

Oxygen: Social Intranets, Collective Intelligence, and Government Practices

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Abstract: How well are government intranets modelling the participatory protocols needed to develop the skills for effective government-citizen engagement? Does the inclusion of social media forms and user-generated content (chat, collaboration work, content sharing) add or detract value from the interactive online space at work? This paper presents work on a small Australian case study drawn from a comparative study of e-participation projects within government in Australia and New Zealand. This paper focuses on the development of, and everyday practices in, a password-only, subscription-based intranet *Oxygen*, which has been operating since December 2006 in the South Australian public service. Specially developed through funding gained in an internally-competitive round, *Oxygen* is designed by, and for, a specific demographic of young media-savvy professionals. The research includes initial interviews with managers, intranet peer-managers, online observation of the 'virtual village' conducted at periods throughout 2007, data collected from *Oxygen's* external site-builders, and an analysis of logins and page hits. A user-questionnaire was emailed to self-selecting *Oxygen* subscribers. In its use of dedicated pages and protocols for social networking, the government intranet demonstrates that, in targeted demographics, the peer-management of online space can further develop existing professional behaviours, and encourage new collaborative ones which have the potential to be transformative of peer and manager attitudes to leadership, cooperation and the reinvention of organisational behaviour within the service. The research also assesses the popular features of the intranet's design, and the most successful peer-practices, in order to gauge their potential transferability to e-participation protocols and projects in interactive citizen-government domains.

Keywords: peer-managed intranets, e-participation, UGC, transferability, civic domains, online protocols, 'virtual village'

1. Introduction

The reinvention of government has, for over a decade, been intricately linked to government's use of information and communication technologies, and to the administrative reform of service practices (Osbourne and Graebler cited in Heeks, 1999; Martin and Gregor, 2005). Governments have experimented with information-rich issue-based or agency-based websites, aiming at more positive reconfigurations of the citizen-government relationship. Often they have reached the benchmarks and milestones set for developing greater transparency and accountability in government. However, despite the fact that the digital "r/evolution" has increased the capacity to interact and participate, and put into the hands of many citizens in OECD countries a whole range of cheap consumer electronics, e-participatory tools and e-techniques, citizen-government models of interaction and participation are sometimes not as successful and productive as they could be, particularly in the area of policy consultation. For knowledge workers in government, new media tools are still only being used rarely or selectively: nothing like the full range of civic or engagement possibilities is being trialled by governments in the use of mobile technologies, in digital community television, or in interactive community forums.

'Push' models of technology in e-government are still dominant. The Victorian state government is pursuing an e-democracy agenda which, as can be seen in the Premier's recent suggestion to televise the deliberations of state parliament, is still based on a broadcast model of one-way outreach, and on the notion – increasingly untenable in a participatory age of many platform choices – of a waiting 'audience'.

In the Government of South Australia (GoSA)'s case, the major strategies include a commitment to providing its citizens with access to information age technologies, and a practically-orientated Digital Bridge Unit, involved in helping marginalised urban, remote and indigenous groups to participate. Government initiatives in the *2006 Community Engagement Report* list the face-to-face interactions and activities which are still the major strategies developed by the team tasked with getting citizens to 'lift their gaze' and build a sense of shared accountability with government. 'We're all in this together' was the chosen motto (2). Over 1600 South Australians attended the "Talking Regions, Community Forums and Talking Targets" sessions and the draft key interactions list focussed on issues of economic growth, green issues, and investment in science, research and innovation. Drafts of the Report were circulated routinely to external groups. As an exercise in partnership, transparency, and with its sharp focus on democratic protocols, the report – and the consultative work it represents – is exemplary in its way. Explanations often offered for the persistence and prioritisation of F2F consultations are: the recognised traditions of community building, the regional geography, the patchiness of broadband and internet access, the lack of digital literacies and, underpinning all these, a

declining interest in democratic processes. Why it is that civic participation online is seen as so hard to develop and sustain?

e-Government pilots are often well-intentioned and well-designed, but there is a 'disconnect' between e-government developers' approaches, and citizen-users' expectations and interests. Governments are missing a chance to experiment by using their own staff's expertise. New communication tools are not just useful for the routine work-related tasks of finding information, ordering it and re-distributing it in government, but they can also be used for socialisation, socialising, and furthering work and agency service agendas, such as the retention and informal peer-training of younger staff. They might also be useful in advancing e-government and e-democracy agendas by capitalising more fully on Web 2.0 and i-enabled mobiles as distribution platforms for harvesting fresh ideas, for citizen consultations and feedback, and for building a sense of community amongst communities. The public service in South Australia, just as in all states and Commonwealth agencies, has young, media-savvy employees, so why is it that many of the skills that young public servants acquire prior to, and outside of, the public service are not being fully deployed *within the service* to create a transformative agenda for government in the area of civic participation? European writers, Vasiliu and Vasiliu, suggest that the skills of top managers may need to be developed for e-government to work (2005).

