

## 3 The Case for Engagement

Citizens across the globe are facing an unprecedented rate of technological and social change. An unceasing flow of new products, systems, services and environments places demands on individuals to change their behaviours, attitudes and values. Collectively, the emerging developments offer the tantalizing promise of enhancements to our lives. The emerging technologies are transforming business, communication and lifestyle; they have the potential to enrich human life in innumerable ways, many of which we cannot yet imagine. They can simplify the mechanics of daily life, prolong independent living with smart homes and with ‘obedient’ domestic appliances, assist our learning, extend our skills and capabilities and enhance our leisure. For the transformational potential of these benefits to be realised in society, new systems and services will need to be accessible to all and taken up by the majority. Achieving positive digital futures, which deliver genuine improvements in quality of life, requires the active engagement of citizens in their planning, design and implementation. This chapter sets out the imperatives for citizen engagement, and identifies the benefits that it can bring.

### 3.1 Drivers for Engagement

Citizen engagement is not a new concept, and indeed there are many areas in which some form of engagement is already an established process. Public consultations are a regular feature in certain domains of public policy and civic planning; for example in 2004 the UK Labour Party launched its “*Big Conversation*” initiative, which was described as the biggest consultation exercise ever undertaken with voters, as a way of gaining public input into future policy making. The Scandinavian countries have led the way in developing participative approaches to the design of technology (e.g. Ehn and Kyng 1994), and there is growing recognition in the product and industrial design sectors of the need for some form of user involvement in defining requirements and evaluating prototypes. However, the pace and nature of social and technical change is now such that there

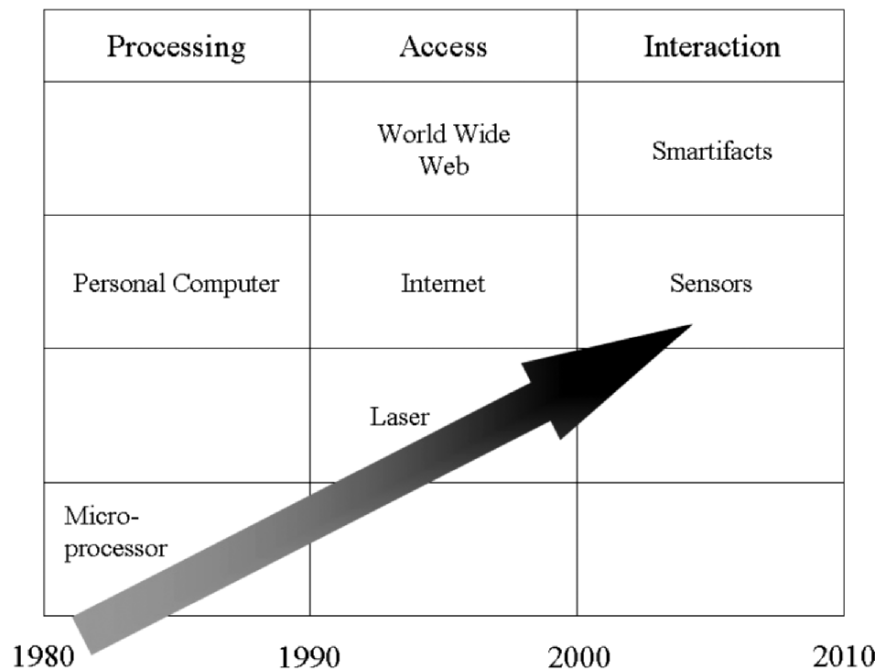
appears to be a good case for these activities to become an integral part of all ICT developments.

There are a number of drivers for greater participation and engagement and four of the most significant are presented below. The first of these relates to developments in technology: nowadays it seems citizens are being offered “*e-everything*” with the proliferation of electronic services delivered by commerce and by government. The second relates to the consequences of the pace of technological change and the dangers of “*digital divides*” emerging in society between those who have access to the benefits of the new technologies and those who do not. The third relates to the goal of increased social inclusion, i.e. the process of reducing social exclusion by enhancing opportunities and equality to enable as many of the population as possible to participate as fully as they would wish in society. Finally, the fourth relates to the aspiration of many governments to capitalise on the potential for new technologies to enhance the democratic process.

