on the training required for both professional users of AT and for end users to manage AT safely and effectively.
- 2.10.3 The case has also been made by practitioners in the field for supporting the building of hands-on technical competence at all levels. This is partly in response to the current failure of education and training in this sector to integrate technical and person-centred knowledge. We propose that demonstration of hands-on competence in relation to working with AT is required at all levels. At the most basic level it means that practitioners know how to work with electricity, for example to change a battery, or to make simple mechanical adjustments, such as tightening fittings on a bath hoist or changing a punctured tyre on a wheelchair, and to do so safely. Such technical confidence provided by hands-on and theoretical technical training and education has benefits for all of the workforce, even if an individual's role is that of commissioner, manager or researcher, and they do not engage on a daily basis in practical work to support the use of AT by individual users.
- 2.10.4 We outline in Appendix 1 the consensus on the good practice required to sustain the continued use of AT following assessment and draw out the implications for the required functions of an AT service for workforce standards. This covers not only the competence to trouble shoot technical problems, but also to work confidently with disabled and older people to address social and environmental barriers to sustaining the use of AT and to provide psychological and emotional support to individuals to adjust to the use of AT or to increasing disability.
- 2.10.5 There is also a body of research that looks at AT service provision from the perspective of disabled and older people and which has highlighted considerable shortfalls in existing service provision models. This has particularly revealed the necessity for the workforce to be supported to be competent to provide information effectively.

2.10.6 Given the current policy climate there is a need to consider the challenges of potential service diversification and of initiatives to support choice and self care. These challenges lead us to believe that the inclusion of a requirement to build competence in assessing the optimal funding route will be urgently required, not only in assistive technology, and that this may be a reference function that is missing across health and social care workforce planning. There is also a requirement to establish competences for selling AT.

2.10.7 The assumptions in drawing up the framework for AT provision is that this has to be applicable across sectors and disciplines, statutory, private and third sector, relevant at all levels and applicable to services provided to all potential users, whatever their financial situation and potential eligibility for statutory services.

2.11 Core competences within the framework

2.11.1 The framework is outlined initially in terms of a generic care pathway, a listing of the functions required of AT services. We propose that there are core competences, those that we propose every AT practitioner should be able to demonstrate.

Functions of an AT service structured loosely on the care pathway (may occur at several points along care pathway) – relates to competences required

Obtain information and carry out assessment	Core
Person <ul style="list-style-type: none"> ▪ Communicate effectively using a range of methods in relation to sensory, physical and cognitive needs ▪ Assess the impact of a range of functional impairments on the individual's lifestyle/ preferred way of life ▪ Assess the individual's preferences and choices 	✓ ✓ ✓
Task/ Activity	✓
Environment <ul style="list-style-type: none"> ▪ Assess the needs and abilities of the individual to participate in desired activities ▪ Assess the impact of social and environmental factors on function and on the potential use of AT ▪ Assess the impact on the service user/ carer relationship of impairment, use of AT, changing social roles and transitions 	✓ ✓
Exercise practice sensitivity/ clinical reasoning/ support decision making:	
<ul style="list-style-type: none"> ▪ Identify creative solutions acceptable to client and relevant funder or service provision organisation(s) – may or may not include AT 	✓
<ul style="list-style-type: none"> ▪ Identify the degree of risk involved in using/ not using AT and agree a risk management strategy acceptable to the client and the funder/ provider organisation(s) 	✓

2.11.2 The reason we propose that these competences should be at the core of all education and training and the key competences to be demonstrated by the AT workforce, whether practitioners have formal requirement to assess clients or not, is that the knowledge and understanding that underpins these competences is central to effective service provision. These are the competences that enable practitioners to understand and be confident in both the person-centred skills and those relating to technology. As such they are equally relevant to someone whose role it is to deliver and install telecare equipment as they are to a sales representative in a demonstration centre or to an occupational therapist working in a school to support students to access learning materials and computers.

