



Mind the Digital Gap: It's bigger than you think

A new strategy for digital inclusion

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Copies of this document are available for download at
www.abilitynet.org.uk/mindthegap

Contents

1	Introduction.....	4
2	Mind the digital gap. It's bigger than you think.....	7
3	Time to think again	9
3.1	Current policy doesn't work.....	9
3.2	Task-based testing	10
3.3	Challenging our priorities	11
4	Our proposals.....	12
4.1	An inclusive Approach	13
4.2	Common Core Technology	15
4.3	Trusted Support Environment.....	17
4.4	Incentivise Inclusion.....	18
4.5	Build incluive design into education and professional learning	19
4.6	Speaking with one voice	20
5	Call To Action	21
6	How to respond to AbilityNet	23

1 Introduction

AbilityNet exists to enable people with disabilities, older people and those with limiting conditions to harness the power of computers, the internet and related technologies to improve their lives at home, at work and in education.

In September 2012 AbilityNet commissioned Kevin Carey to produce a policy paper that could be a contribution towards developing a new strategy for citizen/consumer access to digital information. It reviews current and previous policies in this domain and sets the problem of how to ensure citizen/consumer access in a new context.

A full copy of Kevin Carey's report can be downloaded at www.abilitynet.org.uk/mindthedigitalgap.

AbilityNet welcomes the overall thrust of Kevin Carey's report and his proposals for action to address current shortcomings. We agree that existing policies and practises aren't delivering access to digital services and content for those who can benefit the most from this technology and we welcome this opportunity to debate the best ways to address this.

We believe there is an urgent need to address the growing gap between what technology enables some of us to do and the barriers that many people face when trying to complete the same digital tasks. We also need to recognise the significance of this gap in both social and economic terms.

This has moved beyond a social cause, where we have been seeking equality for the disabled and older people, and is now an economic issue as we enter an increasingly self-service age. Much is made of the potential cost savings of moving business, Government and Third Sector services online but there will be additional costs to consider if customers or citizens do not have the capabilities that they need to be able to use those services.

For too long the debate about accessibility has focused on issues that are specific to people with disabilities. Pursuing legal action to ensure that every website includes alt-tags for people who use a screen reader would be a

pointless exercise, when there is a much more important strategic issue that needs urgent attention.

Business, Government and the Third Sector are driving us to serve ourselves more and more, creating increasingly complex systems for us to use on websites, phones, apps, self-service terminals and now our televisions. As we move towards convergence across digital platforms we need to ensure our approach to inclusivity moves away from device and content and towards user interaction.

As the variety of high end digital technology available to us explodes a capability gap is growing and affecting millions of people. The challenges of filling this gap are made more complex because we have an ageing population. We must act to close the gap between technology and people's capabilities to use it, firstly by recognising that the gap exists and then by agreeing what we can do together to address it.

In particular AbilityNet calls on business, Government and the Third Sector to:

- Deliver inclusive and usable services, content and end-to-end solutions. In particular to achieve this by using task-oriented user-focused testing at every stage of the design process, rather than rely on post-hoc accessibility testing
- Work with technology companies to ensure that they include consistent use of core inclusion strategies, technologies and practices in all their technologies and systems
- Support the creation of a trusted support service to help the disabled and older people make effective use of digital technologies
- Change how we incentivise digital inclusion through the use of taxation to drive uptake as well as improving take up of compliance auditing to demonstrate that relevant standards are being achieved

- Ensure that we have a learning environment for all IT and design professionals that embeds inclusion throughout all roles including the national curriculum
- Actively encourage advocates in Business, Government, The Third Sector and concerned users to come together in a relevant forum so that they can work together in a coordinated way to make technology accessible and inclusive.

2 Mind the digital gap. It's bigger than you think...

We live in an increasingly self-service age. We perform our own check-in at the airport, we book our own train tickets and we put our own shopping through the till. Business, Government and the Third Sector have many reasons for pushing us to serve ourselves, including cost savings, convenience, empowerment and promoting independence, but there is a significant gap emerging between what we are asked to do to serve ourselves and our capabilities and capacity to successfully do so. There are all sorts of potential barriers to be overcome in even the most simple transactions, and the number of people this affects is large and growing larger all the time.

The first gap is for those who are not online. By far the greatest proportion of people not using the internet are those with disabilities and older people, but the self-service gap is much wider than that. Whilst there are 12 million registered disabled people in the UK there is a growing population of older people, many of whom will acquire impairments as they grow older and less likely to be users of current technologies.

Leaving aside people with specific impairments it is clear that adults and children of all ages face all kinds of challenges when using websites, apps, online documents and other digital systems. They struggle with inconsistent, badly designed interfaces, fail to complete tasks and face unnecessary frustration and delays which significantly undermine the drive towards self-service.