These are the questions and ideas which inspired this investigation into an innovative engagement pilot run by young media-savvy professionals, which aimed at developing e-participation skills and capacity building in GoSA's public service. The pilot fits the model of 'high commitment' from human resource managers, said to have significant effects on worker attitudes (Gould-Williams, 2004). Features of the pilot intranet, and selected peer practices, demonstrate more than that. Government change processes can begin from the small seeds sown internally by networked, committed, e-participation 'champions' and, thereafter, through the deployment of the knowledge gained, to wider engagement issues and the development of civic participation protocols. The research is part of on-going comparative studies on government intranets, their aims and their use of (or decisions not to use) social media forms (i.e., chat, blogs, content sharing). It identifies features of intranet design which are transferable to other e-participation protocols and projects, with the goal of making an inventory of those features which support voluntary, committed collaborative participation in online communities.

Survey work in Australia has been done on the usefulness of public and corporate organisational intranets as knowledge management systems, with the focus being on 'build' concepts and benchmarking principles (Robertson, 2002, 2007). Martin and Gregor (2005) have explored frameworks in the online initiatives at the *Australian Bureau of Statistics* and *Centrelink*, finding that ICT governance arrangements 'are typically an extension of the agency corporate governance and structures' (44). The emphases in both these studies contribute to a business-case and organisational perspective.

I investigate the reasons why intranet design innovation took place in South Australia, and explore users' online experiences and expectations, in order to identify the potential ways in which knowledge gained in work-intranet use might serve broader public service/sector goals. At this stage of the data-collection, the focus is on *Oxygen*, (launched late in 2006), a restricted GoSA intranet targeted at under 35 year old 'young professionals' in the public service. Initiated, owned, and collaboratively moderated by users, it incorporates, for example, 'chat' pages, 'visual media content-sharing', a directory, podcasting, weekly health advice, and travel diaries as well as general information about government mechanisms and best practice ideas, with the aim of creating a community of users, a 'virtual village.' It differs from, for example, the all-agency approaches taken by other intranets in its treatment of collaboration and the fostering of 'collective intelligence.' For example, New Zealand's Public Sector Intranet (PSI) is a secure interactive website for sharing content which is not accessible elsewhere. Its development is tied to the interoperability and transparency agenda of the New Zealand national government, and its registration and use is by voluntary subscription. Both the *Oxygen* and PSI intranets aim to promote good practice, and the sharing of information and development of networking skills.

In analysis of *Oxygen*, the aim is to identify why young professionals were encouraged to develop a restricted-access government intranet with social features, the media skills they bring, and which design features they find most compelling. The fact that young professionals in GoSA belong to a generation for whom the everyday making and sharing media content is part of their everyday lives is a key theme in the research. Using observations of online interactions, interviews with project developers and managers from *Oxygen*, access to archived data, and user-questionnaire findings, the study aimed to:

- a. ascertain the impact of particular 'social media' features of the intranet (i.e., features unrelated to the direct conduct of government work per se);
- b. trace connections, if they exist, between the adoption and use of the intranet, and the search for, and development of, better understandings of government in users;
- c. analyse protocols for, and examples of, collaboration and 'collective intelligence' at work in the target groups;
- d. understand better how intranets contribute to the transformative agenda of e-government.

The quick uptake by subscribers of *Oxygen* over 2007 prompts the questions: Are all subscribers media-savvy? Which design features do users find most compelling and attractive? What are they looking for? A key issue to be assessed is the impact that using the intranet has on professionals' expectations of the online pilots they construct for government-citizen relations.

2. UGC, prosumer-citizens and fragmenting cross-media literacies

The technical protocols for making media can be accessed through the many online self-training manuals (e.g. <http://www.ltrainOnline.org>). They are published by the new incarnations of the 'netizens' who believed information should be free. For example, Israel Hyman at Izzy Video offers a large number of tutorials on a donation-fee basis, at http://digg.com/videos/educational/Make_a_Podcast_A_10_Minute_Video_Tutorial). There are many other attractive sites offering visitors some technical training, in order to sell their own media tools. At a range of corporate webpages Nokia, Apple, and Sony, one can find video-training digital camera tutorials, and information about how to upload one's media content to what are called 'social media' sites. Particularly for the connected young, internet sites such as MySpace (Accessed in Australia, the site's logo is : MySpace – Australia : a Space for Friends), YouTube (YouTube is one of the most popular 'prosumer' video-sharing sites globally. ComScore gives figures of 100 million world wide video streams on YouTube (July, 2006). Facebook (Facebook, with a large student subscriber base across the world, describes itself as a 'social utility which connects you to the people around you), and Flickr (Flickr is a photo management and sharing site. The collaborative architecture of all four sites is routinely copied or adjusted for a range of 'collectively-owned' special interest content -sharing sites.) are popular online 'communities.' These social media sites are interactive, sustainable and rely on a gift-culture of sharing, and in the posting of material. In the content posted, anyone can see the shared interests, and a style of irreverent online behaviour. Ease of content-sharing is the key feature of these sites. The instructions for uploading, downloading, posting comments, hyperlinking, and voting on preferred rankings of content submitted by oneself and others are transparently available. The sites encourage participation, and anchor feelings of belonging and commitment to an invisible community of 'friends'. These global social sites have extraordinarily large memberships, many unique site visitors everyday and massive archives of searchable material. Teaching a large cohort of 'media-savvy' first-year students, as I do, is a daily lesson in just how far self-taught and sophisticated digital competencies have spread.