2.11.3 Not only do we recommend that these should be core competences but also that an underlying ethos is demonstrated by the practitioner and conveyed by any education in AT. This underlying ethos is that practice in this area is person-centred, not technology-led; based on a good understanding of the person, their wishes and expectations and their abilities. Contrary to much current practice, such a person-centred approach would require the practitioner to embrace technology, in order for practitioners to be knowledgeable of its limitations and its potential and to match these to the person. Only a strong educational foundation in technology will enable AT to be fully exploited as one of a range of options. This would avoid the common mistakes by practitioners of prescribing equipment as a prophylactic, of habit prescription, or of avoidance of prescription of technology altogether.

2.11.4 The full pathway and list of functions proposed as relevant to practitioners working across AT services can be found in Appendix 1. These key functions would make up the framework of National Occupational Standards and are proposed as:

- Raise awareness of services and of AT
- Support information seeking
- Implement a care plan
- Sell/ assess for eligibility for AT
- Deliver/ fit/ set up/ install
- Train/ provide remote support
- Manage AT distribution and storage
- Maintain and repair AT
- Specify, design, manufacture and develop AT
- Sustain the use of AT
- Review a care plan
- Manage/ commission and procure/ administer

2.12 **Assessment of work required to develop the framework of National Occupational Standards in AT**

2.12.1 The full pathway of proposed competences has been mapped in detail against existing National Workforce Competences and National Occupational Standards (detailed mapping provided in Appendix 2). This mapping included competences developed by a range of sector skills councils for health, social care, education, housing, retail, and engineering sectors. The mapping includes an assessment of the applicability of existing competences and the requirement for further work. The mapping revealed that many of the competences duplicate each other.

2.12.2 The competences are therefore also mapped in relation to the health sector functional map which is currently being established to address the occurrence of duplication across different areas of practice within health. There are only a small number of missing functions at this level of the mapping identified by both mapping exercises.

2.12.3 The reason for mapping this framework against the health sector functional map was not to prioritise the requirements of employers and practitioners in the health sector but because that is the only valid framework against which to benchmark – there appear to be no other similar generic competence framework models that have been developed. To ensure that the framework is as relevant to education, housing, social care and mainstream services

such as leisure, it will have to be tested within those sectors and the whole framework adjusted if necessary in response to any imbalance or disproportionate focus on the requirements of the health sector.

2.12.4 As many of the prospective workforce will be employed within the social care and education sectors, it is vital that competence and qualification structures developed are relevant and meaningful within these settings and aligned to sector core competences and principles, particularly as these may be more closely aligned to person-centred service provision than is currently the case within health.

2.12.5 What has become apparent is that there may be a significant requirement for mapping the related knowledge and understanding that will be required to make these generic competences relevant to various areas of AT practice, the competence clusters.

2.13 **Applying the framework to areas of AT practice, competence clusters**

2.13.1 The proposals put forward in this paper would deliver a framework of National Occupational Standards that identifies core areas of competence required for any practitioner working in any area of assistive technology and would maximise the potential for effective service delivery. The framework has a wide scope of application:

- across existing and emerging areas of assistive technology
- across all job roles and service functions within current and prospective assistive technology services
- across all the providers whether in the statutory, private or third sectors
- to all potential users of AT whatever their financial circumstances

2.13.2 We suggest below areas of AT practice (termed competency clusters) that share core competence in AT. This listing of competency clusters is put forward for discussion and has been developed in consultation with the AT Forum reference group and through discussions with key sector practitioners.

2.13.3 This listing does not attempt to provide a coherent taxonomy or classification system of assistive technology; those have been developed elsewhere. This is a pragmatic clustering of bodies of knowledge that reflects a multiplicity of factors, including;

- the existing ad hoc organisation of services and bodies of learning;
- the need to bear in mind the sustainability of related education modules which will be developed by independent providers;
- the range of core technologies covered by each competence cluster, etc.

2.13.4 If it was possible to start with an entirely blank sheet then this listing may look very different but we have to acknowledge that this workforce development strategy is designed to support the workforce to move from the current situation to an envisaged future situation. This listing will evolve further in response to practical requirements presented by employers, the need for a coherent programme of education and training provision and to

enable integration with existing professional and academic educational pathways.

