

# The Electronic Big Society: A Blueprint for Engaged and Empowered Internet Civic Communities

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## ABSTRACT

In this paper we will set out a programme to create, in the UK, an Electronic Big Society that would promote public involvement and engagement in a whole range of civic and public activities. This Electronic Big Society would comprise a range of public data-sharing communities associated with but not operated by the key Public Services or Agencies in Social Care, Health, Education and Local Government. We will set out the vision of an Electronic Big Society, discuss the Internet technologies that have made its construction feasible, give examples of Internet Big Society communities and outline a programme of government and community actions that would make its creation possible.

## Introduction

Of late there has been considerable discussion concerning mechanisms designed to enhance civic activity and help people achieve greater fulfillment in their personal lives. Chief among these suggestions has been the idea of a Big Society: the proposal that people should, voluntarily, become engaged in a range of public activities, both for their own satisfaction and for the more effective or efficient delivery of these public services. Related ideas include localism, the concept that decisions affecting communities should be made, as much as possible, by the people or communities these decisions effect, and mutualism, the idea that the public or private provision of services could be replaced by mutual associations of interested parties. Related economic and social philosophies also gaining attention are “Nudges”: and the idea that people and society should focus on happiness or well-being as an alternative to wealth or GDP as the sole measure of personal or national attainment.

Whatever one’s personal views on the validity of these ideas we believe that they do have merit and that they could have a valid and natural realisation through the development of a variety of Internet services and

communities. These communities would collectively engage and empower citizens in a wide range of civic and public activities. The development and co-ordinated deployment of these services would provide a national framework in which the visions of the Big Society and related proposals could be achieved in an eminently practical but far-reaching manner through the only medium capable of providing the required level of access and involvement – the Internet.

## Internet Community Technologies

Several recent Internet-related technological developments have made the creation of a national Electronic Big Society not only feasible but also natural. In this paper we will illustrate the use of these facilities to develop public Internet communities in the areas of telecare for the elderly, healthcare, schools and local and hyper-local communities.

Cloud computing makes the provision of large-scale, reliable and personalised Internet services, both computing and data storage, available to people and institutions that previously had no access to such large-scale facilities. The recent TSB-funded PEERSONA project developed a Cloud-based infrastructure that provides for the provision of personal in-network Cloud services. Policies can be attached to the use of data by these services that, in turn, enables the specification of role-based Internet data sharing communities such as those envisaged in the Electronic Big Society.

## Telecare for the Elderly

In a follow-on TSB project, TotalCare, the PEEERSONA framework was used to develop telecare and community mechanisms to support the care of elderly or infirm living at home. In-home sensor data is shared securely between the communities collectively responsible for the support and care of the elderly person: doctors, social workers the carer and the carer’s family. Simple-to-use video communication facilities have also been developed to provide continuously available contact between the elderly

patient and his/her carers or associates. The TotalCare infrastructure and support has recently been successfully trialed in a community of elderly and infirm living singly at home,

The sharing of this data between all the communities responsible for the care of the elderly will, we feel, dramatically improve the quality of care available and aid co-ordination between the agencies and individuals responsible for this care. It will also significantly reduce the physical and mental burden on the carer, a key concern in developing sustainable policies for the care of the elderly. This sharing of data and responsibility between the various parties, professional and civic, having collective responsibility for the care of the elderly person is, already, a good example of the Big Society in action. However, we could go further. As this data is available it opens up the intriguing possibility that it could be made accessible, in a secure and privacy preserving manner, on the open Internet to anyone who, altruistically, is prepared to play a role in helping support or befriend the elderly person. Individuals, whether of the same age group or younger, could befriend the patient, communicating and generally supporting him or her – an even stronger realisation of the Big Society idea.

## Healthcare

As many people have recognised Internet community and data sharing methods have much to offer for the development of effective long-term healthcare support. One of the major health problems of the developed countries is the prevalence of chronic or long-term conditions such as diabetes, hypertension and obesity. Maintenance of the regimes necessary to manage these conditions in isolation is difficult and they are also not well suited to periodic short meetings with healthcare professionals. However, the Internet provides the opportunity to develop condition-specific communities where patients can share both personal experiences of their condition and condition-specific data. The growing availability of Internet-connected monitors and measuring devices such as blood glucose and blood pressure monitors and Internet-connected scales, means that patients can monitor their condition and vital signs almost continuously. This data can then be the subject of sophisticated analysis and trend detection techniques and these results shared with others and the healthcare professionals, enhancing not only the individuals' quality of life but also the efficiency of the "official" NHS service. A prototype diabetes community framework has recently been developed in the DMSNet project

## Schools

In education we see the same opportunities to develop both local and national communities. For example, schools have

their identified local communities: pupils who attend the school, their parents and teachers, and national communities: all pupils of a particular age group or studying the same subject. These local communities could be used to enhance the pupil-teacher-parent partnerships most good schools already support. The national associations could be used to spread best practice and information across the schools' community. For example, as much (e-)Science data: HEP particle collider data, genome sequences, astronomical images etc., is available on the Internet this could provide the basis for the development of computer-aided practical work that would have the benefit of being conducted in a real scientific context using Apps developed by a particular school's pupils, teachers or parents but shared across the relevant national communities.