Across the media and business domains, there are new words for the phenomenon of dispersed interactivity between groups which were not traditionally connected. Participatory power includes the notion that a consumer may now become a 'prosumer' or 'producer'; and that the content produced by such a person acquires the pre-fix 'user-generated.' Anyone with access to a digital camera with professional features, or a mobile phone with adequate camera functionality can produce user-generated-content (UGC); and, if the phone is internet-enabled, prosumers can distribute what they have made on a global scale. The 'many' speak to 'many' with this media content of their own making. Mainstream institutions and agencies' links to social media sites are growing as the potential of user-participation is recognised. Social media's communicative power can be illustrated by the BBC's partnership with YouTube; the ex-British Prime Minister's political channel; the YouTube posting of John Howard's electoral reactions to the polls; the opposition leader, Kevin Rudd's use of Facebook and MySpace; and the U.S. Army's posting of YouTube recruitment videos.

Hillary Clinton's website, from the beginning of her campaign, has been strategically linked to all four of the social media environments listed above. Clinton's first video speech is a case in point : the viewer statistics for the YouTube '1984'-style remix of Clinton's personal address to the nation are ten times the number who have seen Clinton's official video in a YouTube context (and reportedly over 3 million have seen the spoof video globally in different sites across the internet)(Source: ComScore, Many2Many). This instance demonstrates the twin-edged sword of popular access to a global distribution platform, by anyone with the means to access, download, re-edit and re-post media content.

Mainstream losers in this global phenomenon are those institutions which do not adapt to the new interactive, on-demand Web 2.0 or mobile web practices, because communicative and political power is being mobilised in social media and collaborative online sites. The positive side of widely-known and productive strategies for creating online community and commitment – as evidenced by return visits by users, adopted techniques of content-sharing, the capacity to assemble people online, and address them once they are there – are lessons which government could learn in the online environment. The size and popularity of such activities has been recognised by the corporate world (Tapscott and Williams, 2007), drawn by the potential to develop efficient collaborative work spaces, but also the capacity to monetise social media spaces, through advertising to non-traditional audiences in non-traditional ways. A consumer report in 2001 predicted that people aged about 30 belong to a generation 'at home with fragmented media and the latest technologies, and is expected to will integrate the net into everyday life' (Gen Y, 2001). The trends to fragmenting interests and user control over distribution matter when one considers where the skills and commitment could come from for government reinvention through innovation, and the client-end of e-government practices.

3. Sustaining a (youthful) public service

In Australia, at national and state levels, there is a growing concern about the ageing workforce, and the necessary retention of younger people with leadership skills in the public service. 'Equity and Diversity', Chapter 5 of the Australian Public Service's (APS) State of the Service Report (online), identifies worrying trends in public service retention of younger workers. The APS Report notes that the APS 'increasingly relies' on workers aged 45 and over, that younger employees report lower overall levels of job satisfaction than older workers especially with senior managers and work cultures, and that younger employees are more likely to be employed on a non-ongoing basis.

It argues that though there is greater job mobility in the group they call Generation Y (using the consumer classification), and that the reasons for higher job turnover in this cohort need to be investigated and addressed. APS agencies are advised to make greater efforts to retain younger staff. Lynelle Briggs, the Public Service Commissioner noted in an Adelaide speech (March, 2007):

APS agencies need to look at how to make the work environment more attractive to young people. This is likely to cover a range of strategies, including providing opportunities to combine work and study; to develop skills; to do interesting work; and to put their skills into practice (Briggs, 2007).

She referred to some indicative factors including the fact that key skills were lacking despite the growth in the APS since 1996. In South Australia the upward trend was a little lower than the national average (8.1%). Nevertheless, in 2006 South Australia had 8180 employees, 6.1% of the national total (APS, 2006) although staff located there 'exhibited different development needs from Canberra.'

A need for key skills was growing greater in some areas. In 2004 one third of the agencies reported that the 'shortfalls in information technology, accounting and financial management were having a severe impact on their organisational ability.' In 2006 the difficulty of recruiting such people is up from 62% in 2004 to 88%. The issue of recruitment and retention is exacerbated by a general trend for the educated young to leave Adelaide and South Australia. The APS therefore is seen to need to turn itself quickly into an 'employer of choice' (Briggs, 2007) and Generation Y employees – future leaders of the public service if they can be retained – must be a key target of APS and GOSA strategic thinking on human resources. This retention concern is mirrored in the SA documents of the Community and Public Sector Union (CPSU/SA) over the last two years.

Oxygen was designed in part in response to these concerns.