Application of the overarching framework of National Occupational Standards to competency clusters within AT (note these are working titles and will change):

- AT for mobility, posture and seating
- Electronic AT: telecare, environmental controls and automated homes
- AT for lifelong learning and employment (Information, Communication Technology – ICT focus)
- AT for social communication - augmentative alternative communication (AAC)
- Interface and integration of AT systems
- Home nursing and telemedicine
- AT for sensory impairment
- AT for housing and the built environment
- AT for daily living and social care (community equipment/ domiciliary care, including moving and handling)
- Prosthetics and orthotics
- AT for cognitive support (dementia and learning disabilities)
- AT for recreation and exercise
- Robotics and virtual reality
- AT for driving, public transport and navigating the external environment

2.13.5 Between the competence clusters outlined above are areas of shared practice that relate to the ranges of technology or population groups of disabled and older people.

- For example, consideration of the potential of equipment such as ceiling mounted hoists would be appropriate within both AT for housing and the built environment and AT for daily living and social care (community equipment/ household activities).
- We have proposed a specific competence cluster relating to the interface and integration of AT due to the range of issues and spread of core technologies to be considered here, but clearly these issues will also be considered within Electronic AT: telecare, environmental controls and automated homes, AT for lifelong learning and employment (ICT), AT for social communication (AAC), Home nursing and telemedicine, AT for housing and the built environment, and AT for cognitive support.
- Similarly courses aiming to build competence in AT for cognitive support for people with dementia will consider the use of telecare, environmental controls and automated homes in some detail.

2.14 **Work required to apply the National Occupational Standards framework in AT to competence clusters**

2.15 For each competence cluster it will be necessary to gain consensus from the relevant stakeholders on the potential of the proposals put forward in this paper to provide a platform for workforce development in that area of practice. A review of the current stakeholders, the existing situation in terms of workforce support from education and training provision, and the career development opportunities within the area are outlined in some detail in

Appendix 3 as the basis for reaching consensus on the way forward in each area.

2.16 For some competence clusters that already relate quite closely to current service provision models, the employer and practitioner representative groups are easily identifiable and may already have contributed workforce planning. For example, the stakeholders in prosthetics and orthotics services, including third sector organisations representing service users, have identified problems with career development relating to that area of practice and are active in attempting to address them. It is likely that the proposals put forward in this paper can contribute to that discussion and may provide a solution to some of the identified problems. Similarly the current employers and practitioners from statutory and third sector organisations involved in providing community equipment (AT for daily living and social care) have started to work on this area and have expressed interest in participating in this workforce planning exercise.

2.17 Such groups have experience of working together and a sense of belonging to that particular area of practice or competence cluster. For other competence clusters that may not be the case. Practitioners working in lifelong learning are likely to see the logic in working with practitioners in employment. Previously practitioners working to deliver environmental control technologies have not worked closely with those delivering telecare services nor with practitioners in the emerging field of automated homes, but the shared competence here is clear. It may be more difficult to draw together a coherent group of employers and practitioners who require competence in the interface and integration of systems, this remains to be seen.

2.18 **Proposed workforce development strategies:**

In addition to development of a framework of National Occupational Standards in AT, this paper proposes a range of issues that need to be addressed in order to develop the AT workforce. These relate to:

- a more strategic approach to the provision of information about AT
- improved education and training provision
- strategies to enable service remodelling
- the development of a regulatory mechanism
- the development of a practitioner representative function
- the development of programmes to support disabled and older people to choose and use AT, relating to health programmes to support self care

We outline below in more detail some of the issues to be considered.

2.18.1 **Strategies to improve information provision in AT**

A cross-government review of information provision in AT for disabled and older people is required, which should consider the provision of;

- credible, independent AT information sources on a range of AT currently on the market to be made publicly accessible online;
- information strategies, using NHS Direct, information in GP surgeries, in high-street stores, etc to alert people to simple steps to getting effective AT and to alert them to the triggers for seeking more specialist advice;

- strategies to build the capacity of professionals, support workers and volunteers to act as care planners and advisers to be able to provide complex information and to enable individuals to identify the optimal funding route to obtain AT and AT services;
- strategies to ensure product information supplied by manufacturers and retailers includes a common set of data relating to life-time costs, service requirements, inter-operability, etc;
- development of a better evidence base made available through accessible information sources to support the sustained use of AT.

