

Petter Bae Brandtzæg  
Marika Lüders

# eCitizen2.0

The ordinary citizen as a supplier  
of public-sector information



A SINTEF-report written on behalf of the Ministry of Government  
Administration and Reform.  
ISBN: 978-82-14-04411-9

# Table of contents

|   |    |
|---|----|
| <b>Summary</b> .....  | 5  |
| <b>Executive summary</b> .....  | 6  |
| <b>1. Introduction</b> .....  | 11 |
| 1.1 The potential for new information .....   | 11 |
| 1.3 The most important services of the future .....   | 11 |
| 1.4 Difficult public-sector portals .....   | 11 |
| 1.5 Citizens help citizens .....  | 12 |
| 1.6 Growing demands for openness and efficiency .....   | 12 |
| 1.7 The digital information leap .....  | 12 |
| <b>2. The aims, methods and structure of this report</b> .....                                  | 13 |
| 2.1 Aims .....  | 13 |
| 2.3 Structure .....   | 13 |
| <b>3. What is user-generated content?</b> .....   | 15 |
| 3.1 Different types of user-generated content (UGC) .....                                       | 15 |
| 3.2 Platforms for user-generated content .....  | 16 |
| <b>4. Status and trends in social networking sites in Norway</b> .....                          | 17 |
| 4.1 Norwegian social networking sites .....   | 18 |
| 4.2 Trends in social networking sites.....  | 22 |
| 4.3 Summary and significance for public-sector ICT policy .....                                 | 24 |
| <b>5. The Internet culture of participation and democracy</b> .....                             | 25 |
| 5.1 Models of democracy.....  | 25 |
| 5.2 The culture of participation and digital divides .....                                      | 26 |
| 5.3 Summary .....   | 26 |
| <b>6. The study: user behaviour, user-generated content and public-sector information</b> ..... | 27 |
| 6.1 Methods.....  | 27 |
| 6.2 Results.....  | 27 |
| 6.3 Summary of new empirical data .....   | 33 |
| <b>7. Survey of international trends</b> .....  | 33 |
| 7.1 The use of social media by well-known politicians.....                                      | 34 |
| 7.2 User-generated initiatives from various international eGov bodies.....                      | 37 |
| 7.3 User-generated services created by eGovgeeks and non-public sector participants .....       | 39 |
| 7.4 Citizen journalism.....   | 42 |
| 7.5 Central reports on eGov and web 2.0.....  | 43 |
| 7.6 Summary of international trends.....  | 45 |
| <b>8. The authorities and access to data</b> .....  | 45 |

|   |    |
|---|----|
| <b>9. Dimensions of conflict – potential and challenges</b> ..... | 47 |
| <b>10. Ideas and perspectives</b> .....                           | 52 |
| 10.1 WikiNorge.no.....  | 52 |
| 10.2 Openness and reusable data.....                              | 52 |
| 10.3 Pilot programmes.....  | 53 |
| 10.4 The beta culture.....  | 53 |
| 10.5 Experimenting and taking chances.....                        | 54 |
| 10.6 Sharing public-sector information on all channels.....       | 54 |
| 10.7 Politicians on social networking sites.....                  | 54 |
| <b>11. Conclusions</b> .....                                      | 55 |
| <b>12. Acknowledgement</b> .....                                  | 56 |
| <b>13. References</b> .....                                       | 57 |
| <b>14. Appendix</b> .....   | 59 |

## Figures and tables

|   |    |
|---|----|
| Figure 1. Types of user-generated content.....  | 15 |
| Figure 2. Platforms for user-generated content.....   | 16 |
| Figure 3. Simplified time-line for some Norwegian social<br>networking sites.....   | 18 |
| Figure 4. Trends in social networking sites.....  | 22 |
| Figure 5. Percentage of respondents who have obtained<br>public-sector information via the Internet.....  | 28 |
| Figure 6. Responses to the statement: «Information could<br>be easily and rapidly found.».....  | 28 |
| Figure 7. Responses to the statement: «I found the<br>information easy to understand.».....   | 29 |
| Figure 8. Percentage of respondents who reported that they<br>had acquired public-sector information from<br>user-generated fora on the Internet..... | 29 |
| Figure 9. Proportion who use social networking sites.....   | 30 |
| Figure 10. Percentage of social networking site users who have<br>received various types of information.....  | 30 |
| Figure 11. Percentage of social networking site users who<br>have contributed various types of information.....                                       | 31 |
| Figure 12. «I find it useful to have access to public-sector<br>information via social networking sites.».....  | 31 |
| Figure 13. Facebook usage in percent.....   | 32 |
| Figure 14. Wikipedia usage in percent.....  | 32 |
| Figure 15. The White House and No. 10 Downing St. on Twitter.....   | 35 |
| Figure 16. From presidential candidate Barack Obama’s<br>MySpace profile.....   | 36 |
| Figure 17. FixMyStreet.....   | 40 |
| Table 1. Top 25 countries on Facebook.....  | 17 |
| Table 2. Overview of Norwegian social networking sites.....   | 36 |
| Table 3. Possibilities and challenges of increased citizen<br>participation.....  | 40 |

## Summary

The growth of new technologies and ways of using them has led to rapid changes in the public-sector information and services situation. Today, 17 percent of Internet users regularly download public-sector information from user-generated fora on the Internet. This report has studied these changes with the aim of developing new ideas and perspectives for the eGov sector, in which citizens (eCitizen2.0) are also suppliers of services and producers of public-sector information. We have studied the following topics:

- \* The scope of and trends in social networking sites and user-generated content in Norway.
- \* Norwegian Internet users' involvement in public-sector information in user-generated fora.
- \* The challenges of access to and re-use of public-sector information on the Internet.
- \* International trends in eGov services and user-generated public-sector services.