4. *Oxygen*: 'Opportunities for the X and Y Generations'

'What is *Oxygen*? It is the breath of air the Public Service has been waiting for [...] This initiative represents an Australian first...' (OPE, GOSA)'

Oxygen is funded GoSA (the site licence is paid for by the Office of Premier and Cabinet, but it is designed, 'owned' and moderated by young public servants without the online surveillance of their senior managers. It arose out of a young people's group looking at work-issues across the sector and identifying identification, communication and support among others. They bid for problem-based internal project funding and won. *Oxygen* was likely to gain funding for two reasons: the first was that there had been buy-ins from the upper-

echelons for earlier prototypes and experiments. One of the first of these was an intranet, *Savvy*, launched in 2001, and designed to move discussion space to the online environment, for senior management groups seen as time-poor. At the time, the chosen demographic proved to be fairly low-skilled in terms of technoliteracies, to the extent that, according to one research respondent, some senior managers were known to have dictated their personal responses in ‘online discussions’ ‘over the shoulder’ of their secretaries, who then proceeded to type them in

The experiments to engage with the potential efficiencies of online discussion proceeded with refreshed designs and different demographics being involved over a four to five year period. A senior manager involved in these developments noted the trust and literacy required, and competitiveness entailed, in the move to online relationships at work, and concluded : ‘the dynamic of the group dictates the type of site.’

Young professionals in the public service have different work and social needs from their older colleagues. The making of a formal business case for the project came at a fortuitous time as a youth network pre-being able to make a difference in their chosen career immediately but also, in longer term, they thought about reinventing government with new ideas and ways of working. The intranet was designed for cross-service collaboration, networking and staff retention purposes, but it was also going to be fresh, enjoyable and satisfy the needs of individuals. Basic functionalities were modelled on an existing executive intranet, and the work began.

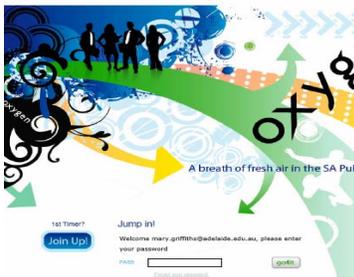


Figure 1: Oxygen login page screenshot (source DPC)



Figure 2: Oxygen login page design shot (source DPC)



Figure 3: Bettina Blefari and Ingrid Lundberg, *Oxygen* moderators (photo source: M. Griffiths)

4.1 *Oxygen* development : Not ‘all suits and boredom’ and ‘stuffed shirts’

The first decision was to move outside the public service for the build as had occurred with *Savvy*, thus reducing the overall costs. Key *Oxygen* developers knew already what would be likely to work with their aspirational age-group so they partnered with same-age peers – the ‘external creatives’ – in a top Australian interactive company *Kojo Interactive* located in Adelaide, to which government had outsourced previous

intranets (like *Savvy*). Kojo specialises in 'the production, management and deployment of rich visual interactive content' and its corporate website shows its global credentials: clients such as the BBC, Sony, Universal, Palace Films, Readers' Digest, NewsCorp, and Roadshow. With Kojo's 'street credibility,' the project was seen by all group members as sophisticated peer collaborative work, which drew upon shared knowledge of social networking sites, expectations of life in the city-state of Adelaide and, if not shared technical competencies, at least working knowledge of the uses of interactive media. Respondents said they expected something different, a place where 'fresh initiatives' could start. The development phase was completed quickly and cooperatively.

The media-savvy public servants who drove the project wanted to have a 'virtual village', an online social space which reflected their attitudes to life-work balance, and helped them in their public service careers. They envisaged a trusted environment where they could find out – from each other – the 'unwritten rules' of public service life, and other vital information: how to get something done, what to do to keep healthy while engaged in long hours of desktop work, how the government machine worked, and a host of legal, industrial and professional issues. As well, they wanted – for the estimated cost of AUD \$2.00 per member – to tackle the retention rate issue. Underneath what appear to be quite conventional navigation buttons, e.g., GovSpeak, Showcase!, was to be housed a wealth of other resource material suited to the generation and interests of the subscribers. Some examples of pages originally designed and still working on the site include : 'Muscle of the Month' (a site developer deployed her skills as a part-time aerobics instructor to good effect with medical diagrams and ergonomic exercise advice); an article on 'The Generational Mirage,' a study of perceptions of leadership by generation X and Y; reports of a conference on the 'quarter-life crisis' and advice on how to get a desired lifestyle by age 30; links to such sites as *GlamAdelaide*, a newszine for South Australian 'fashionistas'; and to discussion of two crucial South Australian water preservation and conservation issues - Lake Eyre and the Murray Darling Basin. The developers' aim was to make the site 'ideas-based', and a demonstration of the 'collective intelligence' technologies that regular Web 2.0 collaborators use on a regular basis.

The corporate design team used an existing ICE Content Management System for the site framework. The client brief was to 'connect all the SA government employees under 35 years of age and to provide a common arena wherein they can meet, learn, develop, and share information relevant to their lives and work, and eventually make a big impact on the SA government.'

Asked what was special about the brief, one developer thought the age-group presented both challenges and opportunities: 'This younger and more diverse demographic ... a more active community... the desire of users to be part of the communication and knowledge base building process.' He thought that the incorporation of interactivity, such as 'blogs, direct commenting on the articles, and new Web 2.0 technologies,' was crucial, because 'these types of users would start to expect these types of technologies, and content... Government isn't all suits and boredom.'