### **3.1.1 “e-everything”**

The changing nature of technology is now delivering “*e-everything*” to a vast and heterogeneous user population – the general public. Barely half a century ago, computers filled entire rooms, were serviced by armies of technical staff and were used by highly skilled experts engaged in ‘big science’. Programmes took hours, if not days, to run. Today, more processing power than in those huge machines can be found in the average domestic washing machine, and millions of people carry devices in their pockets (PDAs, 3G mobile phones) which give them instant access to gigabytes of computer capacity. Carrying a terabyte of memory in your pocket is expected to become a reality within the foreseeable future. Analysis by the Institute for the Future shows the major shift which has already taken place since 1980 regarding the availability and usage of ICT and presents the projections for the future (see Fig. 3.1).

As a result of these developments, digital technologies have spread out from the science lab and the workplace to have a role in every aspect of citizens lives: schools and universities, hospitals and doctors’ surgeries, shopping and service provision, transport and travel, entertainment and leisure, politics and government. The deep penetration of digital technologies into all aspects of our lives means that we often have little choice about whether or not to engage with new technologies: whether we realise it or not, we are all ICT users in some way or another.



**Fig. 3.1.** The shift from processing and access to interaction (Institute for the Future 1997).

Those involved in the design and development of new technologies have come to realise over recent decades the benefits of engaging directly with users, to define their characteristics and needs and to develop solutions which serve their requirements and aspirations. With a vast array of new and emerging technologies, and even more vast numbers of potential users, this is no simple task, but the active participation of citizens in the process becomes even more critical.

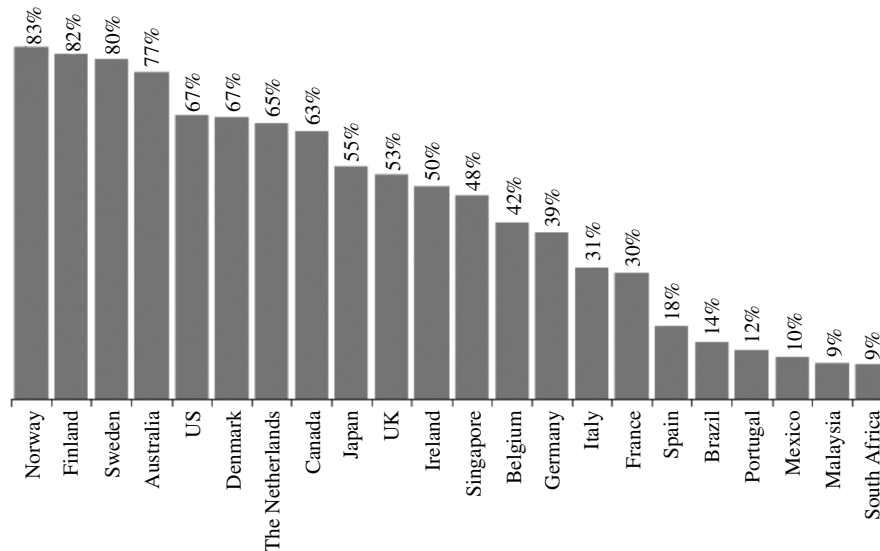
### 3.1.2 Stemming the Digital Divide

Another major driver for citizen engagement is the need to stem the digital divide. The term ‘digital divide’, popularised by the US National Telecommunications and Information Administration under President Clinton, is commonly used to describe the gap between those individuals and groups who have access to digital technologies and those who do not. While there is much debate about this term and its implications (e.g. Kling 1999, Warschauer 2003), there is no doubt that disparities exist. Pippa

Norris (2001) in fact identifies three distinct aspects of digital divide: a “*global divide*”, which refers to differences in levels of Internet access between industrialised and developing societies; a “*social divide*”, which refers to the gap between ‘information rich’ and ‘information poor’ in each nation; and lastly, a “*democratic divide*”, which refers to the division between those who do and those who do not use digital resources to engage, mobilise and participate in public life.

