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Community Portals – The UK Experience

A False Dawn Over the Field of Dreams?

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Abstract

This paper considers the attributes of community portals; questions the sustainability of such portals, and suggests a likely direction that portal evolution may take. The context is that of UK local government portals, over the period from 1999-2004.Research has been undertaken to investigate the extent to which locally deployed UK community portals are capable of supporting citizen services interactive with local government departments. The study finds that few existing portals enable on-line access to back office systems thus enabling self-service interactivity for citizens. Also, along with problems in joining-up technology there are also problems with joining-up people. Current activities are analogous with a False Dawn for Community Portal development, due to gaps and current inadequacies in portal capability. This "Field of Dreams" future suggests an alignment between the emerging development in Enterprise Portals in the commercial sector; Grid Computing emanating from the eScience community; and the need for Community/Civic Portals in the Public Sector. The paper concludes that sustainable development will only be achieved when joined-up people and joined-up technology become a reality. Suggests are given of solutions for remedying the present situation which could result in a joining-up of technology systems along with a joining-up of people.

Introduction

This paper focuses on specific problems identified within a wider review of Community Portals deployed by Local Government in the UK. In two concurrent strands of *People* and *Technology* issues, inadequacies are discussed and potential solutions explained.

Portals are evolving as one-stop information service gateways, with increased interactivity enabling on-line service channel transactions. A Portal is displayed to the user as a desktop that enables presentation of information and interactive services from multiple sources, and hides from the user the complex interactions required to search and discover resources from different and disparate sources. Complexity in searching multiple and heterogeneous resource bases is kept invisible to the user and the aggregated results are presented as a unified display.

Many definitions of Community Portals exist, e.g. '*A Community Portal is a web portal tailored to cater for the specific needs of a community. This could be any type of community, such as a business community, or a local community'*.[1] It remains a telling indictment of Community Portal development in the UK in 2005 that existing definitions are relatively limited, deterministic, and lacking in precision. Definitions exist for Enterprise Portals in the commercial sector (Gartner, 2000), with an

[1] *http://www.chester.gov.uk/chester-portal/main_portal_04_about.htm*

emphasis on strong linkage between front-end and back-office portal systems. Similarly, definitions exist for academic portals (JISC, 2004), and progress is being made towards a typology for portals (Miller, 2003). In the academic portal domain the requirements emphasise Resource Discovery, and Content Aggregation.

Within this paper the term Community Portal is used generically to describe the two distinctive types of Community and Civic Portals. The categorisation of Community Portal is now viewed as those portal instances developed by activists (i.e. bottom-up driven) within a community network, owned and operated by a non-governmental organisation (typically a sub-regional geographic neighbourhood group). The term Civic Portal then refers to government sponsored (top-down driven) portals (national, regional, or local government), within the scope of what is termed a civic network. Accepting the semantic differences above, the term Community Portal is used here to capture' Community' and 'Civic' Portals and including the different functionalities (especially in the integration of office applications). Having identified the two different classes it is argued that both types currently demonstrate the same lack of interactivity and therefore holistically they possess similar needs for a whole system consideration of *People* and *Technology* issues.

A problem for Community/Civic Portals, (deployed in the context of UK political local authorities), when benchmarked against the functionality of Enterprise Portals, is that few community portals possess the capability for transactional service through integrated back office systems. This lack of interactive service channel functionality is a serious drawback that is limiting the effectiveness of the first generation of Community/Civic Portals. The reality is that existing Community Portal development in the UK would generally be categorised with advanced website functionality, rather than being closely analogous to the characteristics of an Enterprise Portal (Oglethorpe, 2003) or an academic Institutional Portal (UCISA, 2003).

Community Networks are a longstanding form of social organisation that have been transformed by the emergence of 'new media' (Flew, 2002, p. 24), enabling on-line communication and discovery/harvesting of information. Garton (1997) asserts that "when computer networks link people as well as machines, they become social networks", generally referred to as Community Networks. Since the inception of the internet, Community Portals have been increasingly deployed to support citizen services and virtual community networking.

Virtual communities are depicted by Rheingold (1994, 2000) as social groupings facilitated by Community Networking and supported by Community Portals (Steinmueller, 2002). They are said to hold the possibility of a "reinvigorated sense of community-building and citizen participation in public life" (Flew, 2002, p77), and community portals are seen to be an enabler of the interaction of citizens with government (Curthoys and Crabtree, 2003). Whilst many community web sites call themselves portals their under-developed functionality hampers their effectiveness and limits their impact on the delivery of interactive services for citizens.

In many cases community network and portal development projects have been viewed as a wholly technical endeavour (Romm and Taylor, 2000). However, it is increasingly recognised that the process of establishing and sustaining a Community Portal contains many sophisticated issues that shift attention away from a technology deterministic approach (Day, 2002).

People and Technology

The components of a Community Network include distributed and disparate on-line systems, giving access to information through a gateway portal, but the network is more than an aggregation of technology elements and infrastructure. Technology on its own is not a panacea for citizen access to government services and citizen-citizen interactions. Mumford (2003) explains that 'technology is only one piece of a very complex puzzle', and in this context technology is not the only driver. The need to understand portal requirements from a citizen user perspective is essential. The 'people element', especially as used by local champions, is a critically important factor in the development, implementation, adoption, and sustainability of community networks, and should therefore be a prime driver of Community Portal development. These arguments preclude an analysis of Community Portals based solely on technological determinism, but until recently there has been a relative lack of academic research that straddles the domains of Telematics and Social Systems. In particular, there has been a paucity of evaluation of the technical architecture of Community Portals. According to Bannon & Griffin (2001, p 40) commenting on Community Network projects,

> 'while there is a wealth of anecdotal material as to the successes and failures of such experiments, there is, unfortunately, a lack of objective evaluation studies'.
> Bannon & Griffin, 2001.