2.18.2 Educational pathway development

The breakdown in Appendix 3 shows that there is considerable work required across all areas of AT to develop educational provision at levels 1-5 in the National Qualification Framework. The picture provided by this mapping exercise is of lack of coherence of educational pathways and of mechanisms to ensure courses relate to each other. There is a reported challenge to sustainability of education provision throughout the range, including at post-graduate level. There is work required to consider how practitioners can be supported to build knowledge and understanding in AT through a range of educational formats and in various educational settings. Some specific issues raised in relation to education provision during the study period were as follows.

- Existing practitioner qualifications appear to be failing to meet the needs of employers who require staff competent in the effective employment of AT at non-specialist levels, in that the remit of education is often too narrowly focussed either on developing technical skills or on therapeutic intervention which largely disregard the potential of AT.
- Current AT training is often related to pre-defined suites of equipment, less often in relation to specific tasks, e.g. bathing, moving and handling or computer access. Occasionally training is structured to relate to the physical environment, e.g. the home, office, kitchen or bathroom. The proposal by recent AT education initiatives, such as Trusted Assessors, is that education should focus on developing competence initially in relation to the person, then relating to task and environment. It is only when learners have this context that one can sensibly discuss the potential interventions/ solutions, such as assistive technology, that may be indicated. This is a significant change of approach to developing the knowledge and understanding of practitioners and it is yet to be established that it provides a useful approach to developing a curriculum. Work underway in various courses, including the Trusted Assessor course, will indicate whether such an approach is viable.
- In no competence cluster area does the education provision currently meet the needs of employers if audited against good practice. The educational provision is unlikely therefore to meet the future needs of employers for a large number of practitioners able to employ multiple skills and to confidently and appropriately employ AT for clients, referring to specialist services when needed.
- For ease of presentation we have so far presented a simplified version of the key functions required from an AT service and the related competences that would be required of practitioners. The aim would be to develop an S/NVQ structure that reflects the varying requirements of a range of workers from those who need a partial understanding to those whose specialised role requires a more detailed understanding.

- Any AT qualification strategy will need to eventually sit within a Sector Qualification Strategy (SQS): an overarching UK wide strategy that aims to ensure publicly funded education clearly responds to sector specific needs and requirements. Such an SQS will take time to develop and will need to build on the foundation of existing provision. It is essential for the sustainability of AT education provision that a coherent strategy is developed and recognised and that courses can demonstrate that they sit within the SQS and meet sector needs, justifying eligibility for public funding.
- In order to develop the appropriate level and quality of education and training for all areas of AT the National Occupational Standards framework must be developed. This will provide the mechanism to create coherent educational pathways and enable the development of an educational strategy which can fit within a Sector Qualification Strategy and therefore attract the funding essential for sustainable development of these courses.
- There has been support voiced for online and distance learning formats and the pragmatic benefits of such learning approaches have to be balanced against the benefits of multi-disciplinary, shared learning experiences. There is concern that the requirement to provide a hands-on experience of a AT in order to build confidence and competence in technology has resource implications and may sit uneasily alongside a distance learning format.
- There is also concern about the lack of consistency in quality and the need for affordable and easy access to education and training in AT. This seems to be of concern particularly in relation to the mainstreaming of telecare services and in relation to service remodelling under the Transforming Community Equipment Review, but is relevant to all sectors. Though the development of a National Occupational Standards Framework will require initial investment, most of this funding is not new money but could be found through prioritising this work in the programme of work carried out by the Sector Skills Councils under their service level agreements with Government department sponsors. Whether AT is recognised as a priority at this level is not yet clear.

2.18.3 Development of a regulatory function

At this stage it is possible to predict that it is highly likely that regulation will impact on this workforce though not the processes or organisations that might be used. It is also not yet clear whether a 'light touch' or more formal regulatory approach will develop.