The technology which is most prominent in discussions about the digital divide is, of course, the Internet. Since its emergence in the 1980s, there is evidence to show that usage of the Internet in many countries is following a well-established pattern of technology diffusion. This pattern sees early adoption by a relatively small percentage of innovators and technophiles, succeeded by a surge in take up by a significant percentage of the population, with a ‘tail’ of the population who are late or non-adopters of the technology (Rogers 1995). Thus, in the UK for example, the number of households with access to the Internet increased almost sixfold from 2.3 million in September 1998 to 13.1 million in May 2005, (over half of all UK households –55%), with 60% (38.14 million) of adults in the UK saying that they had used the Internet somewhere in the previous three months (National Statistics 2005). Similarly, the number of North American adults going online grew by 100% between 2000 and 2005. Overall, approximately 68% of adult Americans (more than 2.2 million people) now use the Internet. But, as figure 3.2 shows, these levels of uptake in the UK and the US are not representative of everywhere else in the world.

While it is estimated that, in July 2005, there are almost a billion people online globally, this represents only 15% of the world’s entire population (Internet World Statistics n.d.), and there are clear differences between nations. Most of the African countries, for example, have fewer than 10% of their population online, while in some countries the online population is approaching 90%. But even within Europe there are significant differences between the larger and more affluent countries where (depending on the source of the statistics) penetration may be more than 70%, and the smaller and less affluent countries, where penetration can be below 10%. There are also differences in access and use within nations, even those with the highest levels of Internet access. Computer and Internet use are divided along demographic and socioeconomic lines, with the youngest, most affluent and better educated most likely to enjoy the benefits of connection: “*the Internet, like cable TV, mobile phones and fax machines before it, connects the connected more than the peripheral*” (Norris 2001).



**Fig. 3.2.** Regular Internet Users (Accenture 2004).

A challenge for all in a democratic society is to ensure that it is not just the privileged few who enjoy the benefits of connection, but that the whole of the world's population can do so. Concerns about the digital divide have led to numerous initiatives to provide free or cheaper access to computers, software and the Internet. However, evidence also shows that the digital divide is not simply a consequence of whether or not people have access to digital technologies. Even when equipment and services are provided free of charge, there are many barriers to prevent people from making effective use of them. Cultural diversity, lack of relevant content, language and literacy are significant barriers to uptake (Warschauer 2003). Thus, the existing divide between materially rich and poor is now exacerbated by the related divide between the information rich and information poor. To stem the digital divide, therefore, requires not only improvements in access to the Internet, but also the provision of meaningful and appropriate content. The value of the Internet is determined by what people put on it and how people interact with it; thus, citizens with diverse needs and interests as yet not represented must be actively engaged and enabled to develop that content and stimulate interaction.

### 3.1.3 Improving Social Inclusion

Social exclusion refers to the multiple and changing factors which can cause people to be “*excluded from normal exchanges, practices and rights of modern society*” (Commission of the European Communities 1993). There are several factors which can contribute to social exclusion, such as economic, educational, political, health and ability, or geographical factors. Although there are concerns that ‘digital divides’ might exacerbate social exclusion, there are also hopes that the new digital technologies can be exploited to promote social inclusion.

Information and communications technologies overcome distances in both space and time, ignore geographical and political boundaries, and can help to overcome limitations on social participation caused, for example, by disability. Connected individuals can therefore potentially participate in a wide range of activities which might otherwise have been impossible, leading to a more inclusive society. A number of ground-breaking initiatives have been carried out with groups at particular risk of exclusion; some of these are discussed in more detail in Chapter 5. In the UK, for example, there have been projects such as ‘Womenspeak’ (a project using interactive ICT to link Parliamentarians and survivors of domestic violence) (Moran 2002), and a project to give Irish women travellers an online voice. Similar projects have been carried out with Asian women (Moran 2000).

A survey carried out for the US National Organisation on Disability in 2000 found that 48% of disabled people said that going online significantly increased their quality of life, compared to 27% of non-disabled people. In the UK, a study for the Leonard Cheshire Foundation (Knight et al. 2002) found that 54% of disabled people sampled considered Internet access essential, compared with only 6% in the general population. By contrast, a survey in the US found that 28% of non-users with disabilities said that their disability made it difficult or impossible for them to go online (Pew Internet And American Life Project 2003).