Consideration of Community Portals necessarily takes account of the three strands of Social, Technical, and Information systems that are inexorably intertwined, giving linkage between People and Technology in a Socio-Technological system. (see fig.1).

The development of Information Systems involves a complex interaction between the user and the technology (Buscher and Mogensen, 1997) and this is the case with Community Portals. Community Network developers and content providers range from a single person to large teams that are often dispersed and with an eclectic mix of backgrounds – some paid, others unpaid volunteers – some working alone, others in self-forming groups. The management of relationships and development methodologies in dispersed teams (including the effects of differing content requirements and support needs) will often result in conflict and contention. Such development becomes increasingly problematic when extended across wider geographic communities (Cawood and Simpson, 2000), particularly if technical and content development teams are faced with a need to meet the disparate requirements of users from different cultural backgrounds. It is a challenge is to retain the citizen in the heart of the portal environment; through self-service access to government departments (Edwards, 2004).

A False Dawn

A significant political driver for local government portal development is the UK e-Government deadline of mid-2005 for electronic service delivery. This deadline is fast approaching and further development is needed to meet the target. Progress statistics for Electronic Service Delivery report 74% (489 out of 664) of services e-enabled (eGovMonitor, July 2004). To investigate the characteristics and salient features of UK Government Portals, a research survey was undertaken. The UK Portal Research survey, conducted in 2002 (Musgrave, 2004), identified 'gaps' in portal functionality that limit effective community engagement. Separate evidence from surveys undertaken by the Society of IT Managers (SOCITM) in 2001, 2002, and 2003 corroborates the UK Portal Survey 2002 findings that the existing local/regional government web-site portals are lacking in functionality (SOCITM, 2002, 2003, 2004); in particular interactivity between front-office web presence, and back-office database services.

The majority (98% in 2002) of Community Portals hosted in the UK currently are found to lack interactive service capability, and evidence indicates that the complexity of development of integrated portal services is beyond the resources and capability of many local and regional government authorities (Musgrave, 2004). A technology barrier is found to exist for many local government departments currently engaged in community portal development.

The in-depth surveys by SOCITM are based on observation and analysis of web-sites and portals of each of the 467 local authorities in the UK, and have been undertaken in each of the past three years giving a profile of change. Survey results placed each of the sites in one of four categories:

- *Promotional:* sites providing information but little interaction.
- *Content:* sites providing more sophisticated information and some interaction.
- *Content Plus:* sites providing very useful content and more advanced on-line self-service features.
- *Transactional:* sites that are accessible, complete, thoughtful, and coherent; with more than one type of on-line interaction (e.g. payment, application, consultation, bookings).

The SOCITM 2003 survey results show only 2% (10 sites) have reached 'Transactional' status, (1% - 4 sites – in 2001). The low percentage of 'Transactional' sites is mainly attributable to difficulties in systems integration and lack of middleware development capability. Findings of the UK Portal Survey 2002 (Musgrave, 2004) indicate that this is mainly due to lack of technical expertise (and staff) at local government levels.

Overall, the research identifies significant gaps in portal delivered services. Most local / regional government sites feature 'brochure' style information that categorises them as '*Content*' sites (49% of total sites surveyed), but lacking in portal functionality.

Problems in connecting the front-office web presentation Portal to the existing back-office database systems are a significant factor hindering Community Portal development. Inability to access databases via the portal front-end denies citizens the self-service interactivity that could result in the transformative use of on-line technology. The issues that prevent the front / back office systems integration are mainly attributable to disparate data formats and lack of common standards by system vendors. The result is that many services that claim to be Community Portals possess functionality that mainly would be categorised as advanced web-site features, rather than the transactional capability and facilities that are typified by commercial Enterprise Portal products. Compromise solutions adopted nowadays use an intermediate system to handle the data conversion for front-back office system integration. Based on Customer Relationship Management (CRM) systems developed in the commercial sector (and re-named as Citizen Relationship Management systems), these large software applications enable existing back-office databases to be accessed by users for on-line transactions. Such integration will be simplified by the adoption of common standards and the use of Web Services (Barry, 2003) for sharing data between different systems. The fundamental need for systems integration will be a continuing attribute of second-generation portal products.

People and Technology Issues

The problem of *technology* resources is compounded by the *people* issues, and in the UK attributable to cultural difference between Central Government and Local Government departments. Interview evidence with local government portal proponents revealed gaps in understanding, and lack of collaboration, between officers in Local and Central Government services. These findings are symptomatic of a cultural divide between Local and Central Government departments. The culture of non-cooperation across UK government is seen as the most substantial obstacle to sharing services, more so than legal or IT issues (Kablenet, 2004a).

Examples exist where competing interests between Central and Local government departments skew the capability of systems and polarise individual service providers and service consumers.

