

## **COMMUNITY ISSUES WITH A LOCAL GOVERNMENT PORTAL**

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**Abstract.** Community networking is viewed as connecting government, business, third sector organisations and local people using information and communications technologies. As governments move towards e-service through provision of portals to local authority and other services, there is a risk of community and other groups being left behind: the notion of 'digital divide'. This paper looks at the provision of a community portal for an Australian city, with special emphasis on community groups and residents, and their attitudes towards and uptake of the technology. A three phase study covering the conception, implementation and evaluation of the portal was conducted, raising issues of top down (government/developer-initiated) and bottom up (end-user driven) approaches to portal design and sustainability. Although an end-user design philosophy was envisaged, the costs involved necessitated focus on top down priorities, and community attitudes were found to be more significant in affecting uptake than traditional digital divide constructs.

### **1. Introduction**

Community networking has been described as "the connection of organisations and people using information and communications technology (often entailing) collaboration between government, non-profits, voluntary organisations and business, in establishing and maintaining the networks." (Centre for Community Networking Research, 2003). Whilst the private sector has well established business and commercial networks, and the public sector, including government and tertiary institutions are generally also well served, the third sector, (comprising community, non-profit and voluntary organizations), is often inadequately resourced or provisioned to participate fully in the networked economy. In Australia, although there is a generally high level of Internet penetration and infrastructure, various digital divide issues have been identified.

Governments, at local, regional, national and international levels have an interest and responsibility in ensuring that all citizens have access to services and information. In recent years e-government, including online service provision, information access and consultation activity has become a major policy area both in Australia and globally. As information increasingly becomes mediated electronically, ensuring equality of citizen access moves from policy into actioned initiatives.

This paper looks at the provision of a community portal for an Australian city, with special emphasis on community groups and residents, and their attitudes towards and uptake of the technology.

Community portals are an ICT that facilitate interaction among members of a specific community and the sharing of locally important or relevant information. Although communities for specialised hobby, professional or other interests have portal sites across the Internet, in this paper we are concerned with physically localized communities, in particular a city.

Such a community though is not self-selected, as with hobbyists, and embraces sub communities, with varying levels of interest, knowledge, access and financial resources. The provision of a city's portal site is necessarily a centralized and top down initiative, whose successful implementation and uptake requires partnership and involvement across the private, public and third sectors, as well as citizen engagement. The history of information systems is plagued with examples of the stalled uptake of technologies perceived as imposed. In providing a portal to community services of various sorts, government faces the issue of the diversity of the citizenry, accessibility and the usability of the facility (Donnelly and Merrick, 2002).

The role of local government as lead user, and in successfully championing and conducting consultation activity is essential to community portal initiatives, but the detailed requirements will largely be driven by agendas related to bottom up citizen and local community activity. Government, although representative of its community, has its own ongoing agendas and responsibilities that it must meet, (such as cost-saving, ensuring equity of access, avoiding commercial endorsements) and thus other requirements would be applicable to those considerations. Finally commerce has an interest, directly from business arising from use of the portal, and as infrastructure stakeholders. All three sectors are thus engaged in community networking, and top down (client) requirements must be sensitive to bottom up (end user) ones for successful implementation.

New information technologies and systems provision often fail due to inadequate user needs analysis, and developer-centred, rather than customer-centred solutions. A recognised class of failure is *interaction* failure (Lyytinen and Hirschheim, 1987), where systems are produced that people do not like (Kimble and Selby, 2000). This research has traditionally been conducted in business settings, but now it also implies a need for specific research into the particular issues associated with e-government adoption and uptake in civic communities. The present research examines this.