Ensuring accessibility to the Internet and to digital technologies more generally for disabled people is not only an important step towards promoting social inclusion, but it is now one which is increasingly required by legislation (viz. the 1995 Disability Discrimination Act in the UK and the 1990 Americans with Disabilities Act in the US). However there is ample evidence to suggest that designers and providers are struggling to meet the requirements of the legislation, and there is a long way to go to achieving the goal of universal accessibility. A study of 1,000 websites covering a wide range of services carried out by the Disability Rights Commission (2004) found that 81% failed to meet basic accessibility guidelines which

have been produced by the industry itself – the World Wide Web consortium’s Web Accessibility Initiative (W3C 2004).

In addition to the social and legislative drivers, there are also strong business drivers for more inclusive products and services. As Sir Christopher Frayling, Chairman of the Design Council and Rector of the Royal Society of Arts, clearly states “*the challenge of designing inclusively for the whole population is not just a matter of social urgency – it has become one of the defining business priorities of the age. The need has never been greater for products, services and environments to be developed in such a way that they reflect accurately the diverse demands of today’s consumers*” (Frayling 2003).

Promoting social inclusion is, of course, more than just a matter of ensuring that designs do not exclude individuals or groups from access to technology. To achieve greater social inclusion requires that those who are currently marginalized in society are enabled to actively participate in the determination of both individual and life chances (Stewart 2000). In order to be able to influence the shape of future technologies, stakeholders (citizens) need to be actively engaged in the identification and articulation of their goals, needs and aspiration, and in the evaluation and validation of alternative options.

### **3.1.4 Promoting Democracy**

There is a perception amongst politicians and governments in many countries that the population has become more and more “*disenchanted with the traditional institutions of representative government, detached from political parties, and disillusioned with older forms of civic engagement and participation*” (Norris et al. 1999). What Norris (2001) calls the “*cyber-optimists*” in society regard digital technologies as the panacea to many of the problems which underlie this apparent civic disengagement. E-democracy and its subsidiary e-government are two of the perceived lynchpins of the e-society. E-democracy can be defined as the use of ICTs and strategies by democratic actors (e.g. government, elected officials, the media, political organisations, citizens/voters) within political and governance processes of local communities, nations and the international stage (Clift 2004). In the UK, government policy on e-democracy has two tracks:

- firstly it is about encouraging people to take part in elections by giving them choices about how they cast their vote, including through the internet, either at home or at public venues, and by using mobile phones;

- but is it also about getting people to interact with Government between elections, allowing them to raise topics they want discussed, and influencing Government policy, including participating in on-line discussion fora.

The aim of the proposed policy is to take advantage of the new technologies' potential to encourage people to participate in the democratic process.

There are three stated objectives:

- facilitating participation in the democratic process: making it easier for people to collect public information, follow the political process, discuss and form groups on political issues, scrutinise government and vote in elections;
- broadening participation by opening up a range of new channels for democratic communication – this may enable involvement from people who in the past may have felt excluded from the democratic process or unable to participate;
- deepening participation by creating a closer link between citizens and their representatives (<http://www.e-democracy.gov.uk>).

This policy has given rise to two activity streams, concerned respectively with e-voting and with e-participation.

Voting systems are fundamental to the democratic process, and many governments are concerned about low or falling levels of turnout at elections.



photos from  
Susan King Roth  
"Disenfranchised by Design"  
in IDJ, 1998

**Fig. 3.3.** Difficulties in using machines.



As a way of making voting easier and thereby encouraging turnout, many are exploring mechanisms for e-voting. Both the US and UK are currently trialling e-voting systems, but in addition to public concerns about the security of online votes, pilots and trials have highlighted a number of usability and accessibility problems of the different systems which have been tested. Fig. 3.3 shows one example of a usability problem. The figure shows a voter having difficulties with a machine clearly designed for a much taller user.

To explore the potential for e-participation, a number of pilot projects were set up in the UK. These pilots focused on three primary groups: councilors, council staff, citizens and communities. Councilors were offered e-petitioning services and online surgeries, in effect updating traditional techniques. Councils were provided with information on funding, and with guidance on tactics and strategies for implementing e-democracy in different types of authority. Tools and techniques were also provided to implement programmes and to assess progress against a baseline of national public opinion research. Interfaces with citizens and communities was mainly by websites and web portals offering information and access to forums for discussion and e-petitioning. They also included SMS broadcasting of local government activities, mobile phone games for young people and development of e-democracy icons to make websites more accessible to those with disabilities.