A recent warning regarding the new on-line Student Loans system of the Department of Education and Skills (DfeS) known as 'Protocol' typifies the need for closer liaison and collaborative work on project planning, development and implementation. Wandsworth Borough Council (UK) sent a written complaint to the DfeS (eGov monitor, 28 June 2004), claiming that the software has been "slow, unreliable, buggy, and at times totally inaccessible". The DfeS countered that "the system has been meticulously planned and tested, and suggests that the problems are largely due to the way councils' IT networks are configured". Anecdotal information from DfeS IT personnel found no evidence that Councils' were involved in planning system specifications, or that user testing was conducted with a range of councils and in a systematic way.

Similarly, with the introduction of the new Criminal Justice IT (CJIT) system in 2004; although the UK Home Office proclaimed the extensive capability of the CJIT (PITCOM, 2004), other observers (Suffolk, 2004) explain that obstacles are not just in the form of integrating the IT systems of a large number of organisations, although this provides a significant challenge in itself. An underlying problem is the fact that the UK does not have a single criminal justice system. There are a plethora of police forces, agencies, legal bodies, and processes, each with their own demands. Competing factors mean that an efficiency measure for one body could be a short-coming or even a legal violation for another (Kablenet, 2004). The large number of conflicting demands makes it unlikely that a unified set of business processes and a single IT framework can be achieved in the near future. The existence and use of different data-sets, with requirements for secure authentication, and data-protection impinge on arguments for adaptation of local systems to operate within a national portal framework.

As in the previous example, this highlights the fact that tensions are created by different organisational cultures. Local priorities often crowd out a contribution to national efforts, and in this example the demands of the legal system combine as resistors to effective implementation. Gaved (2004) points to Jain's suggestion that there is a divide between "…the envisioners who dream about what technology can do, the technologists who understand what technology can do, the funders who have the money but do not necessarily know how best to spend it, and the implementers in the field

who know what solutions are needed." (Jain, 2003). These traits are evident in UK government portal initiatives and account for many of the difficulties encountered in Community Portal development.

Through these examples it can be seen that *centralisation* of development and support of Community Network services at the national government level would be unsustainable and a *distributed* development is envisaged. To achieve this there is a critically important need for joined-up thinking, planning, and development between Central, Regional, and Local government departments, and cascading to individual officer level. Such joining-up at the *People* level ranges from Politician (eChampion) to Government Officer; Government Officer to Citizen groups; and Citizen – Citizen interactions. A concurrent need is to join-up the *Technology*, giving interoperable systems and modules that easily plug together.

A harmonising factor is the government's commitment to extend the electronic Government Interoperability Framework (eGIF) and the electronic Government Metadata Schema (eGMS). eGIF is already extensive, giving common standards in the different technical areas of the framework, such as extensible mark-up language, metadata and web services, and is constantly being updated (version 6.1 due out Autumn 2004). The extensive nature requires competent people with the right skills for the job. An accreditation programme in eGIF is to be run by the UK National Computing Centre (NCC) (contract awarded May 2004), to certificate people with appropriate levels of competence (Government Computing, 2004).

Research analysis of *People* and *Technology* issues finds a lack of 'joined-up technology', and a further need to 'join-up people'; in particular for systemic linkages between Central and Local government portal developers, or the citizens that the portals serve. The research finds that community portals are difficult to implement, and that software currently available is still in its relative infancy (Musgrave, 2004a). Individual community portals at the UK local authority level are generally found to be insular developments that are not readily transferable or capable of easy replication across government departments.

Fig. 1 show two concurrent strands where problems currently exist in not having joined-up people systems, and not having joined-up technology systems. It is imperative that interactive capability is developed to support transactional service channels, and absence of this functionality leads to a conclusion that this first generation of portals constitutes a '*false dawn'* in community portal development. The requirement for joined-up people, and joined-up technology is postulated to realise the integration '*dream'*, through evolution of a second generation of Portal systems.

The Field of Dreams

As the internet enables the government to publish citizen information quickly, a challenge is to harness the many outputs of different government departments and turn them into consumer-friendly and easily navigable sites. In this context "the government needs to be at least as good as any other sector in communication, and arguably should set new standards". (Phillis, 2004).

Phillis (January, 2004) endorsed the recommendation of the e-Envoy that there should be one Central Government website (a portal), within which the output of the various different departments and agencies can be found.

> The current UK Online portal helps by providing navigation for the maze of government websites, but this falls a long way short of providing a single site for all government services. It is critical that the design of such a site be driven by the needs and perceptions of the users, and that individual departments are only "visible" when this makes sense to the users. Our research suggests that information on local public services is most important to individuals, which would invert the usual pyramid of information offered by departments". (Phillis, January, 2004)