- As we have indicated many of the workforce are not subject to registration or regulation by practitioner bodies or Councils (see the detailed review of current practitioners by competence cluster in Appendix 3). Of those groups who are registered, most do not need to demonstrate competence specifically in AT as a requirement of registration. It is unlikely that existing regulators will be willing to take on a regulatory role relating to AT while competence demonstration is not supported by clear accreditation systems. If regulation is required then it is likely that methods of demonstrating competence will be required. This may be met by ad hoc development of competence demonstration within groups of AT practitioners, but it is unlikely that such accreditation mechanisms will be sustainable or provide career development opportunities.

- Various organisations are recognising the need to establish standards for organisational processes and individual competence and are setting up self-regulation processes. The British Healthcare Trades Association and Telecare Services Alliance, for example, both require member organisations to comply with Codes of Practice. Such regulation is attractive to commissioning bodies as this can be built into service specifications, though there are questions about monitoring of compliance of member organisations. The credibility of self-administered standards and accreditation processes is unclear and there would be significant benefits to setting such accreditation within a cross-sector National Occupational Standards framework.
- Concerns that have been noted by contributors that relate to the possible use of the term 'AT practitioner' or related terms to denote a minimum level of competency for retailers. One proposal is that any term to denote competency should relate to the area of AT in which each practitioner has demonstrated competence. One proposal is that this is referenced in their title, e.g. AT Practitioner in prosthetics and orthotics, Practitioner in AT for mobility, posture and seating and in AT for lifelong learning and employment, etc.

2.18.4 **Supporting disabled and older people to choose and use assistive technology**

FAST have drafted and disseminated a consultation paper on the potential for developing self care approaches in AT (included as Appendix 4). The paper proposes that potential self care models and related strategies to support self care fall into three categories which are likely to reflect the level of engagement desired by users or carers.

- The first model would aim to build greater awareness of the potential of AT and to empower disabled and older people to make a considered decision to include AT as part of their care package. The existing self care model with potential to deliver these outcomes is that of the Expert Patients Programme (EPP). Related strategies to support greater public awareness and to provide relevant information are particularly important in relation to these outcomes and would underpin self care at all levels.
- Building the capacity of users and carers to actively engage in the assessment and decision making process is likely to increase the effectiveness of AT provided. The recently developed Trusted Assessor training framework and Hereward/ City & Guilds VRQ (2) in AT could substantially deliver this outcome. Additional approaches to develop users' capacity to assess and negotiate the optimal funding route would be required in recognition of the high level of self purchase and shortfall in statutory provision of some AT.
- The third model would aim to build the capacity of users and carers through skills training, which may be provided jointly with professionals. This recognises the current shortfall in service provision in relation to sustaining the use of AT post-assessment. Building the capacity of users and carers to carry out simple technical adjustments and maintenance tasks in relation to straightforward as well as complex AT is likely to substantially sustain the use of AT. The High Tech Assistive Technology training delivered by Enable Ireland and peer mentoring programmes in the US indicate the capacity and desire of a significant client group to receive training and provide peer support in complex AT.

The development of an approach to support disabled and older people to choose and use AT clarifies the requirement for competence in supporting self care to be accommodated in workforce planning

2.19 **Impact of investing in developing the AT workforce**

The case for investment in an AT workforce development strategy is founded on the requirement to build the capacity of the workforce to embrace technology more effectively and improve service provision for a wide range of disabled and older people. The impact of investing in workforce development relates to numbers of people currently working with AT and those likely to require competence in AT in the future and to the value of the investment in the AT itself. To establish the impact of the proposed work a review was carried out to identify the size of the market, the numbers of users of AT and numbers of practitioners within the current and future workforce (Appendices 5, 6 and 7).

- 2.19.1 The AT market is large with the NHS alone spending in excess of £220 million of per annum for audiology, community equipment, electronic assistive technology, telecare, orthotics, prosthetic and wheelchairs and their associated products.¹⁹ In relation to the potential service remodelling resulting from the Transforming Community Equipment Review, the British Healthcare Trades Association note that 'it is estimated there are seven million people in the UK who could benefit from assistive technologies products and services - currently, the best estimate is that the state and private sector combined provide equipment to only around two million people so the impact on businesses could be enormous' Even if service remodelling is not extensive, there is a growing private market as witnessed by the availability of a range of AT from Argos and B&Q.