The developed site is thus data-rich, clean, and user-friendly, and the internal and external links work well. It has a creative high-end design and a professional, almost corporate, digital aesthetic. The content changes regularly, as there are enthusiastic 'champions' from the young people's management group who look after specific areas of the site, and kick-start interactivity if it slows down, for example, by posting questions or getting a discussion theme started. In this respect *Oxygen* shares features with an e-learning environment, its professional aims are monitored and facilitated by a leadership group. The facts that it is a restricted access intranet, and peer-run, are seen as key to its success. As one user commented, 'the reality is, if it isn't kept as a special interest group, bureaucracy will take over and the whole thing will likely stagnate.' The same user noted that the intranet had brought the young professionals' management group closer together.

A senior manager, interviewed later, endorsed this view by stating that the information flows in a distributed system are looser but equally reliable between peers, where trust and a 'club atmosphere' prevail.

Compliance with mandatory public service business practices and protocols noted by the Kojo team included, (selected items):

- Clearly displaying the GOSA logo on the home page and major pages;
- Displaying the department name prominently on the home page and major pages;
- Providing site specific search capability;
- Providing a Disclaimer notice (for) the site
- Displaying a copyright notice on each webpage;

- Ensuring that the site is cross-browser compatible;
- Using breadcrumbs to enhance ease of navigation;
- Ensuring that the online forms are easy to complete, accompanied by clear instructions, having all fields clearly labelled, providing validation for the form fields;
- Providing access to the Administrators of the site to update and publish content on the website and to moderate content on the discussion forums.

Among the (few) major development problems noted by an internal project manager was that getting an appropriate domain name had been difficult as the name was not seen as ‘government’ enough.

The innovators also met other regulatory barriers: the ‘under-35-only’ site needed a discrimination exemption from the Public Sector Management Act (1995) organised by Crown Law. Issues of privacy and confidentiality raised some anxieties too, but these were dealt with by ‘extensive consultation with Crown Law and the development of Terms and Conditions of Use’, again with the help of Crown Law. The intranet’s netiquette, the terms and conditions of engagement terms and were modified from those on YouTube’s etiquette site (comment form senior manager).

On the other hand, getting rapid chief executive support for autonomous management of the site facilitated its progress and rapid development. Senior managers were said to be ‘excited’ about the experiment. The intranet, which (from receipt of funding) had taken three months to develop including the one week pilot, was launched at an appropriately festive party where the two ‘body models’ attending were fully painted with the attractive site graphics. Senior managers attended the party, although there was reportedly an anxiety that the inclusion of the models might attract unwelcome press attention. Managers had seen the site design, but not the intranet in action, as they are not part of the subscription base. The intranet, totally owned, moderated and serviced by the young professionals’ subscriber-base, operates on senior managers’ trust in their junior colleagues. The password-only intranet went live in December, 2006. Memberships and page hits surged quickly (see below). The management group consists of 21 representatives from various agencies and departments as diverse as the Attorney General’s, community, and primary industry. Member photographs are published along with details of their agency affiliation to assist intranet users.

Connections exist between the adoption and use of the intranet, and the search for, and development of, better understandings of government in users. Protocols for, and examples of, collaboration and ‘collective intelligence’ are present in the target group. They became evident in early comment to various parts of the site.

5. Time in the ‘virtual village’

Observer rights were granted by *Oxygen* management, and extended from February to November, 2007. To interest possible research participants, an explanatory notice was posted on the first News page of the intranet, and an invitation extended for user participation in the research project. Researcher access to all areas visible to regular users was allowed, and all content could be routinely downloaded except, for legal proscriptions, GoSA letterhead and templates. Time spent observing online activity allowed assessment of the most interactive and ideas-driven areas of the site. Three key groups were then asked to give qualitative feedback on the site : developers (internal and external); users; and, separately, senior managers were asked to respond to questions formulated around the business case for its development; and their estimates of the potential knock-on effect on retention, and on developing professional skills and leadership in younger staff.

The official login data shows that logins increased steadily over the year, almost doubling by the end of September, 2007.

Table 1: Logins and page hits

Date	# Logins	Total Page Hits
12 Dec 06 - 31 Dec 06	518	13, 243
1 Jan 07 - 31 Jan 07	980	28, 198
1 Feb 07 - 28 Feb 07	994	18, 261
1 Mar 07 - 31 Mar 07	1, 134	18, 533
1 Apr 07 - 30 Apr 07	1, 021	17, 128
1 May 07 - 31 May 07	857	10, 907
1 Jun 07 - 31 Jun 07	1, 715	24, 560
1 Jul 07 - 31 Jul 07	1, 267	15, 509

1 Aug 07 - 31 Aug 07	1,809	20, 047
1 Sep 07 - 30 Sep 07	1,023	13, 322

On the other hand, the total page hits fluctuated over the months, showing disparities of about 18,000 page hits between the lowest and highest hit rates. Page hits peaked in January and June. The surges in hits could be explained by the interest shown in specific email notifications of news or important events sent to users' work accounts by Oxygen managers. Table 2 below correlates dates of surges with the content of emails.