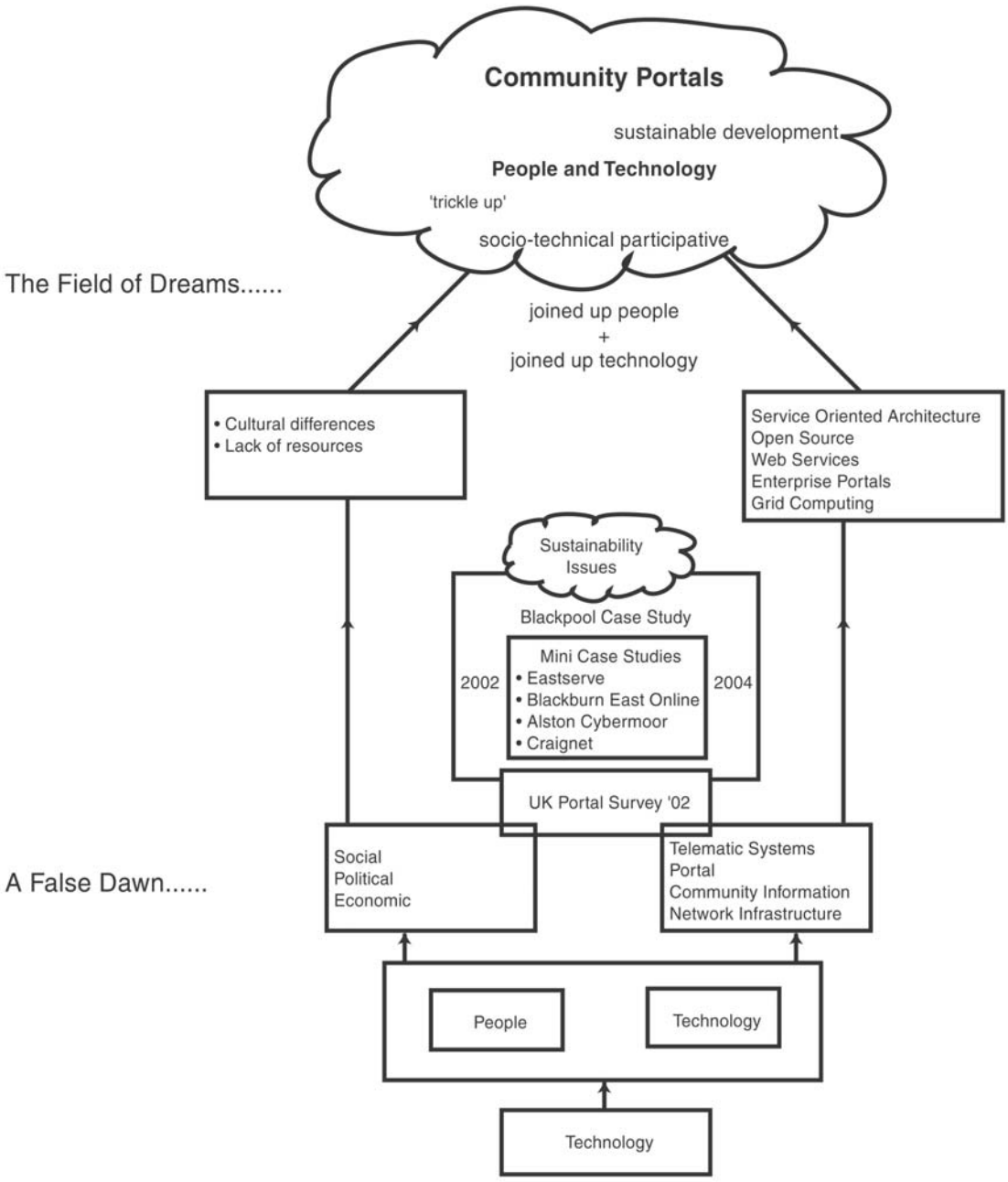

Figure 1

Since the Phillis (2004) report, the UK Online portal (supported by an unsustainable funding stream (New Opportunities Fund (NOF)) has been superseded in May 2004 by Directgov (www.direct.gov.uk). The change to Directgov has been a fundamental shift in approach, with a business structure where Directgov becomes the overarching brand-name for a range of services operated by a distributed network of Intermediary organisations, each of which are operating as 'Customer segmented franchises' (Edwards, 2004). It is claimed by the Office of e-Government that Directgov is "designed around the needs of customers, not the structure of government" (Edwards, 2004). The use of Intermediaries is said to give a more sustainable model aiming towards viable levels of paid services income. (e-Envoy, 2004). (The Office of e-Government replaced the former Office of the e-Envoy in the UK in 2004). In this context the Intermediaries are franchise organisations, with responsibility devolved to them as agents to operate a specific service to agreed service standards on behalf of the UK government.

An issue in this process of electronic service delivery is for the UK government to replace the strategic target of having all services on-line by 2005 with a new set of criteria for success. According

to Kearns (2004) the thinking to do this has already been started within the UK government itself. The Cabinet Office Strategy Unit paper 'Creating Public Value' (Cabinet Office, 2003) gives a framework for assessing the real value of government activity, which can be seen as the elements of a new set of success criteria for e-Government. This framework sets the scene for replacement of the blunt instrument of counting numbers of services that are e-enabled and focuses on the citizen experience of interaction with government services, including consultation with users, identification of services that are valued by people, and subsequent prioritisation of service development.

Cultural differences that exist between Central and Local government departments are creating a gap in understanding, and an absence of collaborative development. The government aims to bridge this gap through improved dialogue between the Office of the Deputy Prime-Minister (ODPM), and the Office of e-Government (OeG) (eGovMonitor, March 2004). Improvement is evident through recent UK initiatives such as the Citizen Relationship Management programme, with its *'Integrated e-Government Delivery Roadmap Framework'* (Devin, 2004). This UK national programme is aimed at saving time and resources through central development of tools, components and best practice standards which may be lost in re-inventing the wheel (www.crmnp.org).

Leicester (2001) argues for a radical change with new models of service delivery and a new model of politics and organisation to match. Outlining a vision for local service delivery based on the concept of the 'Community Portal' he argues that "Local Government should and could be leading this revolution rather than trailing in the wake of Whitehall."