E-government services can enhance opportunities for citizens to debate with each other, to engage with their local services and councils, to access their political representatives and to hold them to account. They can also support councillors in their executive, scrutiny and representative roles (Office of the Deputy Prime Minister 2003). Many countries are investing heavily in e-government initiatives. One aim of such initiatives is to make government more accessible to citizens, but there are many examples where this objective is not being achieved. A survey in 2004 of interactive local council websites in the UK, for instance, found that of 23 websites which offered citizens the capability to carry out transactions with local authorities online, only one achieved a 'AAA' standard for accessibility, (the highest rating according to the International World Wide Web Consortium's Web Accessibility Initiative). Of the remainder, three achieved a single 'A' rating and the other 19 websites were deemed not to meet the W3 minimum accessibility criteria (Socitm 2004).

For new technologies to succeed in promoting democracy, serving the democratic process, and in avoiding 'disenfranchisement by design' (King Roth 1998), it is crucial that citizens are engaged in the planning and design of all aspects of e-voting and e-government. Although there is recognition of this principle, it is not necessarily being effectively applied in

practice. While local authorities in the UK have been consulted by Government about the development of e-government strategies and systems, there is little evidence of systematic or widespread participation of other stakeholders, particularly citizens. This demonstrates the gap between UK Government aspirations for improving participation and social inclusion, and the activities which are actually taking place.

## **3.2 The Benefits of Citizen Engagement**

The benefits of actively engaging citizens in designing the world around them are numerous and diverse in nature. This section reviews the wide ranging, and sometimes unplanned, benefits which derive from engaging citizens in different ways and in different roles in a variety of projects and initiatives. This includes emerging e-government and e-commerce applications as well as an array of products. Although emphasis will be placed in this book upon electronic systems and services, the benefits also apply to other domains such as product design and building design, where there is an equally strong case for developing products and facilities which are accessible to all and which meet the real needs of consumers and users.

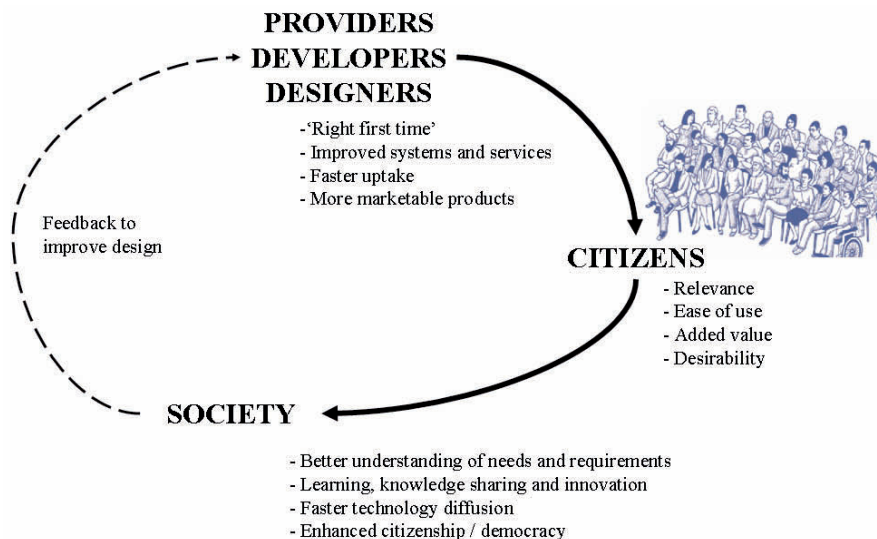
### **3.2.1 Better Understanding of Needs and Requirements**

From the citizens' perspective, the advantages of having a voice in shaping their environment and the nature of services and products can be profound and far-reaching. The experience of participation offers opportunities for individuals to articulate their hopes, fears, aspirations, problems and frustrations with their on-going life experiences. These reported perceptions, real life experiences and goals of individual stakeholders in society are often important and sometimes fundamental to the proper specification and verification of design or process requirements to be met by ICTs. Improved and validated requirements specifications lead to better design. At a later stage in the design lifecycle, resultant design prototypes, and simulations can be tested with relevant user groups, generating early feedback on citizen-consumer responses. Thus a significant benefit of citizen engagement is its impact on the design of the environment in which we live, on the manufactured products and on the raft of conventional and e-services we use to conduct our lives in the Information Society.