A purely top down approach, Enterprise Resource Planning (ERP), was common at the end of the last century, in which all of a (typically large) organisation's processes, (human resources, finance, manufacturing etc) are integrated around a single common data repository. ERP promised a rationalisation of diverse, incompatible and isolated systems, which might also be affected by the Y2K issue, so many large organisations decided to adopt this off-the-shelf system. Naturally, existing corporate processes had to change to fall into line with the ERP solution's way of doing things. There is now widespread scepticism as to the return on investment from many ERP solutions. As Sammon et al (2003) note "As ERP systems are being introduced, the specific needs of the organisations and the specific features that make them different may be lost or eroded in a way that is not controlled or understood by managers. In certain cases the

enormity of the system leads the business rather than the business leading the system." By analogy, at a societal level 'totalitarian' technology has powerful effects to which community or cultural engaging them must adapt. Global systems of e-government and e-commerce are coalescing through technology into what Debord (1967) called the "integrated Spectacle". The West is experiencing high levels of mistrust of governments, (e.g Kay, 2003) and of multinational corporations and their intentions. Technological solutions perceived as being imposed "top down" by powerful agencies are thus especially likely to be viewed with concern if not actively resisted.

A different philosophy of end user design was first described in Crowe Beeby and Gammack (1996) and summarized with further examples in Gammack, (1998). This places the system user (rather than the technology) at the centre, designing applications and instances of use from their own context, enabled to do so by flexibility built into the ICT. The concept of a *design environment*, (rather than a functional technology that matches specifically detailed items) motivates an approach by which generic requirements provide a "top down design" framework, and detailed requirements emerge from the end user at the time and context of a specific need. This reinforces empowerment of the users of information, and their determination of the uses to which it is put. It allows also for applications and patterns of community practice to emerge organically from local uses. In this sense it is the opposite to ERP technologies, which impose a single way of doing things, to which organisations and communities are required to adapt. The philosophy is essentially to create a participation *space* within which projects, dialogues and information can dynamically come together and emerge into shared conceptions. Although cast within the systems and organisational literature, particularly Kampis (1991) Koffman and Senge (1993) and Kao (1996) it is interesting to follow a parallel history of ideas leading to participation spaces (Randell, in press) which draws on the citizen participation literature (e.g. Arnstein, 1969).

Our paper is organized as follows. First we describe the case study with its background context. We then describe a pilot study aimed at identifying issues applicable to community uptake of, and engagement with, the portal. This was then followed by a survey of residents and we indicate the prevalence of the key issues in the wider community. Following implementation of the portal we then report on the uptake and changes noted one year on, through an interview with the local government agency responsible. General conclusions and lessons learned follow.

## 2. Case study

The case study began in late 2001, when the local government authority (LGA) of the City of Beachtown, Coastal Australia<sup>1</sup>, with a population of 25000 was just beginning work on the community portal. Beachtown is a politically and socially active community with a lively tourist and daytripper presence, and a good reputation for community consultation practices<sup>2</sup>. It provides a case context example of some of the issues identified in providing a mechanism for information dissemination through the portal. The council's general strategic objectives related to efficient and effective local

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<sup>1</sup> This city is real, but the name is fictitious.

<sup>2</sup> The reference for this would identify the location but can be verified with the authors.

government, and improved service delivery, using IT to reduce costs. As well as listening to interest groups, the Council currently uses random surveys and has a facility on its website for residents to lodge votes prior to council meetings. To move from merely good consultation practices toward an even higher level of active participation, the Council identified an opportunity to provide a community portal for the City, using a previously researched design, which would then act as the infrastructure for e-participation applications. Indicative applications centred upon local government and community services and included provision for informed voting on proposals. Community groups and businesses however would also be enabled, through the resource to provide, share or request information, in unimagined future decision making circumstances, through community developed patterns of interaction.

The project context was that a major national telecommunications provider (telco) was piloting portal websites for different types of community across Australia. Beachtown was considered representative of other Australian cities, with a full range of services and community groups, but manageable in size. The telecommunications provider naturally had a business interest in activity on the website, regardless of its nature. At the same time local government authorities were moving towards e-services, and typical activities such as consulting residents regarding planning proposals in their neighbourhood, paying rates 24/7 and the like were seen as ideal applications for online provision, increasing citizen engagement and consultation, whilst reducing costs. The LGA had also anticipated a range of community driven applications that would be possible once the site was established, such as a family planning a shopping or tourist day trip visit looking for activities for the children, or local doctors consulting one another in a private area on specialised diagnoses, or allowing the community to find particular medical suppliers, or private support groups. Such applications would not require specific design, but would be enabled by a flexible infrastructure, a design environment containing a usable toolset that the community members could build upon. This is consistent with the philosophy of end user design described earlier. At this point, the authors became research partners to the initiative, to investigate the issues in community requirements in adoption of the portal.