Contiguous with political and organisational changes to improve the *'people'* element, there is a need to improve the *'technology'* through adoption of common standards and common components that simplify interconnectivity of software systems. Since the era when the gramophone didn't easily connect to the wireless, audio-video equipment now readily inter-connect via standard plugs. Similarly with computer hardware components; base units, monitors, printers, scanners and other peripheral items use common standards and protocols for connectivity, enabling equipment of different manufacturers to connect as systems. Applying this analogy to software, it is currently difficult to integrate bespoke back-office database systems with portal front-end websites, but software development is now shifting in the same way with adoption of common *standards*, common *components* and software *objects*. Adoption of 'plug compatible' software, and the use of new elements called Web Services will create the same transformation, enabling connections between systems that although different and disparate, comply to common standards for web service connection.

The use of Web Services for business-to-business transactions is gaining ground in many organisations, and this technology will become the standard by which Portal services will be integrated with different applications (Barry, 2003). This is part of a larger transformation along with a shift to a Service Oriented Architecture (SOA) for systems development. In simple terms SOA is an approach to system development using 'Lego' style building block electronic modules and software components to create complex systems, importantly using common standards for inter-connectivity. The goals of a Service Oriented Architecture using Web Services, are the adoption of common standards (including web services and eXtensible Markup Language (XML)); and the use of common components (in particular Open Source Software). In a service oriented architecture, rather than interconnecting different systems with interfaces at the top Portal/Presentation level, or alternatively integrating data in a single large database at the bottom level, the new way is to expose the middle tier application logic level as a service (Web Service). Information (as messages) is then in a format that can be used (consumed) by other and different applications. (Olivier, 2004).

Enterprise Portals in the commercial sector have been developed with a strong linkage between front-office functions and back-office systems. Software products include Plumtree, HummingBird and SAP as market leaders. A discourse on the classification of Enterprise Portal features and functions is given by Raol et al (2003).

The global e-Science community has developed Grid Computing for sharing large data resources on-line. Research and development in the area of Grid Computing has significant potential application in the development of Enterprise Portals in the commercial sector, and Community Portals in the Public Sector. Applying research and development output products from Grid Computing will accelerate the evolution of a second generation of Enterprise Portal, and Community Portal functionality. The Grid is the computing and data management infrastructure that will provide the electronic underpinning for a global society in business, government, research, science and entertainment (Hey et al, 2003). The technology of Grid Computing components, developed to support the distributed computing paradigm, now gives solutions to remedy problems of connectivity

between distributed information sources and data repositories. The same Grid components are relevant to the future development of second generation Community Portals.

The evolution of Enterprise Portals through use of Grid concepts utilises technology that was developed to enable resource sharing with scientific collaborative communities working across the globe. The same concepts are now relevant as a solution to the challenges relating to the construction of reliable, scalable, and secure distributed systems in the commercial sector. Today's Enterprise Portals will be transformed from separate computer resource islands to integrated, multi-tiered, distributed systems, where service components can be integrated dynamically and flexibly, both within and across various organisational boundaries (Foster et al, 2003). Extending this argument, Service Providers are now adopting Grid Architecture techniques to transform standard e-Business processes, such as the creation of a web portal presence, and providing this to multiple customers as an e-Utility. Exploiting the economies of scale that are enabled by eUtility structures is a further decomposition and distribution of enterprise computing functions. Grid development is now being used to design a new generation of Enterprise systems, and this will cascade into the Community Portal arena.

The UK Government approach to common standards is expressed through the eGovernment Interoperability Framework (eGIF). This is applied to the national portal Directgov where a distributed architecture connects databases, repositories, and systems for interactive on-line service transactions hosted by disparate 'intermediary' franchise organisations, using common standards and components. The national Directgov portal environment includes portlets that can be embedded into local authority portal gateways as the user presentation interface. This approach will enable a blend of local content, backed by access to centrally hosted services. The user 'view' can still retain the look and feel of being in a local environment, whilst accessing advanced central service functions. Citizen-centric self-service interactions would thus be achievable, in a way that may otherwise be undeliverable.

Joined-up People and Joined-up Technology

Misquoting Donne (Donne, 1631) 'No Portal is an Island' - the argument for adoption of common standards and use of plug-compatible common components is to give connection between 'islands of technology'. Research and development to produce, expose, and curate open source software objects, (to be lodged in a repository), will support developers of local community portals with ready made components to add functionality at the 'local' level.

It may appear naïve to focus on basic principles of communication between people, and inter-operability between technical systems, when global agendas on eGov are tackling weighty topics such as 'A Generic Architectural Framework of Municipal Information Systems (Neskovic, 2004); but the reality is that fundamental 'People and Technology' issues need to be resolved, and cultural differences acknowledged and circumvented. Central-Local Relations requires partnership between local and central agencies (ODPM, 2004). Collaboration on eGovernment between Central and Local Government departments is visualised in (fig. 2) from the Office of the Deputy Prime-Minister (ODPM), using Central-Local Partnership as a catalyst to improve co-operation on the development of services.