Feedback gained before a system is built can be used to make improvements which would be impossible or extremely expensive if flaws were to be discovered at a later stage of the design. For citizens/consumers there

are the evident benefits associated with the outcomes of improved design. These advantages might include, for example, a better match between the citizen's needs and the services provided, improved usability, reliability and security.

For designers, developers and providers a major benefit of citizen engagement is that it provides them with insights and a sound and extensive knowledge base of citizen-consumer intelligence. Entering into genuine dialogue with citizens reveals the diverse objectives, aspirations and needs of different groups in society. This is valuable since most people find it difficult to imagine the possibilities outside their own experiences. Where there is a significant gap in understanding, developers tend to create products based on their own interpretation of the needs of others, thus often generating a solution which is less than satisfactory (Eisma et al. 2003).



**Fig. 3.4.** Designing for a better society.

Eisma et al. (2003) give an instructive example of what can be discovered through engaging with citizens: “we talked to a woman in her late sixties who had had a stroke which resulted in some functional impairment. We discussed her use of her mobile phone (Phillips C12 Savvy) and then showed her a more modern, smaller one (Motorola v66). Contrary to our preconceptions (that she would prefer her existing phone with its larger buttons) she did not comment on the size of the buttons, instead she remarked that she liked a small phone which would fit in her pocket, as she could not use a handbag (it slides down her paralyzed shoulder)”.

As Eisma et al. note, this insight challenges preconceptions about the kind of mobile phone which would be most appropriate for an older user with disabilities. The generic assumption that older people prefer larger control devices, like many other assumptions made about the design requirements of older people, requires validation with the users themselves.

### **3.2.2 Learning, Knowledge Sharing and Innovation**

A well-documented and detailed account of how effective communities of practice evolved in Xerox from informal storytelling among technical staff provides rich evidence of the value of engagement (Seely Brown and Duguid 2000). The report details the history from the 1980s when technicians from Xerox responsible for the repair of photocopiers and printers were trained using traditional ‘chalk and talk’ methods. Many of the repairers preferred their own ways of learning including the use of ‘storytelling’ among their peers, i.e. informal verbal exchanges based on real life experiences with different machines at different customer sites, to share their knowledge of rectifying different faults arising with the copiers and printers.

Although initially seen as time-wasting and potentially damaging by some in the management echelons of the company, the process of storytelling was eventually recognised to be an excellent method of promoting learning, knowledge sharing and knowledge capture. The challenge for the company was therefore to find a way to capture these stories, verify their validity, record them and then make the resultant learning and training material accessible to new employees. This was achieved by the active involvement of technical staff in developing a system to capture their ideas and experiences by using two-way radios. This enabled all technicians to ‘listen in’ and help any colleague who was struggling with a particular problem. A newer technician could listen to these conversations and pick up tips and techniques that enabled them to become better repairers. The system was such a success that the stories were used to develop new training material for other technicians.

The technicians and employers improved the system by co-designing and developing “*Eureka*”, a web-based system that enabled their ideas and stories to be validated and recorded in a way that would be readily understood by most of the target group. This was achieved by vetting ideas and stories through a peer review process using the (*Eureka*) web-based system to create and store examples of good practice in copier and printer repair. Widespread use and enthusiasm for the system has brought substantial financial benefits for the company. The system is reported to have saved

Xerox around \$100 million dollars a year, and improved the learning curve of the technicians by 300%. Another example is given in Hepsø and Botnevik (2002) who describe the effect that storytelling and communities of practice have had in improving crane operations on North Sea oil platforms owned by Statoil – the Norwegian State Oil Company.

Considerable learning often takes place in the process of engagement itself and the citizens involved become more informed as users/consumers of ICT products, systems and services. As a consequence of this learning, knowledge of the technological possibilities grows. The importance of this for improving confidence and enabling participation has been highlighted by Eisma et al. (2003). In their research they concluded that “*older people are sometimes too much in awe of the technical knowledge of the developers, and it is important to make them aware of their (own) expertise, and how valuable their contribution is.*” With this awareness and confidence grows the capacity and interest of stakeholders to explore and evaluate alternative options – and to suggest new options for consideration, or even quite new directions to explore.