2.20 **Workforce data**

The mapping exercise undertaken to identify workforce planning data revealed the paucity of information. At this stage of initiating workforce planning in AT it is perhaps not surprising that the information on existing and potential practitioners is not easily accessible. Mechanisms to begin to collate information on the practitioners who will be required to demonstrate competence in AT are still to be developed.

- 2.20.1 Similarly, and more surprising, there is a requirement to establish the numbers of disabled and older people who would benefit from using a range of assistive technologies. This will be required for workforce and service planning and to support market activity and product innovation in this area and it is recommended that mechanisms for collating this information are established.
- 2.20.2 What the mapping exercise does indicate is that the existing number of people playing a part in the AT workforce is significant. Taking the numbers of people with impairments and those identifying themselves as disabled, together with the population modelling provided in the Wanless Review⁸, there is clearly a significant and growing proportion of the population likely to benefit from a workforce development in AT.
- 2.20.3 The lack of data currently relevant to this mapping exercise was a challenge, but we considered it was of relatively little importance given: the enormous shift in workforce pattern and service efficiencies which would be made possible by implementing the workforce strategies we propose here; the shift

in culture currently underway in health and social care to move care closer to home; and proposed service remodelling to enable diversification of the service provider base and to engage more fully the voluntary workforce.

- 2.20.4 In addition to looking at the potential numbers of practitioners in AT services and mainstream services who may wish to build and demonstrate competence in AT, it might be useful to envisage some future scenarios indicated by current initiatives relating AT service remodelling.

Future ways of working and the future workforce – some possible scenarios:

- John, a sales rep for Remember-in-time Ltd, is asked to assess Tracey by her family who live some distance away. Tracey is 81, living alone and experiencing early symptoms of dementia. At the assessment Tracey is accompanied by Crystal her daughter who has been on a 'Choose and Use AT self care course' at her local recreation centre. During the assessment John is able to identify Tracey's priorities and the problems she's having with maintaining her usual routine. Crystal's involvement enabled her to assess whether John's assessment was comprehensive and addressed her mother's needs. She was able to support her mother to express her views and was able to give her mother confidence that John's advice was useful. Together they reviewed the options which included some AT to address the needs arising from Tracey's dementia symptoms and also due to her reduced mobility around the house. John is also able to discuss greater involvement from the local Age Concern volunteers, some personal care and the potential for Tracey to move home to live with Crystal or another family member. Following the discussion, John prepared an online care plan which Crystal helped her mother contribute to, this was sent to the local Dementia Co-ordinator at Tracey's Health Centre. John's assessment covered AT from his own company's range but also AT from other companies. His assessment time was partly reimbursed by the local Primary Care Trust. Some of the AT is provided by the PCT and some is funded by Tracey's family. The Age Concern volunteers provide follow up support to assess the effectiveness of the care package and to maximise the benefits of the AT over the longer term.
- Anna is a personal support worker for Daryl, who is 13 and has learning difficulties and motor impairment. He attends a mainstream school and takes part in an extensive range of after-school activities. Daryl lives in a residential home during the week, spending weekends at his parents' home. Anna not only attends school with Daryl to act as his learning support worker, she also acts as Daryl's support broker, organising his online care plan and schedule of activities. Anna facilitates twice yearly meetings of the workers involved in Daryl's care, including from the residential home, school and out of school activities, and works with Daryl to actively participate in these meetings. Anna has previously worked in a call centre supporting remote communication for a telecare service. Her training for this post raised her interest in working directly with disabled people and technology. She is responsible for maintaining and developing Daryl's communication, learning and environmental control systems and is working with the technician at the school to customise the interface for these systems.