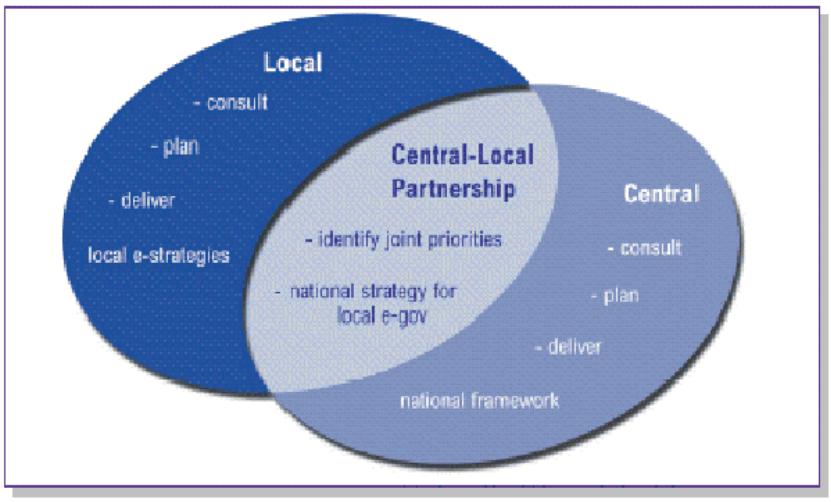

Figure 2 (ODPM, 2004)

In departments of both Central and Local government, 'vision' leaders need to communicate their planned development in detail to '*people*' who will be expected to undertake the operational implementation and system development.

Improved collaboration between government departments, and better communication between those driving the vision at both Central and Local government levels, and their operational teams, will manifest itself in improvements through joined up *people* and joined up *technology*.

Improved communication between the eGovernment Office (formerly eEnvoy) representing central eGov development, and the Office of the Deputy Prime representing local government is only a start point and the need is for Central Government not only to talk to Local Government and overcome issues of culture difference but to work collaboratively on project planning, development and implementation.

Sustainability

Research evidence (Musgrave, 2004) indicates that the majority of UK Community Portal development is based on project-like 'windfall' capital and revenue funding streams that are time limited. It is often the case that project 'architects' and developers may themselves be operating on a 'hobbyist' basis, perhaps with only ephemeral ties to each other due to other commitments. Staffing issues may therefore be a significant risk factor in Portal development.

Sustainable portal initiatives require a trajectory towards, (and strong linkage to), mainstream service development. Evidence exists over each of the two past years (SOCITM 2003, 2004) identifying a correlation between top-tier councils in England within the Comprehensive Performance Assessment (CPA) process, and high ranking Web-site/Community Portal presence. To date there has not been explicit reference to e-Government and Community Portal preparation or implementation in the CPA process, but SOCITM predict that this linkage will be established in the near future (SOCITM, 2004). The necessity to meet new criteria linked to such a CPA process would aid sustainability through improved resource allocation. Linking to this process, the UK Implementing eGovernment (IEG) Phase 4 plans (following the Gershon Review), and called for by Central Government from each Local Authority in December 2004, ask for statements on 'Efficiency Gain' in this funding round[2].

In this Community Portal context *sustainability* is about culture, not just mechanics and processes, and is more than simply technology. It is about the environment and the fluid landscape in which Community Networks operate, and where Community Portals are developed.

The portal must be sustainable, and some desiderata are:

[2] Government Computing, October 2004.

- Management structures to implement and achieve strategic and operational objectives.
- A technology architecture based on common standards and common components (including open source software with support).
- Strong linkage between Portal developers and the Citizens' (users) they are intended to serve.
- An organisation to secure stable sources of income at sufficient levels to enable sustainable operation.
- Organised and accountable forms of quality control, in particular where aspects of editorial control of content is devolved to developers in the community.
- Lowering of cultural barriers between Central and Local Government.

To increase the sustainability of portal projects there is a need to "work towards establishing common frameworks that will enable applications and services, from different sources, to work together" (Olivier, 2004). This supports the arguments for a Service Oriented Architecture as an element of sustainable development.

A model for sustainability of Community Portal development is offered by the Maleny Community (Australia) (MENA, 2004) based on engagement and Community Informatics, and which is a portal project that is owned and managed by the community and based on Open Source software[3]. The Portal-in-a-Box solution deployed by Maleny has been developed by the Maleny Enterprise Network Association (MENA)[4].

Considering innovation as a 'community process', it is asserted by Gurstein that as well as cascading knowledge downwards there is a need to "trickle-up" innovation (Gurstein, 2004). This has resonance in the Community Portal context in the application of research from Enterprise Portal development and Grid research in the Central and Local government development of portal services. In this context feedback from Local Government development projects to Central Government developers and their agents, is needed to engage exemplars of good practice in citizen service delivery. Such iterative cyclical feedback – cascading down and trickling up – is essential to sustainable development, through Central / Local Government collaboration. A 'Sustaining Networks' review gives actions to build knowledge, and support skills development, for those engaged in Community Networks (MacDonald, 2003).

Conclusions

Community Portal development is complex in the tasks involved, and daunting in scale. The challenges should not be under-estimated, in particular when interfacing portals with existing 'legacy' database systems, which are largely bespoke software products from different and disparate vendors.

Allied to the technology challenge, the success or failure of such 'information age' reform depends crucially on the conception-reality gap: the gap between the conception of reform initiatives and the reality of public sector organisations into which they are introduced (Heeks, 1999). There is a need to span the gulf between the visionaries and the operational implementers through explicit communication and effective planning (Jain, 2004).

The UK Portal Research survey (2002) finds evidence that development is beyond the capability of many local authorities. Dissonances exist in relationships between Central and Local Government in the UK that are fundamentally culture clashes (Kablenet, 2004a). It is argued that best value will be achieved through central research and development to specify common standards for community portal models that support interactions with centrally accessed services, via local gateways.