In order to benefit from these new user trends, the authorities must regard citizens to a greater extent as partners rather than merely passive recipients of information. We propose the following measures:

- \* A WikiNorge.no – a wikipedia for public-sector information
- \* Core aspects of public-sector data should be made accessible and re-usable
- \* eGov should collaborate with both Norwegian and international «eGov geeks».

A new information and communication technology (ICT) policy would have several advantages, including greater participation and involvement on the part of the general public, more openness, more user orientation, and greater eGov efficiency. The measures that we propose here imply a «digital information leap», and challenge the principles of the national authorities' ICT policies in general and their information policy in particular.

## Executive summary

This report has been written on behalf of the Norwegian Ministry of Government Administration and Reform. The project lasted from February until August 2008, and had the aim of generating ideas and perspectives for how national ICT policy and public-sector information services could utilise applications of user-generated content on the Internet. The report is also one result of cooperation with other SINTEF projects: the EU CITIZEN MEDIA Social Change project (partly financed by the EU, IST, FP 6) and the Research Council of Norway's RECORD project.

The background for the project is technology development and the emerging participation of Internet users in terms of social interaction, content creation and sharing. This has led to a redefinition of the rules that underlie the dissemination of communication and information, also within the public sector. Today, «all» citizens can in principle produce and share information among themselves. The underlying premises of information dissemination have been turned upside down. Citizens themselves can play a role in determining the flow of information, which is the principle from which we derive the term eCitizen2.0. The definition of an eCitizen2.0 is one who produces and shares public-sector information with others via the Internet.

This reports offers a survey of national and international trends, in addition to empirical facts regarding how people today use new services for spreading and sharing information. The results indicate that central principles of state information policy will have to be modified. The authorities must dare to undertake a fundamental rethink of the mechanisms used to distribute public-sector information and services. The public sector and eGov need to a greater extent to take as their point of departure the fact that the ordinary citizen herself is capable of acting as a «supplier» of public-sector information and communication.

An important problem, however, is the lack of openness and access to public-sector data. Openness and easy access to public-sector data are essential if these are to be re-usable and be used in other contexts. Today, public-sector data are largely kept hidden from the ordinary citizen, either because openness costs money, because of old-fashioned attitudes, or because the data have been stored in such a way that they are neither available nor searchable by the general public.

According to this report, a number of initiatives currently under way in other countries point in the direction of a trend towards user-generated fora for public-sector information; such fora include FixMyStreet, TheyWorkForYou and EveryBlock. A very large number of interesting Web2.0 projects are the result of voluntary initiatives on the part of eGovgeeks, who integrate a number of sources of data (including public-sector information) to create new, local services based on combinations of different types of data. Social networking site use is also in the process of encompassing a larger proportion of the population. Both the usefulness of being a member of a social networking site and the variety of ways in which such communities are used have also become more varied in the course of the past few years.

Therefore, the authorities should take the following trends into account:

1. User participation
2. User-generated content
3. A culture of sharing among citizens
4. Collective intelligence and the knowledge of the masses
5. Decentralisation of information and services
6. Person-oriented niche information
7. Hyperlocal services
8. Greater openness and access to information
9. eGovgeeks who develop user-generated information services based on data from the public sector in combination with other information and services
10. Virtually direct communication between politicians and citizens.

As well as investigating general trends, SINTEF, aided by Norstat, has carried out a study of 2000 Internet users aged from 15 to 75, who are representative of the Internet population in May 2008. (More details of the sample and the limitations of the methodology involved can be found in section 6 of this report). The results of that study indicate that there is a movement of information content in the direction of new, user-generated contexts on the Internet. People are creating their own information to a greater extent, and are consuming information generated by other citizens.

- \* Younger user groups in the 15 – 30 age group are the least satisfied with access to public-sector information on the Internet.
- \* More than half (53%) of all Norwegian Internet users between 15 and 75 years of age use social networking sites such as MySpace, Facebook or Net-tby.
- \* Seventeen percent have accessed public-sector information or services in user-generated fora (blogs, social networking sites or discussion fora) on the Internet several times a year or more often.
- \* The youngest age-group (less than 30 years old) is the most active in finding public-sector information in new contexts.
- \* Social networking site users find useful access to various types of information in social networking sites ranging from cultural tips (53%), travel tips (40%), to advice about kindergartens, choice of schools and hospitals (12%), and health-related information (14%).
- \* Thirty percent of social networking site users think that it is useful to have access to public-sector information in social networking sites.
- \* Wikipedia and Facebook appear to be among the most popular user-generated fora at present. Almost 20% of the online population of Norway aged between 15 and 75 visit Facebook every day.

The underlying data and other reports referred to in this study all point to the fact that some parts of the population already obtain public-sector information in new ways via user-generated fora on the Internet. An important conclusion, therefore, is that the authorities cannot ignore this trend, but should rather exploit it to their own advantage. There are clear indications that the production and consumption of user-generated content is bound to increase. It may

therefore be appropriate for the public sector to start to cooperate with private developers (i.e. eGovgeeks) of user-generated services in order to help ensure that their content and data will be of as high quality as possible for the general public.

- \* Moving information and communication efforts from traditional information producers in the public sector to the general public could also have several other positive effects, such as:
- \* A reduction in the number of enquiries by members of the public and in the level of effort to supply information in general, since citizens will be able to help one another.
- \* More easily accessible and understandable public-sector information, since information will be offered both at local level (hyperlocal services) and in a more informal language, based on experience culled from the general public itself.
- \* To a greater extent, public-sector information can be produced in accordance with the needs and wishes of the general public, since it will be able to participate in the process of generating information.
- \* More participation in and engagement with public-sector information and services, because citizens themselves can contribute content and will be less isolated in their search for information.
- \* More openness on the part of the authorities, because public-sector information – research results, accounts, map data and measurements - can be made more accessible to the individual citizen.