Table 2: Email prompts/ surges in page hits

5 Feb and 20 Feb	Updates on Oxygen content
7 Mar and 30 Mar	Updates
16 Apr and 23 Apr	Opening, and reminder of competition
10 May	Murray-Darling Basin Commission Opportunity
1 June	Public Sector Week ideas (regional/remote area employee attractors)
11 July	Call for volunteers for another agency's schools-based program
August	1 st : Call for internal project volunteers (e.g. Young Ambassadors Program) 3 rd : Competition to re-name Public Sector Week (\$400 prize) 23 rd : Seeking artists, musicians, graphic designers 28 th : Aboriginal Reconciliation discussion
14 September	Start Dreams website, and OxyNet launch (off-line networking)

Over the first year of operation, certain pages were visited more often, and built up a solid following. The tables below, of the top 10 pages, demonstrate that 'Talk' and 'Splash' were the most visited, followed by 'Home' and 'News.' Of the up to 74 page individual hits possible, the most popular social pages proved to be 'Lifestyle' and 'Day in the Life'; and the most regularly visited work-related ones were 'Directory', 'Calendar', and 'Career Gear.' Content on the site can be divided into 'information-sharing' and 'work-networking,' and social interactions, including 'creative activities' and 'self-presentational work.' All components can be seen to contribute to the broader aim of supporting the re-invention of government and they are integrated in function. The content of individual responses to questionnaires and interviews act as a counterpoint to the metrics of logins and page hits in these two tables.

Table 3: 10 most popular pages Dec 2006 - May, 2007

Top 10	Dec 12-31 13243	To Jan 31 28198	To Feb 28 18261	To Mar 31 18533	To Apr 30 17128	To May31 10907
1	Talk 1723	Talk 3961	Talk 4224	Talk 6595	Talk 5835	Talk 3758
2	Splash 1428	Splash 3280	Splash 2513	Splash 2157	Splash 1951	Splash 1574
3	Registration 1294	Registration 3088	Home 1609	Home 1656	Home 1487	Home 1324
4	Home 1189	Directory 2577	News 1400	News 1598	Lifestyle 1156	News 700
5	Disclaimer 980	Disclaimer 2353	Directory 1097	Lifestyle 660	News 1125	Lifestyle 277
6	News 900	Home 2215	Registration 942	Directory 609	Directory 624	CareerGear 263
7	Directory 822	News 1447	Disclaimer 896	Day in Life 465	Day in Life 425	Animal Lovers 229
8	Calendar 470	Day in Life 1070	Voting 709	Registration 400	Travel 367	Directory 223
9	Day in Life 458	Calendar 927	Calendar 512	Disclaimer 373	Career Gear 292	Jobs 216
10	CareerGear 351	CareerGear 715	Day in Life 494	CareerGear 329	Bragging Rights 247	Day in Life 189

Table 4: 10 most popular pages June 2007- September, 2007

Top 10	To May31 10907	To Jun 30 24560	To Jul 31 15509	To Aug 31 20047	To Sept 30 13322
1	Talk 3758	Talk 6978	Talk 5975	Talk 5716	Talk 6917

2	Splash 1574	Splash 3873	Splash 2311	Splash 3077	Splash 1513
3	Home 1324	Home 2382	Home 1681	Home 2496	Home 1443
4	News 700	News 2030	News 1533	News 2101	News 923
5	Lifestyle 277	Registration 1178	Registration 370	Directory 829	Directory 342
6	CareerGear 263	Directory 1025	Directory 363	Registration 510	Lifestyle 166
7	Animal Lovers 229	Disclaimer 999	Disclaimer 311	Disclaimer 452	Disclaimer 162
8	Directory 223	Day in Life 660	Lifestyle 306	Lifestyle 441	Registration 152
9	Jobs 216	Lifestyle 515	Calendar 205	Day in Life 373	Voting 112
10	Day in Life 189	Calendar 458	CareerGear 202	CareerGear 294	CareerGear 109

5.1.1 Information-Sharing : Professional Networking Pages – Discussion

- Talk
- News
- Career Gear
- The Machinery
- Professional Development
- The Unwritten Rules
- It's Bureaucracy Gone Mad!

The information-sharing ranges from provision of the relevant hyperlinks to government training programs, to the elementary and clear educational information about government structures in 'The Machinery,' to exchanges of corridor-style know-how such as 'A person who notices a resource is near empty or empty notifies the relevant person to order more, 'Not just anyone can approve invoices, leave forms, contracts etc,' or,

"Postage Paid Australia" stamps on business envelopes can't simply to be placed in a red post box out on the street without having gone through the department's mailroom. They aren't really paid yet (well in SA government anyway).'

Even when people are identifying frustrations with bureaucratic procedures, the language register is conversational, polite, and professionally committed to making improvements. This feature illustrates the stakeholder identification with such a special interest intranet. In this it shares similar characteristics with online professional communities dedicated to, say, OpenSource development or other problem-solving participatory groups operating in Web 2 (Wink, Wordpress, Demo Net, Social Media). The public service is represented by subscribers in this group of pages as reasonably supportive organisation, but as one user said 'I like to know there are other young people around government working stuff out day today.'