Some may consider that the needs of disabled and older people are of purely social concern but there are real economic threats unless we can start to close this gap.

As the gap between what we ask customers to do and what they are capable of doing grows, we are inadvertently disenfranchising a significant proportion of the entire UK population. Not only are potential customers not able to spend their money online but their unsuccessful experiences can have a negative impact on the buying decisions of others.

Instead of saving money and improving customer service there is a real risk that business, Government and the Third Sector will not see the cost benefits of moving services online. Too many customers still require additional support to access their systems and services, shopping baskets remain unpaid for, booking systems fail, complaints increase and revenues will fall. Customers who cannot or do not want to serve themselves will choose suppliers who are more sympathetic to their particular needs - or they will simply go without.

3 Time to think again

3.1 Current policy doesn't work

We want to start by underlining our support for the core assumptions in Kevin Carey's Report. It is vital that all citizens/consumers who are in any way disadvantaged by virtue of education, language, capacity, facility, physical or other impairment and economic status have, as near as possible, the same access to digital information systems as their peers, on a non-discriminatory basis and at a fair price.

Over the last 15 years much has been said about the delivery of inclusive digital systems and content, particularly those that are claimed to support users suffering from a disability or age related condition.

The reality is, however, that apart from a small number of good examples, many digital systems and content are inaccessible to the majority of disabled and older people. The current methodology of how to engage organisations and individuals to deliver accessible and inclusive technology, content and services has failed and we need a change in mind set on how we approach digital inclusion.

We therefore welcome Kevin Carey's paper and, in particular, agree that we need to stop thinking in piecemeal terms on how best to deliver digital inclusion, such as font sizes, colour contrast etc. Whilst these are all important technical requirements it is important to think in a holistic way about how everyone needs to:

- Use technology
- Seek and process information
- Undertake and complete tasks.

3.2 Task-based testing

AbilityNet has always been a leading advocate for the use of relevant standards to ensure accessibility. We are also committed to user-centred design methodologies so we support an approach that augments the use of standards with the use of task-oriented measures. This combination is vital if we are to put the needs of users at the heart of the design process.

AbilityNet continues to be a user-focused organisation and our services reflect this by ensuring that the needs of users are central to decision-making at every stage of the design process. We have developed a set of user personas that not only reflect a wide spectrum of standard demographics but also a broad range of disabilities. We use these when working with our clients and this encourages them to think about inclusive and accessible design from a practical and pragmatic point of view. By adding relevant user journeys they can adapt these personas to reflect their customers or service users.

It's worth pointing out that a fully optimised web site, which passes every aspect of the technical guidelines, may still have such a practical limitation which could prevent someone from completing key functions of the service.

An example of the impact of this approach could be an airline website where there is a time limitation upon each step of the process which sends you back to the start of the booking journey. This may be imposed to protect the details of the person booking, or to ensure that tickets are not held for too long, but someone using the site with a learning or cognitive impairment may take longer than this limited period to complete the process, especially if the site is not optimised for their needs.

A simple adjustment to the time out cut-off would allow them time to complete the task in the same way as their peers. Without it they may continually fall foul of this limitation and never be able to complete the process.

3.3 Challenging our priorities

This Report is directly concerned with those who face problems with accessing digital information systems as the result of impairment, grouped in clusters in descending order of prevalence as follows:

- Learning and cognitive
- Physical
- Hearing
- Visual.

As Kevin Carey says in his report this list is frequently inverted when developing priorities for policy and practise. Blind and visually impaired people clearly have particular problems, but the depth of their problems should not be confused with its prevalence. Many more people are affected by learning and cognitive disabilities, such as dyslexia, autism or Alzheimer's, and their needs must be addressed if we are to close the inclusivity gap.

Current priorities are severely underestimating both the prevalence and depth of problems faced by people with physical, learning and cognitive disabilities. This will affect the way we design and deliver all digital systems, and the assumptions we make about the savings we can make when implementing those systems.

4 Our proposals

We propose six policies to bring about a step change in creating an inclusive digital environment and economy:

- Deliver inclusive and usable services, content and end-to-end solutions. In particular achieve this by using task-oriented user-focused testing at every stage of the design process, rather than rely on post-hoc accessibility testing
- Work with technology companies to help them include consistent use of core inclusion strategies, technologies and practices in all their technology
- Support the creation of a trusted support service to help the disabled and older people make effective use of digital technologies
- Change how we incentivise digital inclusion through the use of taxation to drive uptake, together with compliance auditing to demonstrate achievement
- Ensure that we have a learning environment for all IT and design professionals that embeds inclusion throughout all roles including the national curriculum
- Actively encourage advocates in Business, Government, The Third Sector and concerned users to come together in a relevant forum so that they can work together in a coordinated way to make technology accessible and inclusive.