2.21 **Vision:**

- That people working in the community with disabled and older people can: become aware of the potential of AT and match the needs of their clients to a range of solutions, including AT; are aware of the best way to get hold of AT; develop confidence in using AT safely and effectively; and are confident to sustain the use of AT.
- That the public can become confident to choose the right AT for themselves and to build the skills to keep using it for as long as it is useful to them.
- That clinical and person-centred knowledge and skills demonstrated by practitioners are inextricably linked to those focused on technology to enable them to deliver comprehensive, creative assistive technology services.
- That a career development framework can be put in place that is applicable across the UK, with integrated vocational and academic educational pathways.

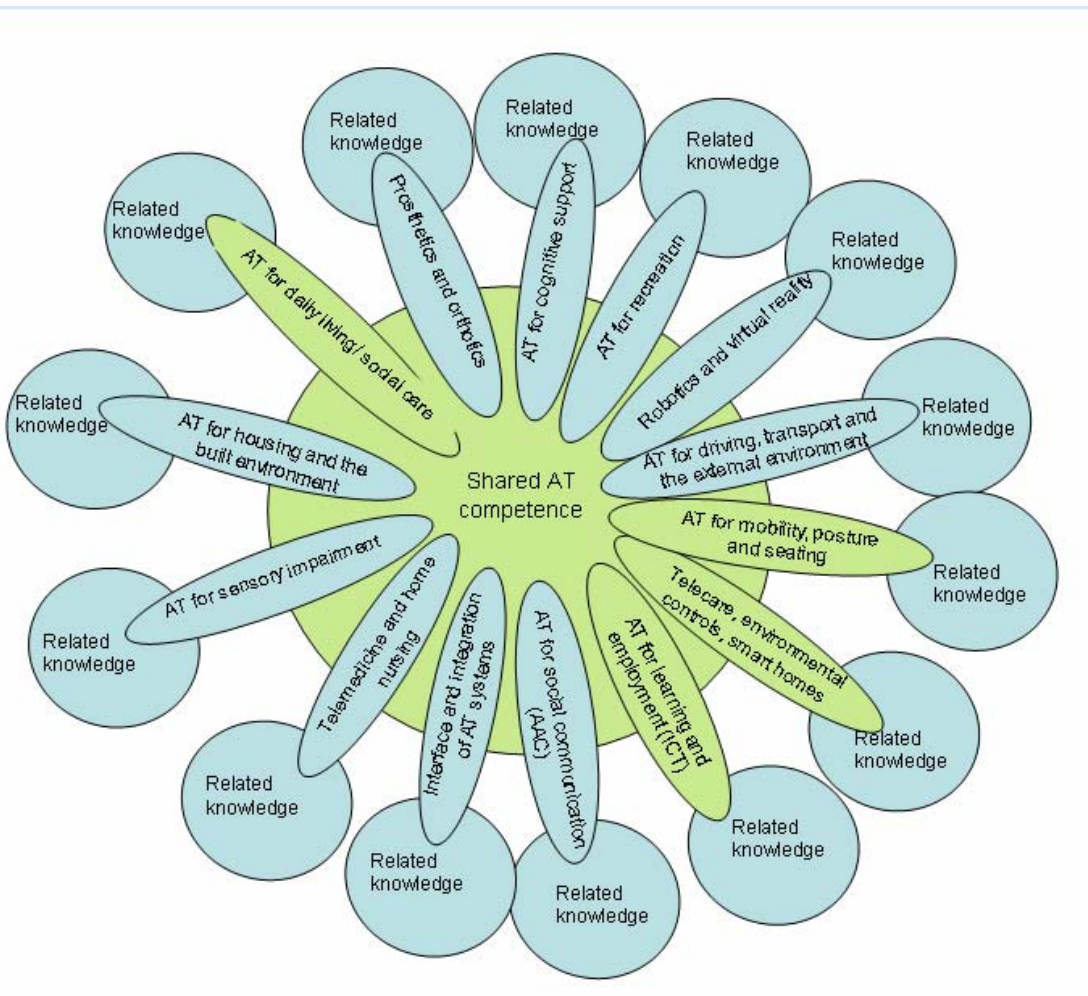
2.22 Action plan and future work

2.22.1 This workforce development strategy is ambitious in scope of application and in its aim to refocus workforce practice and related education and training provision in AT to encompass both person-centred and technology competences. The validity of the strategy and of the related framework for National Occupational Standards in AT will need to be tested within each of the competency cluster areas.