People and *Technology* improvements addressed in this narrative are required to enhance portalised delivery of citizen-centric services through the adoption of common standards, and the development of common components. *Technology* improvement through Systems Integration is required to achieve the interactivity demanded by users; giving services that will in turn be valued by

[3] http://docs.communitye.net/engage_adopt_sustain/),
[4] A further open source portal project solution is Cocoon and available from http://cocoon.apache.org.

users. The use of Open Source software - with vendor support - is likely to become a 'middle way' that gives ownership of core elements to the portal developer community; minimising problems with vendor lock-in, whilst enabling industrial strength portal products to be deployed. *People* changes, in particular a culture shift in government are detectable through new dialogue between the Office of eGovernment and the Office of the Deputy Prime-Minister, and are evidenced through collaborative initiatives such as the National Project Portal – The Local e-Democracy Project [5]. This bridge-building between the government department responsible for central eGov development and the department responsible for local authority development is significant.

Returning to Mumford (2003) we see that "we are now moving into the era of what is called soft technology". Socio-technical design always saw people and technology as part of a single system, but still tended to treat them separately. Nowadays, social needs often stimulate technical innovation, and these create a sequence of activities of which technology is only one part (Durand & Dubreil, 2001). Social Sciences can no longer be kept away from technical innovation, and they are increasingly the stimulants that create its use. Mumford (2003) urges a 'participative' approach by enabling those affected by the new systems "to contribute to the design of their own futures by actively participating in, and influencing, the change processes". It is suggested that this will create better futures for the organisation in which they work and for the communities in which they live.

The challenge for Local Government is to establish itself as the Community Portal, the natural access point for all citizens to the full range of local services, but it is not a foregone conclusion that local government will play that role. Other agencies could easily take up the challenge and establish the portal, or another local body could claim first mover advantage as for example, an Enterprise Council, Health Authority, or Private Sector service provider. One of the lessons of the internet is that familiarity is all: once a site is established as the access point of choice it will be difficult to shift perceptions. A clear message for Local Government is that unless they respond to the challenge of Portal development and engage with Central Government to achieve this, "Local Government could be left shopping on someone else's network". (Leicester, 2001)

Research points to an opportunity to exploit existing R&D in Enterprise Portals and Grid Computing to gain advantage in what will become second generation functionality and service interactivity. Portal development should be placed within the wider context of Citizen Service delivery and embedded within the management framework of government departments. A holistic approach to ensure joined-up *people* systems, and joined-up *technology* is advocated. The research concludes that without a step change in functionality the early vision for Community Portals will remain *'A False Dawn over the Field of Dreams'*.

References

Bannon, J., and Griffin, L., (2001), New technology, communities, and networking: problems and prospects for orchestrating change. Telematics and Informatics 18 (2001) pp. 35-49.

Barry, D.K., (2003), Web Services and Service-Oriented Architectures. Morgan Kaufmann.

Buscher, M., and Mogenson, P.H., 1997 Mediating change: translation and mediation in the context of bricolage. In Facilitating Technology Transfer through Partnership Learning from practice and research. IFIP TC8 WG8.6 International Working Conference on Diffusion, Adoption and Implementation of Information Technology. Edited by T. McMaster, E. Mumford. Chapman and Hall.

Cabinet Office (2003) Cabinet Office Strategy Team. Report. Creating Public Value.

Cawood, J., Simpson, S., (2000). Can Public Policy Widen Participation in Cyberspace? Networks, Interests and Initiatives in North-West England. DIAC 2000 Shaping the Network Society: The Future of the Public Sphere in Cyberspace. Computer Professionals for Social Responsibility. www.cpsr.org.

Curthoys, N., Crabtree, J., (2003). SmartGov – Renewing Electronic Government for Improved Service Delivery. ISociety Report. Work Foundation. ISBN 1-84373-010-3.

[5] www.e-dem.info/DesktopDefault.aspx?tabid=1

Day, P., (2002). Participating in the information society. Community development and social inclusion. In Community Informatics, ed Keeble and Loader. Routledge. London.

Devin, A., (2004) Roadmap for local government peace. Government IT, February 2004. p38. GovNet Communications. (www.govnet.co.uk).

Donne, J., (1631) No man is an island. www.phrases.org.uk/meanings/257100.html

Durand, T., & Dubreil, M. (2001). Humanizing the future. *Foresight*, 3 (4), 285-296

Edwards, W., (2004). Managing Director of Directgov, The e-Government Unit, Cabinet Office. Keynote address: Delivering high take-up of e-services – Directgov, a case study. Kablenet Conference Manchester (UK) 23 Sept, 2004. www.kablenet.com/ip2004

e-Envoy (2004) Intermediaries. Annual Report 2003 http://www.e-envoy.gov.uk

eGov Monitor (29 March, 2004). ODPM and OeG New dialogue. www.egovmonitor.com/links?115f

eGovMonitor (28 June, 2004). Wandsworth report on DfES Protocol Student Loans Systems. "Council Warns of Student Loan Chaos". www.egovmonitor.com/links?129j

eGovMonitor (July 2004) Electronic Service Delivery Report – Q1 2004 www.egovmonitor.com/link?133r

Flew, T. (2002), New Media. Oxford University Press.

Foster, I., et al. (2003) The physiology of the Grid. Grid Computing. Making the Global Infrastructure a Reality. Wiley.