All in all, more informal user-generated arenas for access to information can make the information supplied more useful and more accessible to certain groups of the general public. However, this would be at odds with our current information strategy in general, and ICT policy in particular. Today, access to public-sector information is based on search functions and one-way systems that expect citizens to know what sort of information they are looking for. A sharper focus on the citizens themselves and participant information generators could be obtained by means of the following measures:

- \* **WikiNorge:** Treating citizens as partners rather than as mere passive recipients of information: A radical proposal in this respect is that the state should set up Wiki.Norge.no; a «Wikipedia» for public-sector information., where citizens themselves could informally contribute and edit all imaginable sorts of public-sector information, from provisions for changing one's general practitioner, to the regulations about changing schools, to tax and social security regulations. A system of this sort could also support cooperation and mutual help between segments of the general public. This might lead to easier access to public-sector information for a large number of user groups who find the current system complex and difficult to understand.
- \* **Openness:** Public-sector information must be made freely available and reusable on the Internet. The authorities must open up and make available their own information, so that citizens and private operators/developers (eGovgeeks) can utilise, publish and share such information in new forms and contexts. This will require common and/or standardised publishing solutions for national and local authorities.

Mechanisms will have to be created that will enable large data-sets and metadata from the public sector (state and local) to be downloaded in order

to create alternative services (like TheyWorkForYou or EveryBlock). Such openness would, in other words, be capable of creating services and information that would be feed back to the authorities, via a combination of public-sector information (such as map data) and other available data (i.e. mashups), as well as giving citizens themselves the power to take responsibility and inform themselves. The authorities would therefore be able to put more resources into making available public-sector metadata and data in a universal format. To increase openness, motivation and support are crucial. Local governments should be encouraged to follow the path of information openness by providing support and motivation to those who do well.

- \* Pilot programmes: Establish pilot programmes within individual local services. For example, the authorities could start to collaborate with eGovgeeks on small but useful local services such can we find in other countries: Fix-MyStreet.com. Such services can help to involve citizens to a greater extent at local level. Digital Pioneers in The Netherlands and MySociety in the UK are projects from which the Norwegian authorities could learn.
- \* Beta Culture: Get to grips with the «Beta Culture». In addition to pilot programmes, we could also, as Rune Røsten pointed out at the 2008 FAD seminar on the social web (FAD, 2008), exploit the «Beta Culture» by involving at an early stage «super-users» of ideas and thinking about new public-sector services on a blog – a Norge.no/beta (such as NRKBeta already does to develop its net-site). A similar public-sector measure in the UK can be found on [www.showusabetterway.co.uk](http://www.showusabetterway.co.uk), where the following text can be read: «The UK Government wants to hear your ideas for new products that could improve the way public information is communicated». A beta net-site can also act as an arena for testing out beta versions of new public-sector services.
- \* Experiment and take chances. The points listed above emphasise the importance of daring to experiment. Internet services are characterised by their flexibility, which enables them to be relatively simply scaled up from functioning for small user groups to serving the great mass of the population. This is a different strategy from that usually employed by the authorities – complex services that are developed in the course of many years and that are not launched until they are «ready». More effort should be put into acting rapidly and being fresh.
- \* User involvement: Make political thinking, ideas and efforts visible by means of mobile, simple and inexpensive consumer technology. With the help of mobile and simple consumer technologies such as Twitter, profiled politicians can inform and update citizens about their day-to-day efforts on an ongoing basis, as well as letting them know about their thoughts and ideas in the course of 140 characters. This is already being done by leading US and British politicians. The point here is that the Prime Minister could more easily communicate with the general public.

These measures offer a number of additional challenges, such as:

1. Can we trust public-sector information that is generated and distributed by ordinary citizens?
2. Does Norway have a sufficiently large population to allow it to develop user-generated applications of this type (too few for «Crowdsourcing»)?
3. What about personal data protection?
4. Will this type of information create «echo chambers»?

5. Will such measures widen the digital divide rather than eliminating it?

Such challenges and dilemmas are therefore discussed in the course of this report.

# 1. Introduction

## 1.1 The potential for new information

This report introduces ideas and perspectives for how IT policy and public-sector information on the Internet could utilise user-generated content. According to the British report «The Power of Information» (Mayo & Steinberg, 2007), there is an enormous information potential for the authorities to move away from traditional one-way communication, by exploiting today's active user participation and information-sharing on the Internet. Ordinary citizens already participate actively in a number of ways: 1) As generators of content (blogs, wikis, photo- and video-sharing services), 2) Via evaluations and recommendations (Amazon, Del.icio.us, Furl), 3) As members of social networking sites (MySpace, Facebook, Nettby), 4) Through reputation and feedback (eBay, Tripadvisor, vibb.no), 5) Via collective intelligence and knowledge (Wikipedia).

## 1.2 eCitizen2.0

The background for these forms of user participation is that in the course of the past few years, developments in technology have made information and communication processes more symmetrical. This offers non-professional users (ordinary citizens) the possibility of controlling the flow of information on the Internet by contributing relevant important content within social contexts. The definition of an eCitizen2.0 is a citizen who produces and shares public-sector information with others via the Internet. This development has already gone far: the «voluntary» encyclopedia Wikipedia contains some 7.5 million articles (Wikipedia, 2008). Within an extremely short period of time, the growth of social networking sites such as Facebook and Nettby has reinforced this trend by further simplifying the tools needed for user-generated content and social processes. Social cooperation and content-sharing on the Internet have thus become a natural part of the pattern of Internet use of more and more citizens (Brandtzæg, 2007).

## 1.3 The most important services of the future

The European technology platform Networked Electronic Media (NEM) has predicted that Internet services and applications for user-generated content will be the most important services of the future. For this reason, it is important to find out whether such services could also be used by Norway's public sector. It is conceivable that such an approach could mean savings for the authorities by moving work from producers of information to its users. At the same time, such a trend could help to reinforce the capacity of the ordinary citizen for self-help, control and involvement. Finally, we might assume that members of the public would obtain better insight into political processes and could improve their chances of finding relevant information by themselves becoming information contributors\*.