Although all three sectors, public, private, third are implicated in developing a community portal, the requirements may be broadly categorized into infrastructural and application oriented. Infrastructural applied to the underlying technology, its sustainability and cost effective maintenance, including updating. Applications are built upon the infrastructure, and are community or other stakeholder driven, using tools and facilities designed into the website. Examples are indicated below.

In extensive consultation with the community, and with the state's umbrella association for municipal authorities, the LGA conducted a requirements analysis and subsequently the telco had designed a site map with 10 high level categories leading off the home page, each detailed to sublevels and high level information pages. A number of functions were also provided allowing for interactivity, membership privileges, polling, search, current information and the like. Although the site design itself is commercial information it was comprehensive enough to cover the functions of the LGA, index local businesses, and a wide range of clubs and community groups.

Although the infrastructure was designed in this top down fashion, and was intended to be scalable to communities of any size, the content was largely to be

provided from the bottom up. This is a critical part of any large data driven system, and an expensive exercise. The telco offered to provide content for around \$250 000: a sum infeasible for an LGA of this size. A potential strategy was therefore devised through a partnership between the LGA and a local university at which one of the present authors was employed. This entailed a pilot research project, a survey, and a follow-up interview. The partnership understanding was that the LGA would host webpage content free, and that free assistance in webpage design and markup would be provided by IT students. The university had several advanced courses in which systems requirements analysis with real clients occurred, and basic markup and page design was taught each semester to large first year classes. With academic supervision it was therefore possible for the University to sustainably provide a community service to small businesses and community groups to ensure those without relevant ICT skills or budgets had a web presence in the LGA's portal.

## PHASE 1

In the first phase, as a seed funded research project, a questionnaire/interview was conducted with a sample of the groups who would provide content for the site. This included schools, art galleries, medical practices, community groups, some local businesses and tourist attractions. Emphasis was given to third sector organisations on the grounds that these would be least likely to have budget or training relevant to producing web pages of content.

A short (11 item) questionnaire was designed using best practice principles<sup>3</sup>. It drew upon some previous research by the telco and LGA partners, and piloted by engaging a research assistant to personally approach Beachtown community groups, schools and businesses. The research assistant had been fully briefed to discuss any issues personally so that a subsequent mailed survey would not miss its mark. The questions themselves are itemised in the next section in relation to the data analysis.

The main purpose of this questionnaire and the associated discussion was to identify the needs and wishes of these groups, in particular against a list of about 60 possible features the portal could contain; to validate that the questions were understandable and relevant, and to offer help to provide a web presence to those who wished such. A question was included asking if assistance in web development was desired, and also if invitations to relevant university events was wanted, as part of the partners' intention to offer a broader community service. Although the Council and research partner were prepared to host and mark up web pages for the community groups, not all groups responded positively, and there were some actual refusals. The reasons given for these refusals suggest specific barriers to be overcome in diffusing the technological infrastructure for e-participation at community level.

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<sup>3</sup> These include brevity, clarity, responder-centric phrasing, offering something of value, avoiding ambiguity (e.g. using "or" within a question thus producing unambiguous data), stating objectives and source authority upfront, good use of white space, logical question ordering, easy to answer questions first, elimination of low priority items, visible contact details, and simple explanation of possibly unfamiliar terms. The accompanying use of a personal interviewer ensured concerns about the likely time involved, voluntariness of participation or withdrawal, confidentiality and appropriateness of language were addressed. (see Backstrom and Hursh, 1963) and Market research society (2003)

Reasons given for refusing to participate in the questionnaire included the following.

- A perception that it was not relevant;
- a perception that it was a waste of time;
- that it was not user friendly;
- that they were not the right person to complete it;
- that they had no time;
- an appointment had not been made;
- that a stamped addressed envelope was required, and finally
- the question that asked about money (estimating business value of a basic internet connection) was offputting.