These ideas could also be applied, of course, in Further and Higher Education with the development of local campus or subject communities coupled with the spreading of best practice and shared experience through national student or subject associations.

## Local Authorities

Given the localism agenda we cannot think of a much clearer example of the power of Internet communities to realise these aspirations. Local communities could be constituents of a particular council, ward or street as appropriate, and local matters concerning people, planning proposals, parking, waste collection arrangements etc., could be aired, discussed and decided in electronic fora as appropriate.

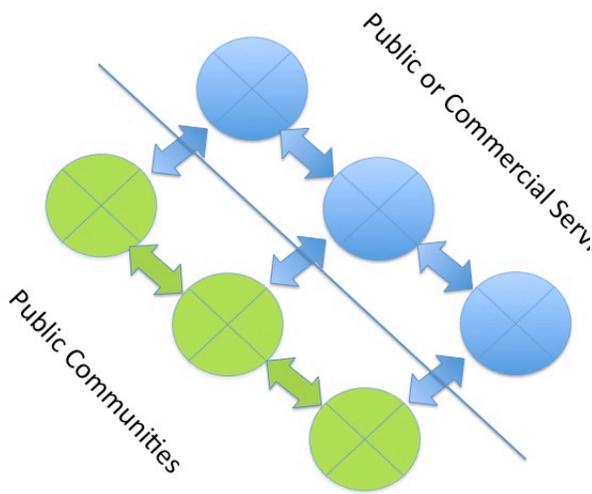
## Realising the Electronic Big Society

We envisage the Electronic Big Society being realised, in the UK, as a set of overlapping Internet communities or mutual associations.

The UK is fortunate, as are many other European countries, in having a range of well-established public services and public bodies. These national public services would provide the skeleton on which the Electronic Big Society could be developed. Each element of these public services has their own naturally defined constituency: for example GP practices their patients, schools their pupils and parents and local councils their constituents. These civic communities and their mutual interests and activities would form the starting point for the creation of the Electronic Big Society. Citizens would be given an electronic single sign on identity and participate in as many communities and activities as they so wish. Full identity disclosure would not be necessary for all services but certification of necessary attributes, e.g. residence in a particular locale, would be a necessary condition for participation in relevant services. The citizen side of the Electronic Big Society would

comprise open democratic citizen-driven communities and may evolve differently in different communities. *The Electronic Big Society* would then be just the union of all these communities and could, potentially, involve a high proportion of the UK population.

As discussed above there will be vertical associations between citizen communities and their partner public agencies and horizontal associations between communities, both civil and public, with shared interests. This situation is illustrated in Figure 1. For example in healthcare the vertical association would be between a GP practice and its patients and the horizontal associations would be between patients with shared chronic conditions and between collaborating GP practices. In education the vertical associations would be between schools and their pupils and parents and the horizontal associations between all school groups in a particular subject.



**Figure 1** Overlapping and Collaborating Big Society Communities

The Electronic Big Society would be a national UK framework. The government would announce and promote this as a national high-profile programme and the communities themselves, in association with charities or third party providers and Web social enterprise platform developers, would build and operate the communities. The government would define standards and interfaces and would encourage (or require) its agencies: GP practices, hospitals, social services, schools, local authorities etc., to provide appropriate gateways for the communities to interact effectively with these agencies. The recent development of a single API or gateway to public service data age would very much assist this process.

Within this framework related ideas of “nudges” and happiness measurement and attainment could be realised via the development of Internet personal support and planning services that would allow individuals to set goals, say in the areas of work, domestic and social activities, health and energy use, and be guided towards attainment of these goals by the provisions of reliable outcome data and by fine-grained incentives or reinforcements, integrated with their personal planning utilities.

The successful creation and operation of a national Electronic Big Society would have much to offer the UK and its Digital economy agenda. It would provide an exciting realisation of the ideas inherent in the Big Society vision – volunteering, altruism, localism and mutuality – through the only medium capable of providing the required level of access and involvement, the Internet. It would provide strong practical incentives for UK citizens to adopt the Internet, particularly amongst groups that are currently underrepresented, for example, the elderly and the disabled. It would be showcase for the UK of next-generation Internet facilities and services and would enable significant increases to be made in the productivity and effectiveness of the public agencies associated with these communities.