## 1.4 Difficult public-sector portals

For the citizen in search of information, Internet sites such as Norge.no and minside.no may be the first steps towards important public-sector information. These sites are based on search functions and one-way systems that expect the citizen to know what sort of information she is looking for – i.e. traditional

---

\* Habermas (Habermas, 2006, [1962] 1989) has for example uttered concern with the public sphere being inhibited by a media-society strongly dominated by the commercial market. Increased user-participation and online debates could be a healthy counterbalance towards the hierarchically structured public.

one-way communication systems. These sites were not developed with the aim of incorporating the experiences and points of view of citizens, and for many users, access to information is extremely limited, as a result of the bureaucratic terminology they employ. For many people, the terminology and the ways in which the authorities express things can be distancing. Information provided by citizens themselves will largely be experience-based knowledge and information, which can more easily communicate the benefits and an understanding of individual public-sector services. The information on public-sector portals has also been described as being difficult to navigate (Natvig, 2007). A central challenge for large integrated public-sector portals such as MinSide, but also at international level, has therefore been that they are used to only a limited extent by the general public (Gartner, 2007).

### 1.5 Citizens help citizens

The need for, and access to, public-sector information are probably more complex problems than ever before. Not all citizens know what information they need, and they therefore need support and help with the process of gathering information. Such help and support may be available through other citizens. However, this would require information and communication efforts to be moved from traditional top-down information producers to the grassroots (ordinary citizens); i.e. eCitizen2.0. However, the question is how this can be done, and what challenges and potential dilemmas the process might create.

### 1.6 Growing demands for openness and efficiency

«eNorge 2009 – det digitale spranget» (FAD, 2005:2) emphasises that «the Government wishes to see a knowledge society in which everyone can participate and in which the potential of information technology is fully exploited». However, «eNorge 2009» does not focus on integration with social networking sites and user-generated services, but rather underlines the visions and aims of minside.no. Today, three years later, it would be more appropriate for the Norwegian public sector to consider the potential that arises when the general public become co-producers of relevant public information. Exploiting the potential of web2.0 technologies and user-generated content is an important route to take, also in order to meet demands for more openness and efficiency. This is pointed out in the report «Gov 2.0: Wikinomics, Government & Democracy» by Don Tapscott, Anthony Williams and Dan Herman (2007): «If governments are to ensure their relevance and authority, they must move quickly to meet rising expectations for openness, accountability, effectiveness and efficiency in the public sector» (6).

### 1.7 The digital information leap

Technological development and changes in user habits have meant, in other words, that strategic documents that are only a few years old are no longer fully relevant. The aims and principles of «Information policy for the national authorities» (AAD, 2001), for example, describe neither the potential of information openness, information sharing nor the ability of users to participate actively and generate information. Nor is this surprising, since this report was written in 2001. Perhaps we now need to make the digital information leap?

## 2. The aims, methods and structure of this report

The aim of this report is to survey what new media developments in the shape of wikis, social networking sites and user-generated content\* can mean for the authorities' information policy aims and principles. A central question for this project is how the public sector can exploit users as active participants and information contributors, or to put it in other words: *Can the public sector utilize this new technology, as well as the resources and voluntary spirit of ordinary citizens and eGovgeeks as potential producers of public-sector information and services, and if so, how?* The rest of this section describes the aims, methods and structure of this report.

### 2.1 Aims

The aim of this report is the following: To develop ideas and perspective for how public-sector information service can exploit greater user participation and alternative eGov services. This will be done via the following sub-goals:

- \* To survey international trends and best practice and identify what we can learn from existing user-generated content and alternative eGov services.
- \* To describe the potential and challenges related to eCitizen2.0.
- \* To acquire new empirical knowledge of the production and consumption of user-generated content by the general public.

### 2.2 Methods

The report is based on information gathered for the most part by means of two methods.

- \* Information searches on the Internet. Comprehensive searches were performed on the Internet in order to garner knowledge of national and international trends, best practice with regard to user-generated content, and how these can be exploited by the public sector. We also carried out literature searches for relevant research reports, using Google and Google Scholar, under, for example, the following search terms: egov 2.0, government 2.0, community information 2.0, user-generated content and government. For a detailed overview of the relevant references, please go to <http://del.icio.us/petterbb/FAD>. In order to obtain information about Norwegian social networking sites, we contacted social networking sites owners by email and telephone, and made use of information that had been published on individual social networking site sites.
- \* Questionnaire survey: a survey of the general public's use and experience of public-sector information and user-generated content, based on a sample of representative Norwegian Internet users (n=2000) aged 15 to 75. More detailed information about this method is provided in section 6 of this report.

### 2.3 Structure

The structure of the report is as follows:

Section 3 defines the concepts employed; a run-through of the concept of «user-generated content and information».

Section 4 describes trends in social networking sites and their status in Norway.

---

\* These technologies are often referred to as web 2.0 technologies (O'Reilly, 2005; Osimo, 2008), but as Osimo (2007) emphasises in a blog-post «Web 2.0 is not only a technology, but also an attitude towards openness, transparency, many-to-many interaction, users as producers (...)».

Section 5 relates the trend towards increased use of social networking sites and user-generated content to relevant models of democracy.

Section 6 includes a survey of new empirical evidence obtained by SINTEF via a questionnaire survey carried out in May 2008.

Section 7 is a survey of international trends and of examples of private- and public-sector initiatives, in which new applications have been adopted. The report focuses particularly on examples in which citizens themselves have created «public services» based on the re-use of data from the public sector and other types of data, as well as data supplied by the users themselves. This section also includes a survey of some important research reports in this area.

Section 8 offers a brief description of the availability of data from the authorities.

Section 9 is a description of a number of dimensions of conflict related to the potential and challenges of user-generated content.

Section 10 summarises and describes ideas and perspectives regarding how the authorities and the public sector could exploit these new possibilities.