Some individuals with particular grievances also made anecdotal comments indicating a generalised mistrust regarding the agenda of questionnaires associated with government. Although in a minority, these comments tally with reported opinions that the community “does not want e-government” (BBC, 2001). An established principle in offering any product or service is the market research to identify likely demand issues.

The data from the initial phase however suggested that the questionnaire was understood by potential respondents, elicited a discriminating range of responses and could be completed in reasonable time.

## PHASE 2 SURVEY

The second phase of the research was a survey. This was shortened slightly but based directly on the pilot questions and was issued with the next annual rates notices, issued in September 2001 to 400 Beachtown ratepayers, targeted for known interest in online business or community groups, and notified generally in the LGA's newsletter. This rates notice requires a response by post, internet or a visit to the town hall, so was guaranteed to target the maximal range of citizens, on a cost effective basis and at a time when they might be expected to be considering the value of the LGA. The survey was also posted on the Internet at the LGA's website. A database recorded online responses: others were entered manually. An analysis of the questions and breakdown of responses follows.

Three categories of respondent were identified: community groups, businesses and private residents. Community groups included spiritual, environmental, cultural, artistic, community politics, plus hobbyist eg cycling. The type of businesses included only one medium scale manufacturing and one large retail, with all the rest being individual or micro business predominately in retail, medical, accommodation provision, restaurants, and consultation/professional services such as architecture, training, and IT. Artists and craftspeople (art, local publishing, puppet making, hand made jewelry...), were also well represented, since Beachtown is a vibrant and “bohemian” community. Many residents operate businesses from home, and thus business owners are also citizens. The average length of participants' residency was 15 years.

117 responses were returned, and were entered manually to supplement the 88 submitted directly online. These were checked and data re-entered where the original data entry required cleaning. No personally identifying information was recorded, and

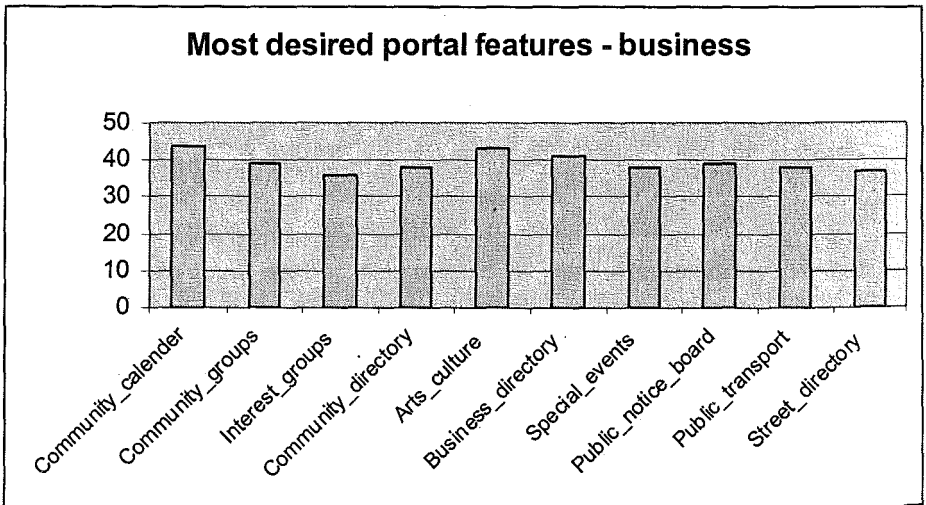
the sectoral demographics of respondents were as follows. Differences were then sought between the responses provided by each category of ratepayer.

*Table 1. Demographics of survey respondents*

1.	Number of residents	124	60%
2.	Number of businesses	66	32%
3.	Number of community groups	15	7%
4.	Number conducting business online	65	32%
5.	Number with an internet connection	135	66%

Private residents were included in the figures for internet connection, but almost all businesses, (88%), had a connection. The percentage conducting business on line was similar between commercial and other groups: 47% of community groups and 59% of businesses were operating online.

Similarly, the percentages who wished to use the portal for promotion were comparable: 53% of community groups and 51% of businesses. This however also suggests that about half of each group did not wish to use the portal for selling or promotion of their group.