Gartner (2000). Portal – The most abused term in IT. A portal definition. Gartner Advisory Research News. Sept 2000.

Garton, L., C.Haythornthwaite, and B. Wellman. 1997. "Studying on-line social networks." *Journal of Computer-Mediated Communication*, 3 (1).

Gaved, M., (2004). CIRN 2004 Doctoral Colloquium paper. http://www.ciresearch.net/conferences/

Government Computing, (2004). eGIF & XML. The accreditation approach. Government Computing. June 2004 (p25). www.kablenet.com.

Government Computing, (October 2004). Beyond Gershon. Sheila Beck (p7). www.kablenet.com

Gurstein, M., (2004). Community Innovation and Community Informatics. Building National Innovation Capability from the Bottom Up. www.cmis.brighton.ac.uk/research/seake/cna/conference/proceedings/docs/Mike%20Gurstein.pdf

Heeks, R., (1999). Re-inventing Government in the Informational Age. International Practice in IT enabled Public Sector Reform. Routledge Research in Information Technology and Society.

Hey, A.J.G. et al., (2003) The Grid: past, present, future. Grid Computing. Making the Global Infrastructure a Reality. Wiley.

Jain, R., (2003). Tech talk: transforming rural India: a wider view. Online. Available http://www.emergic.org/archives/indi/004833.php (20th July, 2004).

JISC, (2004). Information Environment. Portals: Frequently Asked Questions. http://www.jisc.ac.uk/index.cfm?name=ie_portalsfaq

Kablenet, (2004). Joining up criminal justice IT. Kablenet.com. 15th July, 2004. www.Kablenet.com.

Kablenet, (2004a). Kablereport White paper. What do they mean by "yes"? Shared services and the Gershon agenda. Available at www.kablenet/kablereport/

Kearns, I., (2004). '2005 Targets Must Go'. Institute for Public Policy Research. Government IT. July 2004.

Leicester, G. (2001). The Community Portal: Democracy, Technology and the Future for Local Governance. Scottish Council Foundation. ISBN 1 909835 17 0.

MacDonald, K. (2003) Sustaining networks. How regeneration partnerships learn and develop. Joseph Rowntree Foundation.

MENA, (2004). Building Blocks to Sustainability. Community Portal Development. Maleny Enterprise Network Association. http://docs.communitye.net/engage_adopt_sustain/

Miller, P., (2003). "Towards a typology for portals" Ariadne Issue 37. Publication Date: 30-October-2003. Originating URL: http://www.ariadne.ac.uk/issue37/miller/intro.html

Mumford, E. (2003). Redesigning Human Systems. IRM Press.

Musgrave, S. (2004). Unpublished Ph.D. dissertation survey of Local Authority Portal capability in 2002. available at: www.blackpool.ac.uk/portalsurvey2002/

Musgrave, S. (2004a). The Community Portal Challenge – is there a technology barrier for local authorities? Telematics and Informatics 21 (2004) pp261-272. Elsevier.

Neskovic, S., (2004) A Generic Architectural Framework of Municipal Information Systems: A Vision. E-Gov 2004, Zaragosa, Spain. (accepted for publication in LNCS by Springer Verl) August 2004.

ODPM, (2004). Office of The Deputy Prime-Minister. e-gov@local towards a national strategy for local e-government: consultation paper. www.local-regions.odpm.gov.uk/egov/index.htm

Oglethorpe, S., (2003). The elements of an Enterprise Portal. Sun Journal: Vol. 5, Number 3. www.sun.com/executives/sunjournal/v5n3/features1.html

Olivier, W. (2004) Application & Tool Component Frameworks. CETIS. www.cetis.ac.uk.

Phillis, R. (2004). An Independent Review of Government Communications. Chair Bob Phillis. Cabinet Office. www.gcreview.gov.uk.

PITCOM (2004). Parliamentary Information Technology Committee. PITCOMentry: Joining up Criminal Justice IT. 15th July, 2004.

Raol, J.M., Koong, K.S., Liu, L.C., Chun, S.Y., (2003). An identification and classification of enterprise portal functions and features. Industrial Management & Data Systems 103/9 [2003] 693-702.

Rheingold, H., (1994). The Virtual Community: Finding Connection in a Computerised World, Secker & Warburg, London.

Rheingold, H., (2000). 'Community development in the cybersociety of the future', in D. Gauntlett (ed), Web Studies: Rewiring Media Studies for the Digital Age, London, Arnold, pp.170-8.

Romm, C., and Taylor, W., (2000). Community Informatics: the next frontier. In *proceedings of the Information Resources Management Association Conference* (IRMA). Anchorage: IRMA.

SOCITM, (2003), Better Connected 2003 report. An Insight Publication – Society of Information Technology Managers. www.socitm.gov.uk

SOCITM, (2004), Better Connected 2004 report. An Insight Publication – Society of Information Technology Managers. February 2004. www.socitm.gov.uk

Steinmueller, W.E. (2002). Virtual Communities and the New Economy. In *Inside the Communication Revolution.* Mansell. R. Oxford Press.

Suffolk, J. (2004). Home Office Criminal Justice IT programme. Joining up criminal justice IT. Government Computing. July/August 2004. Kable Publications. www.kablenet.com.

UCISA. (2003). UCISA-JISC Portals Conference proceedings, June 2003. Oxford. Available at: https://www.ucisa.ac.uk/events/2003/forum/forum-1-review.htm#papers