4.1 An inclusive Approach

There is a need to change the language and approach to stop isolating accessibility in order to make inclusion mainstream. We need to stop talking about accessibility, disability or usability but rather speak of inclusion and inclusive design.

We need a mind-set shift towards systems, services and content being available for consumers and users regardless of ability, and a natural assumption that the disabled, older people and those with limiting conditions are able to operate in a digitally inclusive world.

Instead of thinking about how to achieve this in a piecemeal fashion, such as colour contrast, alt text, fonts etc (which are all important), we need to focus on how people engage with a required task, how they digest content, use a solution or complete a transaction. We must consider the complete task as an end-to-end process, consisting of a number of interaction points, and not in isolation, so that the user can attain the experience intended for all.

To achieve this we support Kevin Carey's proposal for much wider use of task-based testing. This does not diminish the value of existing technical standards but recognises the need to establish a common approach that formalises the relationship between usability and accessibility. It also provides an excellent starting point for promoting much closer working between a range of usability and accessibility practitioners.

Much greater emphasis is placed on usability and user experience than accessibility in the commercial arena but we believe the time has come for usability and accessibility to be considered as equals as a key component of user experience. Whilst current usability practises encourage an inclusive approach to design, a usable product may still not be accessible to some groups, whereas we would argue that an accessible product is more likely to be more usable by everyone.

Designing and testing for accessibility could be seen as extreme usability testing. It encourages consistency, clear labelling and reduces the incidence of errors, all of which help the user use a product effectively.

Usability, user experience and accessibility practitioners and professionals must work together to achieve this shift in attitude. As well as collaborating on methodologies we need to show clients that this gap may be having a significant impact on their ability to achieve their business or social goals. We also need to influence the designers and developers who are delivering the systems and services that clients are paying for.

4.2 Common Core Technology

To improve the experience of disabled people, older people and those with a limiting condition it is essential that a core set of inclusion technologies and practices are built into all “operating systems” and user interfaces, such as found on PCs, laptops, tablets, mobile phones, televisions etc.

This core set should be consistent across all platforms, and whilst different companies will implement those appropriate to their technology they should all provide the same core inclusive technology that enables access to their products for the widest range of customers.

The core set should include:

- Text to speech – converting text on a computer to spoken word
- Speech to text – converting spoken word to text
- Magnification - increasing the size of the words and pictures being presented on a screen
- Ability to configure your interface – building in the facility to set preferences such as text size, colours, language, etc
- Task intelligence: the ability to make sense of complex requests for action “remind me to send my dad a birthday card next Thursday”
- Location services (where applicable) – knowing where a device is and being able to report that information for use by other services.

It may not always be possible to deliver this functionality directly from the device itself. For example, it may not be commercially viable to offer text to-speech control on a fridge or ATM. In such cases the device must be ‘extensible’ – in other words the technology must have the ability to link to other devices that are themselves smarter and already have these core technologies built in.

For example an ATM could link to a smartphone via an inexpensive addition and a user could hear all screen prompts to operate the machine. A fridge

could be programmed by a user accessing its controls on a device that is already set up to meet their access needs.

This will ensure that the technology is accessible to the widest possible audience out of the box, be usable as soon as you unwrap it (as this technology will be provided as standard in the “operating system”) and ensure that users are far less reliant upon expensive assistive technologies.

4.3 Trusted Support Environment

A major role for the Third Sector is that of a trusted provider of support services to constantly and consistently help, support or advise older people, disabled people and those with limiting condition on how to use or fix their technology.

Many charities have networks of volunteers that offer support and help either remotely or in people's homes, but this provision is patchy and un-coordinated. With such a large market of potential clients (over 20 million and growing as our population ages) the Third Sector must pool its resources and use of volunteers to service this market.

We need to create one joined up support service that any disabled, older person or person with a limiting condition can call upon to receive the support and help they will need. Not only to get online, but far more importantly to stay online and make use of the services which they require.

This is a moving target and this client base will need regular and sustained help to keep engaged with the digital age. Not only will the nature of the devices and services we are using continue to evolve rapidly but the learning and cognitive disabilities and health conditions - which are the most prevalent in our society, and continuing to increase - are often themselves progressive and require continued support.

4.4 Incentivise Inclusion

Within the UK we have had the Disability Discrimination Act and subsequently the Equality Act that requires reasonable adjustment by law. Unfortunately this legislation has had little impact in delivering accessible and inclusive digital content, systems and services.