### 3. What is user-generated content?

User-generated or user-created content is such a recently coined expression that an agreed definition does not yet exist. The OECD (2007) defines content as «user-generated» if it is produced by non-professional persons (i.e. amateurs), as opposed to professional media producers. User-generated content also refers to: 1) Content made public via the Internet, 2) that reflects a certain degree of creative effort, and 3) that has been created outwith professional routines and practices.

Another characteristic of user-generated content is that it is in continuous change and is often created by people in cooperation, perhaps with the aid of «wiki» technology\*. An example of this dynamic is the articles in Wikipedia, to which users continually return in order to edit their content.

#### 3.1 Different types of user-generated content (UGC)

We can refer to different types of user-generated content (Figure 1): text, photos/images, music/audio and film/video.

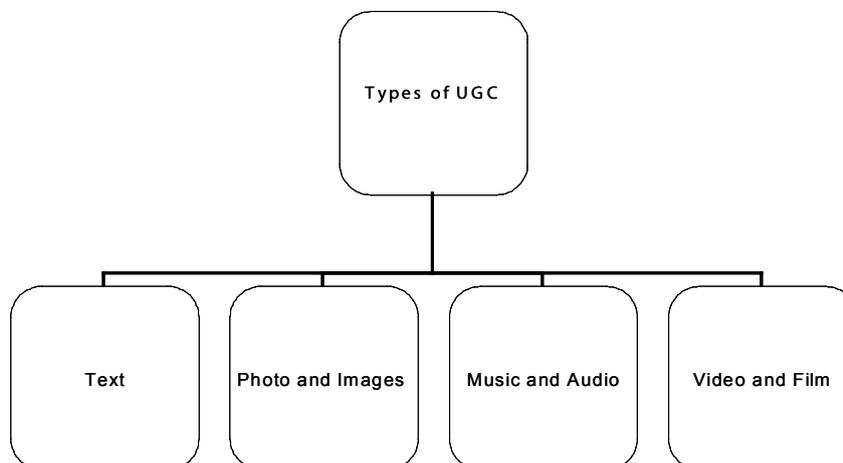


Figure 1. Types of user-generated content (OECD, 2007)

Text, visual and audio-visual expressions are being combined to an ever greater extent, but it is still simpler to post text content than other modes of expression on the Internet. Most people who have access to the Internet produce text content. Photos and other types of image are also uploaded by many people, but this type of user-generated content is still not as common as text. Audio and video are uploaded by relatively few people; possibly 2 – 3 percent, according to a study of social networking site users in 2007 (Brandtzæg & Heim, 2007). There are many potential reasons for this, which we do not discuss here.

User-generated content on the Internet is often seen in the context of «rich media content» (multimodal and interactive media). The OECD report (p. 32: 2007) mentions text, images, audio and video as different forms or modalities of user-generated content, but also distinguishes between different categories of content:

- \* Citizen journalism: journalism produced by ordinary citizens (amateur journalists) and non-professional journalists.
- \* Learning content: content produced by universities and schools and published on the Internet for educational purposes.
- \* Mobile content: content created using a mobile telephone or similar device,

\* An important principle of «wiki» technology is that anyone who has access at any time can edit-page content. Since content is developed in collaboration, the effort involved is more efficient than if individuals had sat and written their own individual collections of texts or web pages.

such as text messages (SMS), multi-media messages (MMS), photos and videos, and often uploaded to the Internet.

- \* Virtual content: content generated in a virtual context, often 3D environments in which the users are avatars; i.e. animated figures. Typical example of this type of content include Second Life and World of Warcraft.

### 3.2 Platforms for user-generated content

As well as types of user-generated content, we can also distinguish between the different platforms on which it is uploaded and shared with other users (Figure 2; see also Dutton & Peltu, 2007, for an alternative presentation of what they call different Web2.0 genres). Nevertheless, it is important to point out that the content that is published and tagged on these platforms was not necessarily originally created by the person who uploaded it. For example, content posted on YouTube or MySpace is often professional content that has been copied and in many cases published illegally by non-professional users.

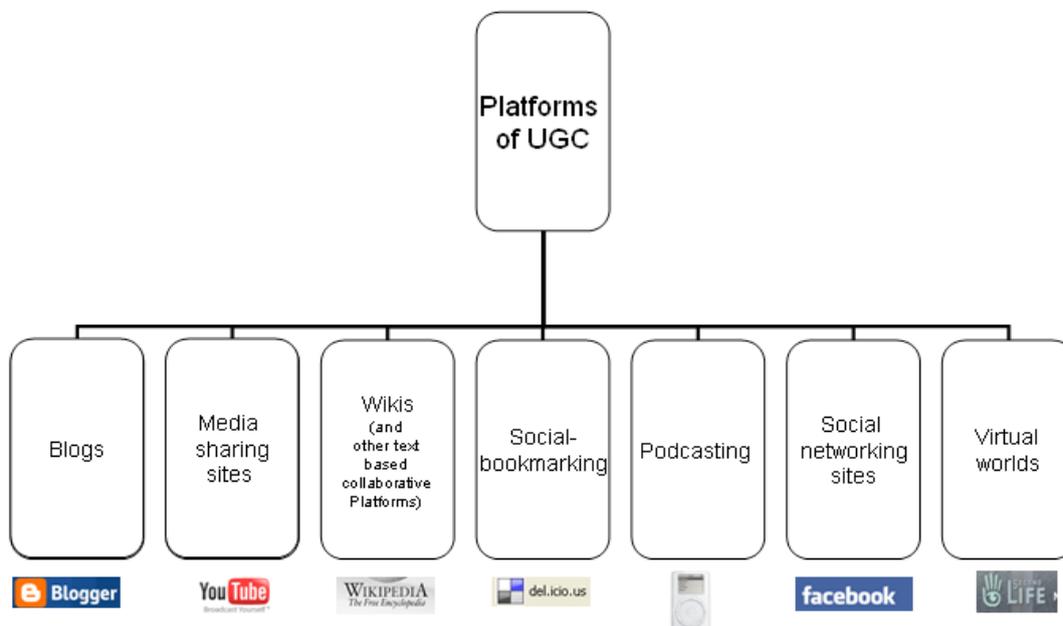


Figure 2. Platforms for user-generated content (OECD, 2007).