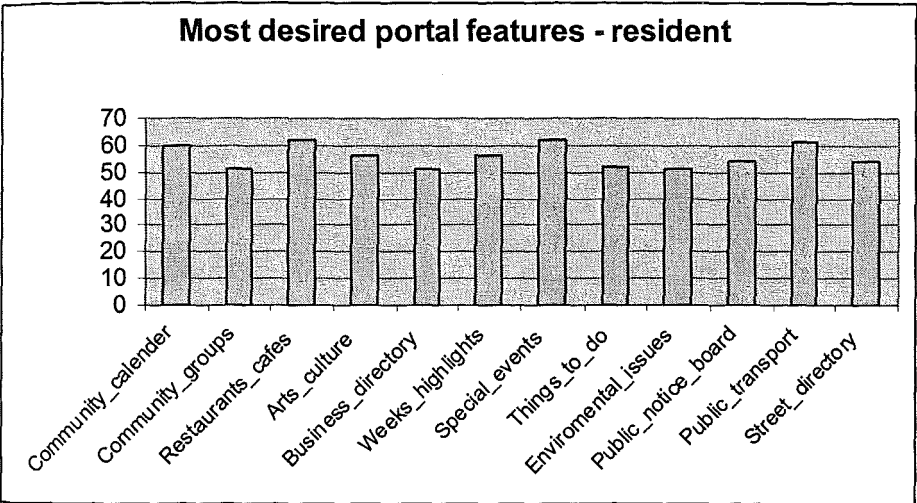
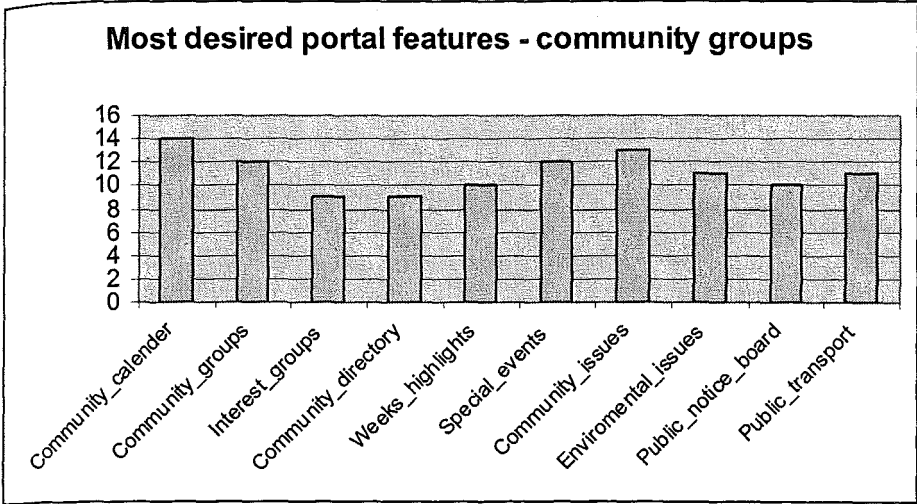


Figure 1. Features seen as most desirable by different respondents

This led into the specific questions about what services were most desired in the community portal, and here there were some differences between the different types of respondent, though also a number of similarities. Figure 1 shows the relatively most desirable features for each group.

The features most desired in a community portal by all groups included information on community groups, special events, a public notice board, and public transport information. There were however some clear differences between the groups. Businesses also showed a higher level of interest in features than either residents or community groups. Business and community groups both identified a community directory and special interest groups as of interest. Businesses and Residents both



identified a street directory, business directory, and arts & culture as desirable priorities. Community groups and residents both identified public transport, environmental issues, and the week's highlights. Only residents were interested in "things to do" and restaurants. Community groups were the only demographic interested in community issues.

The features desired by less than 25% of all respondents are listed below with little variation shown across the three types of respondent in terms of the level of interest in these portal features.