So further legislation is unlikely to work as there may be no appetite within Government to create it and it may take far too long to implement. There is a real need now that must be met. Thus we need another way to incentivise the provision of, and gain compliance for, inclusive and accessible technology for all.

We need a two-pronged approach:

- Provide organisations with a tax incentive to deliver digital systems, services and content in an accessible and inclusive manner. This should be for a limited time period, say 2 or 3 years, to focus attention and create a tipping point for organisations to implement new or updated solutions
- A clearly recognised accreditation process that demonstrates that a digital system, service or content provision meets a recognised level of inclusivity, and which also includes a commitment to maintain that level. Such a recognised accreditation can be built upon the most valuable parts of various existing schemes and should be seen as a “badge of honour” that serves to inspire and encourage organisations to “join the club”.

4.5 Build inclusive design into education and professional learning

Education is key if we are to achieve digital inclusion that benefits all citizens, consumers and customers that benefits Government, Business, the Third Sector and UK Plc.

There needs to be three focal points for education:

- We need to ensure that accessibility and inclusion training is embedded throughout the IT and design professions. It must not be seen as specific to only one or two niche roles but must be part of the training through all roles to ensure that accessibility and inclusion becomes as commonplace as security or disaster recovery etc. This includes for example project managers, as well as coders and graphic designers. One way to achieve this is to embed inclusion through the Skills Framework for the Information Age
- Secondly to compliment training of the whole IT profession we need to create accessibility and inclusion as a professional skillset and activity by creating a professional standard/qualification for those working in this area
- Thirdly we need to change the curriculum in schools to ensure that inclusion and accessibility is embedded across the curriculum, not just featuring in IT, so that documents, websites and apps, etc are created in an accessible manner. Teaching the young as part of their normal learning will bring a step change in ensuring content, systems and solutions are accessible and inclusive.

4.6 Speaking with one voice

Across Business, Government and the Third Sector there are numerous groups looking at how to address the issues of inclusion and accessible technology. All this activity and effort is to be commended and encouraged as it means there is clearly a large group of people and organisations of all types who want to overcome these challenges. However one consequence of having such a large number of groups is that it continues to dissipate activity and scarce resources.

We therefore need to bring these numerous groups together, to coordinate and focus activity to make better use of the resources available and achieve greater impact together to benefit those who most need our help.

In our view this can best be achieved through the One Voice Coalition for Accessible ICT, which provides a forum for key players across all sectors to develop policy, build partnerships, share resources, coordinate activity and promote more inclusive technology design practise.

5 Call To Action

Current policy and practise is not delivering digital systems, services and content that is inclusive to the widest possible audience. Government, business and the Third Sector all need to play their part in changing how we approach digital inclusion.

- **Government** needs to take the lead through its Digital by Default and Assisted Digital programmes by ensuring that all people can engage with, and process, digital content and systems
- **Business** must follow the example of the Public Sector and other leading businesses in prioritising the delivery of their goods, services and content in an accessible and inclusive manner to the widest targeted audience
- The **Third Sector** has a key role in digital inclusion by ensuring that its own goods, services and support to end beneficiaries are fully inclusive
- Finally, the **general public** also have a role to play - not only in demanding systems, services and content that they are all able to engage with is inclusive, but also in creating their own personal digital content in this social media age.

We therefore call on all sectors and individuals to:

- Deliver inclusive and usable services, content and end-to-end solutions. In particular to achieve this by using task-oriented user-focused testing at every stage of the design process, rather than rely on post-hoc accessibility testing
- Work with technology companies to help them include consistent use of core inclusion strategies, technologies and practices in all their technology
- Support the creation of a trusted support service to help the disabled and older people make effective use of digital technologies

- Change how we incentivise digital inclusion through the use of taxation to drive uptake, together with compliance auditing to demonstrate achievement
- Ensure that we have a learning environment for all IT and design professionals that embeds inclusion throughout all roles, including the national curriculum
- Actively encourage advocates in Business, Government, The Third Sector and concerned users to come together in a relevant forum so that they can work together in a coordinated way to make technology accessible and inclusive.

6 How to respond to AbilityNet

AbilityNet is taking a lead in pushing this debate into new territory. Above all else we want to encourage people from all sectors to recognise this as a growing problem, with a significant impact on everybody, not only disabled people and the organisations that service them.

This report and Kevin Carey's paper is available on our website at
www.abilitynet.org.uk/mindthegap

This page also allows you to leave a comment and we welcome your thoughts about what we are saying about the nature of the problem we face and our proposed strategy.

You can also engage with us online through Twitter @abilitynet or on our Facebook page at www.facebook.com/abilitynet