This capability can be seen in a number of examples of older people being introduced to new technology. Inglis et al. (2002) after passing PDAs round to older people as part of a user-centred design process for memory aids, commented on the responsiveness the participants showed to the new technology. They also reported that younger, technically-aware users were able to ask for functionality, unlike the older generation which had experienced less exposure to developments in technology and were therefore unaware of the possibilities. This underlines the need to spend time and effort transferring knowledge to citizens to build capacity which will enable them to contribute to the design process (Inglis et al. 2002).

Eisma recalls talking to an older woman in one of the research focus groups used in their research. The elderly woman reacted to the description of every project very positively, wanting to get involved. When Eisma told her the methods they would be using were focus groups, hands on workshops, questionnaires, interviews, etc, the elderly woman responded: “*yes, an exchange of information... I have the experience of being an older person I can share with you and you have just told me about so many things I have never thought of before... we can both help one another*”. After an hour, this die-hard ‘no computers for me’ told Eisma that she was going to the ‘learning flat’ (an apartment equipped with ICTs) the next week to start using the computers “*as I would need it for using the messaging type thing you were talking about*”. Eisma said to her “*so, you’re now interested?*” Her friend said “*that’s because you’ve given her a reason*” (to start using a computer) (Eisma et al. 2003).

### 3.2.3 Faster Technology Diffusion

From the perspective of many providers of electronic services the return on investment in service delivery requires extensive uptake of the services by the public. Whether the providers are local councils implementing e-government or are e-commerce companies vying for business, they have in common the commercial imperative to attract citizens/consumers, sustain their interest in using the service and win repeat business. The critical success factors for achieving this citizen/customer commitment and loyalty are well-researched (Martin 1992; Skellett 1995; McIlroy and Barnett 2000; Kotorov 2003; Uncles et al. 2003; Lundkvist and Yakhlef 2004) and include such factors as perceived relevance of the services, accessibility, usability, good value for money, clear benefits and value from using the service. To meet each of these criteria successfully demands good knowledge and understanding of the needs of prospective consumers in society. Direct engagement with relevant individuals or groups is the richest, most revealing and valid source of knowledge about them. The compelling benefits for providers of engaging with citizens thus derive from understanding the interests, needs, wants, priorities and preferences of its targeted group and then providing services tailored to their characteristics. As with product designers, the economic benefit of 'getting it right first time' can make the crucial difference between a company prospering or failing. When services are well-matched to the life situation of their intended users the reliability of projections of take-up of new services is greatly increased. Enhanced predictive capabilities offer powerful commercial advantage in a highly competitive marketplace and therefore are a further and significant benefit of citizen engagement.

### 3.2.4 Enhanced Citizenship

There is a growing recognition on the part of many within the developed democracies that new relationships between citizens and institutions of governance must emerge if a crisis of democratic legitimacy and accountability is to be averted (Coleman and Gotze 2002). Increasing the participation and engagement of citizens is perceived to be a key feature of such new relationships, with benefits both for citizens themselves and for governments and their agencies. For example, in the United States, an organisation called America Speaks facilitates engagement processes including what it calls the "*21<sup>st</sup> Century Town Meeting*". Its justification for these is that "*the growing power of special interests in all levels of governance has eroded a tradition of collaboration between decision makers and citizens.*"

*Barraged by organised issue campaigns and professional lobbyists, decision makers find it difficult to gauge how ordinary citizens feel about issues. In turn, “general interests” citizens feel disregarded and less inclined to participate in public life” (America Speaks n.d.).*

The Canadian government has embraced citizen engagement as a means of achieving its goals of supporting open, honest, transparent and accountable government, by enabling citizens to participate in the policy development and decision-making processes. The Queensland government, in Australia, has recognised the value of engaging community members in decision-making processes, stating that “*engagement allows government to tap wider perspectives, sources of information, and potential solutions to improve decisions and services. It also provides the basis for productive relationships, improved dialogue and deliberation, and ultimately, better democracy*” (Queensland Government: Department of Communities 2004). It is suggested that participation “*makes people responsible for the decision-making process and their behaviour*”, which has a significant effect on ways they use their resources (UNESCAP n.d.).