### 3.3 User-generated content and public-sector information

In this report, «public-sector information» is understood to refer to information posted on the Internet concerning the public sector. Information of this sort can also be generated, produced and shared by the ordinary citizen – eCitizen2.0, but such cases are about user-generated public-sector information, and «outsourcing» of the information process. This can also be described as «crowdsourcing» of the information and service tasks of the public sector. Crowdsourcing is a concept that refers to a model of work or voluntary information provision, whereby a large indefinable group jointly carries out a specific task. This is often a matter of user-generated content which, via a combination of tips, personal experience and knowledge, is widely disseminated by joint efforts and self-organisation instead of through control and hierarchy. «Crowdsourcing» is a play on «outsourcing», which is a technique whereby a company employs external resources in order to reach its goals\*. «Crowd» is a play on

\* More detailed information on crowdsourcing can be found at <http://no.wikipedia.org/wiki/Wikipedia:Crowdsourcing>

the idea that it is the participation of the masses and their collective intelligence that carry the information, via a «many-to-many» model. This differs from the «one-to-many» model that the authorities still utilise in principle in their information policy.

#### 4. Status and trends in social networking sites in Norway

This section offers an overview of the most important Norwegian social networking sites, with the aim of identifying Norwegian user trends and status. We define social networking sites in the same way as does Statistics Norway in its Media Barometer study: «A social networking site is an Internet site on which users gather to post information about themselves and to read information posted by other people. It is possible to communicate in groups or 'one-to-one', for example in MySpace, Facebook, Nettby or Blink» (see Figure 2).

There are still few good surveys of Norwegian social networking sites. This report therefore describes the target group, aims and number of members of a total of 38 social networking sites, in order to provide a basis for discussing the extent and degree of interactive use in user-generated Internet fora, as well as trends that are related to social networking site use, interests, norms and technology.

However, what it is quite clear that Norway has among the most active social networking users in the world as shown in the table below. This table shows how Facebook are distributed among the top 25 countries (Norway is top 13), according to the blog «Inside Facebook»\*. Norway is at present listed with 1,227,260 members and with a growth of 15% in 2008. 1,2 million Facebook users is amazing in a country hosting 4,7 million inhabitants\*\*, which means approximately that 25% of the Norwegian populations are members on Facebook.

Top 25 Countries on Facebook as of 8 October 2008

| Country        | 10/8/08    | 3Q08 Growth | 2008 Growth |
|----------------|------------|-------------|-------------|
| United States  | 32,975,440 | 16%         | 94%         |
| United Kingdom | 12,410,520 | 9%          | 43%         |
| Canada         | 9,324,600  | -2%         | 7%          |
| Turkey         | 4,921,980  | 41%         | 73%         |
| Chile          | 3,682,680  | 50%         | 3343%       |
| France         | 3,622,960  | 48%         | 183%        |
| Australia      | 3,559,380  | 6%          | 52%         |
| Colombia       | 3,304,600  | 23%         | 325%        |
| Venezuela      | 1,591,220  | 48%         | 1061%       |
| Italy          | 1,342,600  | 135%        | 460%        |
| Sweden         | 1,324,060  | 16%         | 21%         |
| Denmark        | 1,244,700  | 58%         | 204%        |
| Norway         | 1,227,260  | 8%          | 15%         |
| Spain          | 1,214,200  | 57%         | 265%        |
| Mexico         | 1,168,320  | 6%          | 80%         |
| Hong Kong      | 1,134,860  | 24%         |             |
| Argentina      | 1,094,780  | 114%        | 1033%       |
| South Africa   | 961,720    | -1%         | 31%         |
| Belgium        | 925,600    | 78%         | 258%        |
| Germany        | 860,460    | 24%         | 79%         |
| India          | 794,440    | 3%          | 47%         |
| Egypt          | 791,440    | -1%         | 29%         |
| Switzerland    | 701,420    | 67%         | 217%        |
| Finland        | 680,780    | 26%         | 58%         |
| Greece         | 663,920    | 28%         | 260%        |

Table 1: Top 25 countries on Facebook (insidefacebook.com).

\* <http://www.insidefacebook.com/2008/07/29/tracking-facebooks-2008-international-growth-by-country>

\*\* <http://www.ssb.no/befolkning/>

#### 4.1 Norwegian social networking sites

Social networking sites are a relatively new phenomenon, both in Norway and in the rest of the world. As the number of social networking sites has grown, the sites have also become more varied in terms of aims and focus. The first social networking sites were often more in the nature of dating services than meeting places for communication or for information and data-sharing, as they are today. Figure 3 shows a simplified time-line for this trend in Norway:

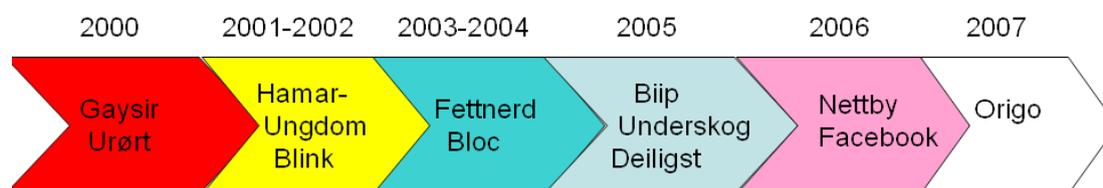


Figure 3. Simplified time-line for some Norwegian social networking sites

Table 2 below offers a more detailed overview, with the date of launch, number of members, and current status of a number of popular Norwegian social networking sites. It is worth noting that Facebook\* is the only international service included in this overview, which otherwise focuses on Norwegian social networking sites. The information presented in Table 2 was gathered by contacting the persons in charge of each site. Some of them do not display information regarding their number of members, because not all the coordinators wished to provide information about membership mass and user-generated content.