Oxygen is thus contributing to the grooming of its members for self-reflexive thinking about government, the service, and for eventual senior policy responsibilities, and major project management. One respondent cited the best idea on Oxygen was 'forming a cross government group to discuss the great water debate.' An external developer commenting on what he had learnt about government during the build suggested :

Oxygen shows how government encourages and provides opportunities for fresh initiatives and encourages participation in the development and implementation of community expectations through responsive programs and practices.'

In a typical comment, the subscription base is seen as 'interested in getting Networked , finding out what is happening beyond their agency and departments. The 'freedom of expression' was appreciated by respondents. It was noted by a user talking issue with unnecessary internal blocks to decision-making that

'some information' (e.g., 'horror stories of bureaucracy') could not be shared in a public forum, and yet were useful for internal debate and improvement strategies.

Another feature well-regarded by users was summarised by a user as 'being able to put up content which is, in my professional opinion, suitable, that I don't have to "get past" a large hierarchy to contribute.'

This participant added:

Having worked in the private sector for a spell, I quickly realised that the public sector more closely aligned with my values – a career in the public service provides the opportunity to positively influence society. Oxygen provides a mechanism for the next generation of decision-makers to progress through the ranks together – hopefully better connected and more open to collaboration across the artificial lines of bureaucracy than our predecessors. Oxygen is an innovation that uses increasingly common technology – it provides a mechanism to establish relationships and connections that might otherwise have only been built with long periods of service with frequent moving around. It seeks to open communication lines, improve efficiency through shared learning, teach responsibility by being self-regulating, provide a safe place to ask questions or have discussions about matters of interest. It seeks to become like oxygen – necessary and fundamental to life.

Significant issues impacting on retention were raised by participants, such as 'combining work and study, gaining permanency, disruptions caused by moving frequently across departments and so on.'

A comment relevant to the future expectation of sharing power with more entrenched groups is that 'mobilising opinion and support for internal change is easier when one has an already assembled group.' The power-base represented by *Oxygen* is an articulate professional group, who may use their mobilisation skills even more strategically in future, as they progress up the hierarchy of the public service.

5.1.2 Social Networking Pages : Creative Content and Activities – Discussion

- Directory
- A Day in the Life
- Lifestyle
- GlamAdelaide
- Travel
- Social Calendar
- VolleyBall Team
- Comic Relief : Progressive Story
- Muscle of the Month
- Win Some Haigh's Chocolates... name a better online recruitment tool...
- Generations at Work – the Debate
- Launch Yourself – National Youth Week

A reason for return visits most frequently cited by users is the social networking opportunity provided by the intranet. This reason was referred to most often by those professionals located in small, or non-city, agencies. 'Directory' - a list of subscribers and their agency affiliations at subscription time - is consistently high on the list of top-ranking pages, as it contains useful information about, for example, potential contacts in other agencies. It keeps *Oxygen* members knowledgeable about personnel changes, and also about departmental hierarchies but, like 'A Day in the Life' (which also supplies cross-agency information and informal training about what is involved in each role in government), it can also be used as a social networking tool. The rest of the pages on the above list are directly linked to the ability to establish (or check up on) contacts and friends, or to the dissemination of useful hints for personal improvement and entertainment activities.

Oxygen is well on the way to being seen as a 'virtual village' by most respondents, although two noted that it is not yet one. These two users, who also cited more extensive social networking experience than others, explain that more time is needed to develop that 'village' profile, and that the provision of more up-to-date information about subscribers would help. This is a typical flaw in website or intranet build: the need to update routine information is a key factor in deciding return visits by users. To make this work, the activity

requires an automated update feature in the original build, and enough users with the social media literacy to see the need for regular updates.

The above list indicates the range of social content and opportunities for people to contribute. Nevertheless, one user thought that ‘the concept of *Oxygen* is great but I think the site is still very-Government looking.’ A majority of participants cited *Lifestyle* as a favourite area to visit and appreciated the image of the public service as contemporary and lively (‘Lifestyle’ did not figure quite as highly in the page metrics.) Writing a short one-two line entry to ‘The Progressive Story’ is seen, by those nominating it as a favourite page, as a short ‘down-time’ activity: the equivalent of a regular work break, and as having an entertainment function.

6. Sustainability, return visits

Developers and subscribers note that more articles (and content generally) are necessary: online community websites are content-hungry. Other improvement and subscriber-retention suggestions were: that the text-based discussions be accompanied by some of the tools used in e-learning environment discussion boards, such as the photographs of contributors to assist recognition and for community-building. One user suggested that the ‘Directory’ should include photographs. There was thought to be a good range of ‘Lifestyle’ UGC, from travel stories to opinion to reports of events: this is the kind of content which subscribers find retains their general interest. Users noted that they return to the site regularly – usually once or twice a week, but sometimes as often as once a day for a few minutes. This was seen by one employee as being ‘part of my work’ because of the information aspects of the site, networking opportunities and ideas. One user commented that visiting *Oxygen* during work time made her feel a little uneasy.

Higher frequencies of visits depend on the significance of the reason, e.g., a lively and salient discussion thread, an urgent request for advice on an agency- or work-related issue, or a particularly comic turn in a progressive story. Developers, rather than users, noted that their knowledge of government had increased. Reasons for this difference could be because of the different number of years of service amongst subscribers, and the fact that developers had to learn about government before posting links for other peers. In the case of the discussion thread ‘It’s bureaucracy gone mad!’ a user reported that the Government Reform Commission is now canvassing *Oxygen* users on ways to streamline approvals and reporting.