- Mission and vision
- Advertising
- Guestbook
- Web\_site\_templates
- Sport
- Web\_hosting
- Views (opinion) utilities
- Downloadable Images
- Discussion\_forums
- Polls
- Itinerary\_planning

Table 2 indicates the relative interest of each group on a basket of portal features. Businesses generally wanted more features; community groups less. On the paper surveys and from phase 1 some commentary indicated possible reasons for this. Many businesses and some community and education groups already had their own websites and would not wish framing by mission/vision, hosting, advertising or templated ways of site engagement.

Table 2. Proportion of participants desiring specific portal features

	Businesses	Residents	Community Groups
Guestbook	<25%	<25%	<25%
Sport	<25%	<25%	<25%
site template	<25%	<25%	<25%
web hosting	<25%	<25%	<25%
Polls	<25%	<25%	<25%
Onlinechat	<25%	<25%	<25%
Email feature	>25%	<25%	<25%
Youth	>25%	<25%	<25%
Classifieds	>25%	<25%	<25%
transactions online	>25%	<25%	<25%
history of region	>25%	<25%	<25%
All other features	>25%	>25%	>25%

Although community consultation is a strength of the LGA, polling, discussion forums, and membership groupings for sharing views on selected issues were also not of interest to most respondents. One of the survey questions asked what participants valued that the Internet did not provide, and face-to-face interaction was the most frequent response. Although a small amount of responses indicated a desire for a more fully featured internet, the vast majority referred to the community aspects of real life, fresh air, coffee with friends, sitting in the sun and the like. Existing consultation methods, (to

which online consultation adds but does not replace), may have been considered adequate, known and not especially requiring an online solution.

The application areas suggested from the top in the initial design had envisaged the community using the portal to plan family trips, to attend sports events and be attracted by touristic images. These features however were generally not desired, possibly because a community calendar and transport information coupled with local knowledge (respondents had lived in Beachtown for 15 years on average) would provide sufficient awareness. The survey however did indicate which of the features were relatively more and relatively less demanded within the ratepaying community.

### PHASE 3 – ASSESSMENT OF PORTAL SITE NOW

Following the survey, the site was developed and is in current use as a portal to the LGA. With the departure of the telco, development has been conducted in-house. After two years of operation, the researchers evaluated the site. Firstly an inspection of the site was used to identify the features present and their relationship to previously identified community priorities. Secondly, a web search identifying external links assessing the site was performed. Finally, an interview with the IT manager responsible for the project within Beachtown LGA was conducted.

An exploration of the site in early 2004 revealed that business indexes, links to schools, and voluntary and community group web pages are all available, though some of the organisations represented by the original interviewees could not be found by a search of the site. The current portal site has evolved since the original site map was specified by the telco partnership, and although structurally different many of the features naturally remain. Community consultation facilities are available with information on issues and guidance on participation. Feedback is welcomed and the LGA reports back on consultation outcomes through the site. This facility is being trialled, and as of early 2004 polling did not seem to be available. The site does contain numerous information pages on accommodation options and current events and happenings, and these are good and appear quite comprehensive, and may be searched by interfaced pathways designed for visitors, students, businesses or locals.

Databases generate basic information pages, and often a page will have links to the home pages of galleries, restaurants or other businesses. However, the community applications intended in the vision have not as yet materialised – the site does not currently support new community driven applications, and no evidence of itinerary planning, postcards and images were evident. The generated information pages detailing, for example, casual sports clubs were useful in terms of providing contact points, fee information, venues and meeting times, and could readily be found through the database search (a submenu), though not directly through a site search. This service has been provided in some form for 25 years and has about 2000 hits /month.

A selection from the navigation bar is shown in figure 2 with selected first level submenus.