Unless otherwise indicated in the table, the information and figures were obtained partly from each social networking site at the end of January 2008, and partly from Internet statistics. Following the table, we have listed some less well-known social networking sites.

| SNS             | LAUNCHED   | MEMBERS   | ACTIVITY  | CHARACTERISTICS  | UGC   |
|-----------------|--|---|---|--|---|
| Facebook        | October 2006 in Norway.<br>Originally launched in February 2004 for Harvard University only. | 1,136,520<br>170,000 are more than 35 years of age. | 720,000 Norwegians visited the site in September 2007.        | Social network. Most members use their own names. By far the most widely used site in Norway, and with the widest age range. | Images, audio, video, and text, as well as user-generated applications. World's most popular site for uploading images. 14 million images are uploaded every day. More than 20,000 user-generated applications. 140 new application uploaded every day. |
| Hamar-Ungdom.no | August 2002  | 190,000 in March 2007. Has since closed down.       | Was one of the most widely used in Norway, but is now closed. | Originally a local social networking site for young people in Hamar. Became popular and grew beyond its original boundaries. | Primarily text communication, plus a few images.  |

\* The reason for this is Facebook's unique position, not only in Norway but also in the rest of the world. Norway is believed to be the biggest Facebook nation in the world as a proportion of population.

| SNS         | LAUNCHED | MEMBERS  | ACTIVITY   | CHARACTERISTICS  | UGC  |
|-------------|----------|--|--|--|--|
| Deiligst.no | 2005     | 660,000,<br>mostly girls<br>aged 14 – 17<br><br>Boys are aged<br>16 – 20.<br><br>56% boys;<br>44% girls. | 21,000<br>within past<br>24 hours.                       | Young people's site, on<br>which they vote each<br>other up on basis of how<br>hot one is. Very physically<br>oriented site.   | Sharing images, video,<br>audio and text communi-<br>cation.<br><br>Contains 421,768 images.   |
| Origo.no    | 2007     | 33,000 in May<br>2008  | 15,000 vis-<br>its to Origo<br>in June and<br>July 2008. | Set up by A-pressen.<br>Varied user mass. Focus<br>on discussion and debate.   | Sharing of images, music,<br>video and text. 94,000 im-<br>ages have been uploaded.  |
| Underskog   | 2005     | 15,000 in July<br>2008.  | Not known  | Originally a user-created<br>cultural calendar for Oslo.<br>Has spread to other cities<br>and functions as a social<br>networking site with a lot<br>of debate.<br><br>This site is not open to<br>everyone, but requires an<br>invitation from existing<br>users. | Sharing of images, music,<br>video and text. Integrates<br>photos from Flickr that<br>have been tagged with the<br>name of a city or «under-<br>skog.no». For example,<br>28,000 photos have been<br>tagged with «underskog.<br>no». |

Table 2: Overview of Norwegian social networking sites and their status.

Other Norwegian social networking sites in alphabetical order:

- \* Aktivitetsvenner.no; a social networking site whose aim is to put members in contact with others who have the same range of interests as themselves. About 5,000 members.
- \* Biffit.no; social networking site launched by young people, for young people. Estimated 69,000 members on June 19, 2008.
- \* Biip.no; started as a site for mobile phone ring-tones, but since 2005 has developed into a full-scale social networking site aimed at teenagers. In spring 2008, Egmont and Mediehuset Nettavisen each bought 45% of the company. Biip.no has more than 320,000 members.
- \* Bloc.no; social networking site for young people. Target group; 15- to 25-year-olds. Bloc was launched in summer 2004 by a group of friends who met for grill-parties and summer fun in Frogner Park on Sundays. There are currently 50,000 bloc'ers in Norway, who have uploaded some 250,000 photos (according to Bloc email, 21.06.08).
- \* Blink.no; launched in February 2002. Number of users unknown. One of the first and biggest social networking sites in Norway before 2005. Primarily for young people. On May 22, 2006 the site comprised 44,285 different groups based on various topics, ranging from fan clubs to opinion polls and political discussions. Number of members unknown, but according to Wikipedia is 300,000.
- \* Bokvennen – Bokklubben.no; social networking site for book-lovers. Number of members unknown.
- \* CU.no (See You); Norwegian social networking site aimed at students.

Number of members unknown.

- \* Dariavenner ([www.daria.no/venner](http://www.daria.no/venner)); Norwegian youth site, target group 13- to 26-year-olds. Topics include jobs and school, and has own social networking site. Offers no fewer than 7,400 «styles», 15,000 photos, dating service, forum, games, video clips, SMS and articles with e.g. celebrity news items from the NTB news service. Popular, but number of members unknown.
- \* Dølatube.no; social video networking site linked to newspaper Gudbrandsdalen ([gd.no](http://gd.no)). Number of members unknown.
- \* Fettnerd.no; social networking site for young people. Started as personal home-page for Stephen Fenne in 2003. Went professional in 2005 and had some 70,000 members in February 2006.
- \* Filmfront.no; social networking site for film-buffs. Number of members unknown.
- \* Fulltreff.no; social networking site for people who are looking for new friends. Number of members unknown.
- \* Galaksen.no; social networking site for teenagers.
- \* Gaysir.no; social networking site for gays, lesbians, bisexuals and others. More than 40,000 members in July 2008.
- \* Hangoutnow.com; social networking site for gays. Number of members unknown.
- \* Jengen.no; social networking site run by a group of young people from Kristiansand. Discusses happenings in Kristiansand and the rest of the country. Publishes photos and films.
- \* Jessheim.org; a youth portal for the Øvre Romerike district. This social networking site contains pictures, a forum, news, links, etc. 2506 users on June 18, 2008.
- \* Livacity.no; social networking site for music-lovers. Number of members unknown.
- \* Kaskjer.no; social networking site opened in 2007. Launched by the University of Tromsø in order to encourage students to help each other to choose the right course, and as an offer to high-school pupils, in particular those in their final year, but also for university students. It also provides an opportunity to meet and get to know people with whom one may later be studying. Number of members unknown.
- \* MyPlace.no; a social networking site for sharing mobile platform content. Number of members unknown.
- \* ME – meside.no; social networking site run by Nettavisen (net newspaper). Number of members unknown.
- \* Moby.no; social networking site focused on quizzes, games and entertainment. Rewards active members. Number of members unknown.
- \* Nydelig.no; social networking site for young people, run by young people. 2742 members, with an average age of 18, most of them in Tromsø. 3444 pictures. (Data from June 2008).
- \* Penest.no; social networking site with same aims as Deiligst.no. Primarily for young people. Number of members unknown, but probably about the same membership as Deiligst.