In the UK, the Office of the Deputy Prime Minister and the Home Office produced in 2005 a consultation document entitled ‘Citizen Engagement and Public Services: Why Neighbourhoods Matter’. The paper begins by explaining the relationship between public services and citizen engagement as follows: “*by enabling communities to help shape decisions on policies and services, we will support civil renewal and strengthen the legitimacy of the institutions of government. The more effectively communities are engaged in shaping services, the more likely it is that quality will be delivered. The more that communities understand the issues and limitations around decisions on services, the more realistic and sustainable those decisions are likely to be. Indeed, reform and modernization of the public services will not be accepted as legitimate unless it is based on citizens’ support*” (ODPM 2005).

Another area in which citizen engagement has been acknowledged as crucial in the UK is in the development of the National Health Service. An initiative entitled ‘Shifting the Balance of Power within the NHS’ had the aim of promoting public participation in the control of the NHS. This initiative sought to move toward a model of increased partnership with objectives of creating partnerships with local communities, assessing the needs of patients and the public, developing the required resources to involve these groups, and ultimately to empower the patients by allowing them to participate in how services are designed, developed and directed (UK Department of Health 2001).

Involvement of a diverse range of stakeholders in a community has been identified as a key mechanism for public engagement in the United States.

Here the aim is that the community should be represented by all voices in order to reduce misunderstandings and a lack of trust on community issues. Public engagement discussions have enabled people to weigh up a variety of ideas and listen to each other in an attempt to build common understanding in their communities. Examples include: the San Jose Unified School District, where a new Department of Public Engagement was created with the specific purpose of organising community forums and other outreach. Other examples have led to more subtle, but equally significant, outcomes such as new trust and openness among different sectors of the community. For example, in Hattiesburg, Mississippi, a community forum on expectations for students led to new alliances between education advocates and clergy, which in turn proved important in planning a forum on race and education (Public Agenda 2003).

Moreover, from a democratic perspective, it is beneficial to have more citizens who understand potential choices and are informed about emerging opportunities and threats in the Information Society. Crises of public confidence in the way in which the UK Government handled BSE (Bovine Spongiform Encephalopathy, or ‘mad cow disease’) and anxieties about scientific developments such as GM (genetically modified) crops, led to the production of a new code of practice for scientific advisory committees in the UK. This document stressed the need for a more inclusive approach. A report from the House of Lords on ‘science and society’ stated that “*today’s public expects not merely to know what is going on, but to be consulted; science is beginning to see the wisdom of this, and to move ‘out of the laboratory and into the community’ ...to engage in dialogue aimed at mutual understanding*” (Irwin 2001).

### **3.2.5 Sustainability**

Information and communication technologies have much to offer community groups and not-for-profit organisations. Yet, as Merkel et al. (2005) point out, few non-profit organisations are likely to have paid IT staff; most rely on volunteers with widely different skills and who may only work with a group for a limited period of time. This situation creates a number of barriers to the effective use of technology. The people involved may not have the necessary skills to select and implement appropriate new technologies to help their organisation and to achieve their objectives. Alternatively, the organisation may have access to people with these skills who then move on, or who are only available part-time, with the consequence that there may not be skilled individuals available to use or maintain the system. The issue of sustainability under such circumstances has



become a cause for concern. Merkel et al. suggest that “*sustainability in this context involves finding ways to support groups as they learn about technology, as they identify ways that technology can be used to address organizational and community level problems, and as they develop plans to take on projects involving technology*”. From experience working with community groups to promote IT adoption, they propose that the key to sustainability is to engage and empower the community members themselves so that they fully ‘own’ and take control of the planning, development, implementation and maintenance of ICTs (Merkel et al. 2005).

### 3.3 Conclusions

In conclusion, the principal benefits of citizen engagement in civic society are significant and far-reaching. Firstly, the systems, services and products which result from active and informed citizen engagement can succeed in meeting the real needs of citizens/users for an enhanced quality of life. Secondly, the increased uptake of new technologies and faster diffusion leads to economic benefits to providers and the possibilities of further enrichment in provision for the public. Such engagement can also be expected to improve the effectiveness and acceptability of information systems in the public sector. It may also help individuals to become active in their communities, thereby enhancing citizenship and the democratic process.

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