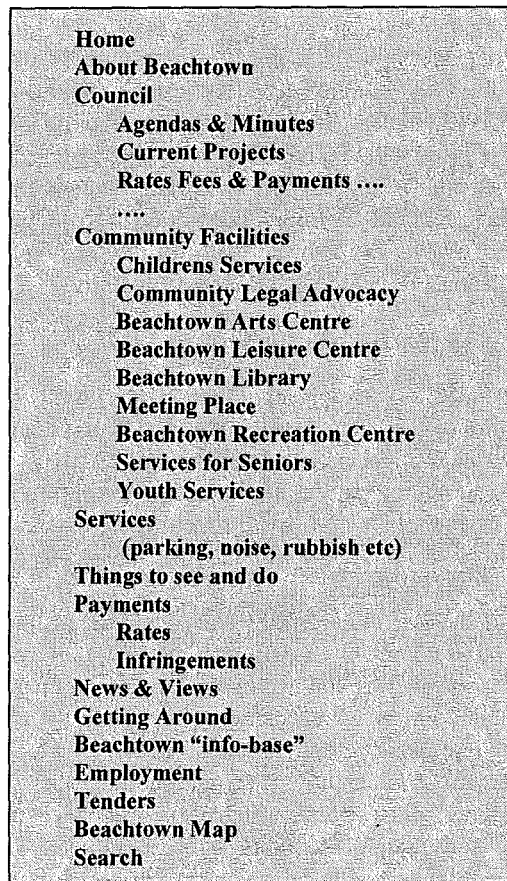


Figure 2. Top level structure of portal with indicative submenus.

A google search in early 2004 retrieved eight pages of sites, and apart from the Beachtown site itself, these indicated a number of external sites linking to the Beachtown portal. Several of these were academic or professional conferences, and drew attention to touristic accommodation and other relevant information for visitors. These tended to note favourably that the site “had everything needed”. The free linking of relevant events and businesses on the portal had been picked up by some external sites, and the portal was also linked from the National government’s Business Entry Point (BEP), an online “resource for the Australian business community (that) provides business with a wide range of services and information, (...as well as) significant transactions such as taxation compliance and licence applications”<sup>4</sup>. A Harvard University webpage notes the site contains one of the best webpages on ensuring personal safety on the Internet, and the portal is linked from a number of special interest groups and communities. The touristic, informational and community service functions were all thus favourably noted externally.

<sup>4</sup> <http://www.business.gov.au/BEP2002/AboutBEP/>

The final phase was an interview with the portal manager, who had championed the project and who was asked the following questions after 2 years of operation.

- 1) What was purpose of site from your point of view and what is it mainly used for now ?

The aim was to merge business needs with community needs to provide facilities the community couldn't afford, and to pay for it by leveraging off business being in contact with community groups, providing marketplaces for e.g. sports products. Also putting (e.g. medical fraternity) together such that community could find sports doctors for example, adding value services to the community.

- 2) Has it achieved its goals - if not why not?

No – The chamber of commerce has now taken over the local business portal aspect, with some LGA sponsorship. Local consultation was extensive prior to portal delivery, with requirements and target groups engaged for a year, and requirements were in line with community wishes. However the telco required too much money to deliver the portal as planned, although they have since reused the analysis, and the data freely shared by the researchers, the LGA and the telco, in portal solutions for very large communities, and with significant budget allocations.

- 3) Has the portal increased online participation in consultation activity?

Yes – a very good operational process is in place, is currently being refined, and once reviewed, will be extended. The relevant feedback is being obtained. 825 responses were obtained on one issue, and before the online facility this was hard to analyse.

- 4) Has community uptake followed since the survey? Has hit rate stabilised, increased or dropped?

Hit rate is not reflective of usage, so tried monitoring longer site engagements, for a while and now are not monitoring usage too closely.

- 5) Appreciating that, do you have a feel for how the site is being used? Who is hitting it, and why?

Payments are being made online as this is proving convenient for many, LGA business units are interacting more with the site through a redevelopment, extending specific uses, and consultation is being expedited, with community take up. No figures on relative use are being analysed though at this stage.

- 6) What were priorities in site design following survey – were they bottom up survey informed or top down strategic objective informed mainly

Both applied – a management tool was needed for the over 300 pages of data, a cleaner look and more effective navigation was required and designed in. This avoids data replication and inconsistency across multiple pages.

- 7) Were all the things asked for in the survey implemented?

Many requirements were abandoned due to cost, so priorities applied, and ongoing direct costs are substantial without investment costs, so no investment is currently happening, and only gradual evolution is occurring. LGA priorities, such as payments, consultation, advertising, (festivals etc) took precedence over planned community needs.

- 8) What are planned developments now?