All respondents had favourite places where they spent time online, threads in the discussion boards being frequently mentioned. The site’s user-friendliness is thought to have developed skills in a small number who thought of themselves as IT-challenged, although the majority of the respondents considered themselves as ‘media-savvy’, i.e., deploying skills they already had. The fact that the intranet is exclusively for a special interest group is another key factor in its popularity amongst research participants. A user thought that the intranet should have at least ‘one exclusive hook’ in addition to the age policy, to be able to recruit and retain its subscription base.

Initial fears (about an unruly and possibly litigious online space) arising out of a ‘risk-averse’ culture in the public service have not been borne out. The disclaimers and privacy agreements, the moderation protocols – and importantly – the professional attitudes of the subscriber base ensure that as yet there have been no infringements of netiquette or public service values by the ‘trolling’ and disruptive behaviour seen so often on public social media sites. One user mentioned that the lack of anonymity might be off-putting for some subscribers.

A high personal level of commitment was registered by the *Oxygen* developer group who are active in seeking new roles for the intranet. A senior management representative interviewed about her perspective on the intranet’s future remit thought its specificity was going to prove a good model for future intranet development.

7. Reinvention potential and transferability to the public domain

To summarise: the group of respondents in the pilot study was representative of the groups of *Oxygen* users, developers and managers. The rhetoric surrounding *Oxygen* as ‘a breath of fresh air’ is borne out by the reality of login and page hits. The surges in hits can be explained by factors such as email prompts, interest in important or newsworthy debates or events, and by participation in wider discussions. A youthful public service which looks outwards to the city and region to which it belongs and which builds internal collegiality through social networking and shared experience is laying down foundations for future new ways for not only management to function, but for government to be transformed.

Oxygen represents a productive approach to the reinvention of government by and for those participating in change management. It illustrates that employees derive satisfaction from working on their own initiative, with trust and support at senior levels. Significantly, the initiative is about releasing senior silo-power and building youth capacity through innovative government and generational partnerships. It has worked as a sustainable intranet pilot because its design taps into younger professionals' existing experience and knowledge of UGC, and the online networking protocols and values of social media. The intranet is about what matters to them. It empowers them to use Web 2.0 'prosumer' skills to improve their cohort's experience of work-culture. The importance of supporting a young professional cohort of public servants to innovate, by themselves, and self-identify as leaders, is a key factor in long-term organisational change. Younger people who leave the public service cite the 'management culture' in sufficient numbers for the reason to be officially noted as 'of concern.'

For the civic domain, the intranet's uptake of the regular online social media and cross-media features enjoyed by many Australian citizens (through the web, and increasingly in future through digital television) could be a lesson in how to build a 'savvy community' from smaller 'communities' committed to special interests or issues. Web 2.0 tools allow a level of interactivity and content upload that help subscribers to think of an online space as their own, and relationships made there as 'as real as F2F'.

When asked 'How do you think SA might improve its government-client online relationships?', research participant suggestions included the need for usability standards, a client focus, and participation in policy-formation in CBD and resources development. A few respondents did not reply to this question, but those who did suggested, for example,

Increase the information available to clients. Increase the number of transactions clients can perform online. Significantly reduce the number of websites to improve ease of access.

Showcase and GovSpeak might be transferred to a public arena.

By developing some user-friendly sites. Most of government is bureaucracy-driven, not client-driven. Governments often don't bother to ask what information people actually want to see.

I think the functionality of the (Oxygen) site can be transferred with people logging in to have access to information but also posting comments to discussion boards and using the voting tools.

It could be argued, however, that the intranet pilot's transferability potential cannot really be tested against the issue of general standards of literacy raised, for example, by West (2004) in relation to access and equity concerns. *Oxygen's* user group is not representative of the general population, but it is representative of young educated professionals. Perhaps it is in the matching of groups to appropriate communications technologies that the answer lies. After all, in West's words, 'One of the virtues of technology The Internet does not care who is using the technology or even to what purpose it is put' (41).

The South Australian government faces the challenge of finding the means to share power appropriately in a digital age where specific kinds of web-integrated interactivity are expected by groups of media-savvy and informed citizens. *Oxygen* illustrates an innovative way of addressing a governance problem (retention rates and work culture); of mobilising, enabling and supporting a particular group (young media-savvy professionals); and of deploying resources (for intranet innovation) to aggregate a group's 'collective intelligence.'

Government's management of public online domains needs to include :

- a. appropriate design support, and build schedules;
- b. recognition of the specificity of the communication tools and infrastructure chosen for each group's development and activities;
- c. the setting of users' online goals;
- d. the importance to the users of their shared *offline* environments;
- e. the delegation to users of choice and resources in developing their online space;
- f. the care taken to build communal trust;
- g. the willingness to use 'non-traditional' online components, if they work successfully in other domains.

The key lesson to be learned is that the sustainability of the online communities formed through the use of social networking is likely in no small way to be linked to levels of autonomy, self-government and lack of external interference.

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