2.22.2 Due to the wide scope of application we would propose that a limited range of competency cluster areas are identified for initial work. There will be variation in how the framework is applied to reflect the needs of the employers and service users within each cluster area. This initial work will need to be co-ordinated to ensure the framework retains its potential applicability for the other competency cluster areas and to ensure coherence across the framework.

2.22.3 We propose that funding is secured to enable work to be initiated over the next year in the following areas:

- AT for mobility, posture and seating
- Electronic AT: telecare, environmental controls and automated homes
- AT for lifelong learning and employment (ICT)
- AT for daily living and social care (community equipment/ domiciliary care)



- 2.22.4 The areas of practice relating to community equipment (AT for daily living) and to AT for mobility, posture and seating are key areas under consideration in relation to the Transforming Community Equipment Review. The proposed workforce development strategy is essential for the long term sustainability and success of the service remodelling proposed by the Review. Although there are still some uncertainties around implementation of the proposed model, there appear to be few alternatives to the signalled direction of travel towards market diversification, greater clarity on the competence of the workforce and greater efficiency in the adoption of technology to support care.
- 2.22.5 Services using telecare have been highlighted in a raft of policy relating to the future direction of health and social care service delivery. Workforce capacity is a key element that is regularly identified as a potential barrier to the mainstreaming of these services. It is unlikely that workforce development in this area of practice alone would be effective in the context of delivering integrated, preventative services to a wide range of disabled and older people. Again it is unlikely that there are many alternatives to a broad framework of National Occupational Standards relevant across AT to meet the needs of the current and prospective telecare workforce.
- 2.22.6 Having set a national priority for training and continuing professional development in relation to disability and special educational needs within the education sector, it is not possible to develop workforce planning that does not consider the requirement for competence in AT in this area of practice. Again, to do so without setting such a competence framework in the context of wider AT practice would be contradictory to the requirement for greater integration between health, social care, employment, leisure and mainstream services.
- 2.22.7 These four areas have been identified as likely to be of high priority for the Government sponsors of workforce planning activity to be carried out by the Sector Skills Councils. It would therefore make sense to develop a coherent programme of work setting these competence clusters as the initial phase in developing the overall National Occupational Standards framework in AT.
- 2.22.8 Depending on feedback from the sector we would propose that work is now required to:
- Secure the AT sector's agreement on:
 - the proposed workforce development strategy in AT
 - the National Occupational Standards framework in AT
 - the proposed core knowledge and skills required of practitioners
 - the competence cluster break down
 - Collate the feedback from the consultation so that it can influence the implementation phase.
 - Estimate the cost of the required work to:
 - develop the National Occupational Standards Framework, including work to address deficits and gaps (both the technical work to be conducted by the Sector Skills Councils and that to coordinate the development of the overall AT framework);
 - address the deficits in relation in the knowledge and understanding required for the generic framework and in relation to the competence clusters.

- Secure the funding to carry out the required work.
- Hold preparatory discussions with the Qualification and Curriculum Authority and awarding bodies.
- Hold preparatory discussions with education providers.
- Secure participation of sector stakeholders and relevant Government departments in progressing identified elements required for workforce development, including:
 - better information provision
 - service remodelling
 - development of a regulatory mechanism
 - development of practitioner representative body
 - development of better workforce data
- In relation to the development of the self care proposal, FAST are currently inviting AT professionals, and disabled and older users of AT to give their views on the proposals in the Self Care in AT paper. The paper has also been sent to the Community Interest Company who are charged with expanding the Expert Patient programme.

2.22.9 There is additional work required to widen the project to include other parts of the UK, this may include:

- Mapping workforce, user population and stakeholders
- Identifying stakeholders and policy objectives relevant within each part of the UK
- Identifying workforce development issues relevant to each part of the UK

There are likely to be fundamental changes to the way that AT services are delivered over the next decade and the requirement to lay down a strong foundation of good practice and shared National Occupational Standards in AT across the UK is urgent.

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Care Services Improvement Partnership 

Telecare LIN

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