Getting the current functions working, training LGA people, and facilitating development by LGA business units rather than the IT unit only. Access for people with disabilities and other horizon things are beginning to happen but no big things happening in the near future.

- 9) How is portal maintenance being handled – e.g. Recurrently budgeted item?  
Do you charge for any links through the portal?

A web committee makes the decisions, these are not management driven but internal champions. The direct costs are known and ongoing training and development costs are being shifted onto other business units. Their thinking is not to externally link widely at present, nor to charge, but to link only where appropriate, e.g. the chamber of commerce and government sites.

- 10) Did any applications (ideas, developments) come from the community beyond the wishlist in survey?

Nothing that has been implemented.

- 11) Is it fair to say - More focus is on tourism rather than community aspects, more emphasis on revenue services than community building?

Yes, that is probably fair. Knowledge for the tourist is an LGA target, and holding down costs is a driver of activity. Although not outright services as such, the community benefits from this indirectly.

- 12) What were main lessons learned?

The process of consultation was very good: business, community and others provided very good data during extensive consultation, and a structure of requirements that was wanted was identified, that has gone on to implementation elsewhere. Unfortunately the lesson was that the cost was much more than was feasible, and a sponsor would be needed to do it properly, or engage the whole community in development, provided they have the skill set.

- 13) Anything you'd like to add?

Even if we got students to help develop the site, you still need many people on the ground to update the information, so there is a need for a community sponsor, such as a local university that is committed to the project for their own ongoing reasons. It would be ideal if community units built their own bit of web, and tools are becoming more usable, but models are needed so such groups can build the right thing effectively. Also the issue of mediating content when other uploaders are involved – consultations involving unmoderated public comment, which might be litigatable, are a particular concern.

The wider community context is the state based group of local government authorities, and this allows citizens across local areas to see what other LGAs may be doing or saying about analogous issues, and the state has companies that provide online forums and other community networking applications to this, and to other LGAs (Walga, 2000). Community participation audits are also provided by such companies, using guidelines developed by Burns and Taylor (2000). These can be peer driven rather than top down, and map the history and context of participation with various indicators to assess its quality and impact (Randell, 2002).

#### 4. Conclusions

The uptake and evolution of a community portal requires several factors to be in place: an accessible technological infrastructure, an accurate requirements analysis and a system that delivers community wishes, a motivated community and a clear benefit from use. This case study had a well considered requirements analysis and a structure sensitive to usage by a range of people: tourists, residents, businesses and community groups. The top down portal design was scalable, and indeed the original site map has been adopted as the basis for a community portal to an Australian state capital City, and a major telco's own community site. Uptake here may be greater, but the budgets are much larger and more research would be required in case a critical mass effect applies.

The usual frameworks for conceptualising community informatics entail notions of social capital and digital divide. An easy analysis would suggest that a divide may be bridged by policies and resources to inner cities, regional areas, and aid programs at national levels. Our study does not allow any simple conclusion constructed to that effect, and suggests that community groups may have other reasons for not adopting a technology, purportedly provided for community benefit. Further research is required, but simple access to technology, and financing or training in portal access and use was evidently not significantly at variance with business levels for the third sector groups identified in this study.

Instead the scepticism about government motives expressed in pilot interviews, was perhaps partially borne out by limited participation by the community, who were happy with the face-to-face activity not available fully on the Internet. The other major reason for limited uptake and bottom up evolution of applications was the cost of producing a community portal at commercial rates, even when the requirements were as close to community wishes as could be expected, and when the structure allowed for evolution of the community uses over time. The business community has progressed its portal through the Chamber of Commerce channels, and the LGA is providing services online which sections of the community are finding convenient. The tourists and conference organisers are valuing the information and its accessibility, and community group information is available if sought.

Finally if a community based strategy, perhaps with a university partner, can be designed: one that avoids prohibitive commercial rates and ongoing fees, true and diversified community portals may become established and evolve as their communities wish.

#### Acknowledgements

This work was supported by seed funding from the Centre for Electronic Commerce and Internet Studies at Murdoch University. Thanks are given to Alan Thompson for database work, and to the IT manager at "Beachtown's" local government, not named to protect confidentiality.

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