- \* Playahead.no; social networking site owned by Modern Times Group, which which claims to have room for humour and irony. Primary target group appears to be young people. Had 57,000 members in June 2008.
- \* Sexyliving.no; social networking site demanding lower thresholds. Around 6000 members in April 2008.
- \* Smootown.no; a social networking site for young Christians in collaboration with Vårt Land newspaper, with about 7000 members.
- \* SMSKing.no; social networking site for young people, with free SMS service. Probably several thousand members, but figure unknown.
- \* Urørt.no; music social networking site launched in 2000. In June 2008 had 23,000 registered artistes and more than 50,000 songs uploaded.
- \* Uweb.no; social networking site aimed at young people. Number of members unknown.
- \* Zyphnet.no; social networking site particularly aimed at young people aged from 10 to 25. Members can upload pictures, vote on them, create blogs, send private messages, etc. Around 20,000 members on June 15, 2008.
- \* WindowsLiveSpaces; social networking site linked to Windows Live Messenger, probably with several thousand users.

This list, which comprises a total of 38 social networking sites, is not exhaustive, but it largely reflects the best-known social networking sites in Norway today. There are also a number of party sites and local social networking sites created by young people themselves. A list of such sites would be virtually impossible to create, as they are difficult to track on the Internet. However, we can assume that several sites of this sort do exist alongside the larger, more commercial social networking sites.

There are also a number of foreign social networking sites (as well as Facebook) that are relatively frequently used by Norwegians. Examples of such sites include Orkut, Bebo, Friendster, MyOpera, Twitter, MySpace and LinkedIn. There also exist a number of user-generated content-sharing services such as Flickr, YouTube and Snutter.no, as well as dating services that have been developed according to many of the same principles as those we find in social networking sites. Examples include Hei.no, Sukker.no, Møteplassen.no and Match.com.

There are also social networking site-like services of which user participation and user-generated content are central elements. Examples of such sites are discussion fora and information sites on which users talk to each other about everything from health and giving birth to cars, games and being a father (e.g. barnimagen.no, helsenett.no, bilforum.no, verdensbestepappa.no, gamer.no, Kvinneguiden.no), in addition to a vast number of Norwegian and foreign blogs\*, and social bookmarking services\*\*, which we have not been able to survey for this study. According to a study from 2006, 7 percent of net users in Norway visited a blog every day, and as many as 840,000 read a blog at least once a week. Moreover, every third Norwegian with access to the Internet had made a contribution to a debate on a blog (Mandagmorgen, 2006). However, it needs to be pointed out that most social networking sites today have integrated blogs as one among several functions.

---

\* An updated Internet site, on which one or more authors express their opinions and tell the world what is going on, often referring to other web-pages. Today, there are a number of tailor-made free blogging tools such as blogger.com, blogspot.com and vgb.no.

\*\* An overview of social bookmarking services can be found at <http://netpublisering.com/sosial-bokmerker-web20/>

All in all, this overview of social networking sites shows that we are facing a revolution in the media world, as far as networks, content generation and content sharing are concerned. The following sections describe these trends in more detail.

#### 4.2 Trends in social networking sites

A number of observations suggest that social networking sites and the ways in which they are used are changing. According to Jenny Preece (2000), social networking sites are defined by people, a set of joint norms, an aim and a technology. Our observations show that these four aspects are currently changing, a situation that has also been documented in an article by Brandtzæg and Heim (2008), as shown in Figure 4.

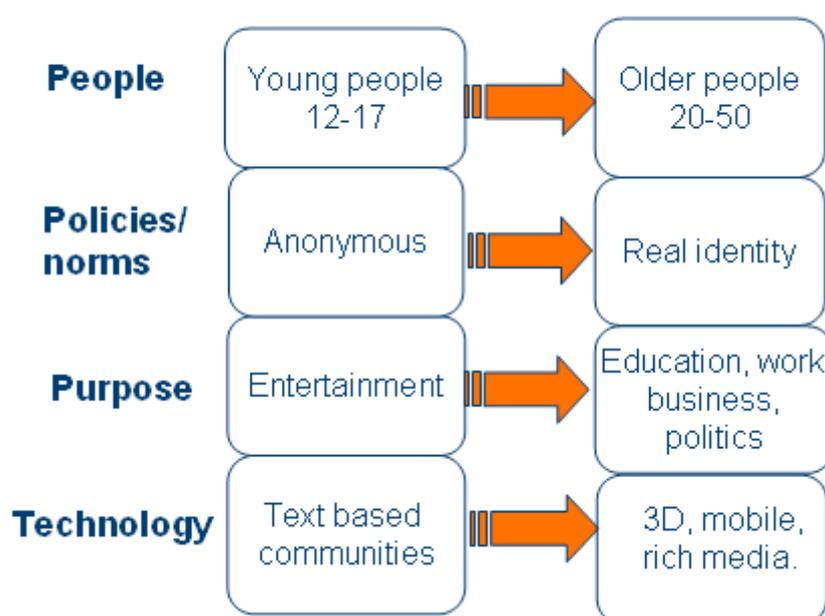


Figure 4. Trends in social networking sites: (Brandtzæg and Heim, 2008).

1. Users of social networking sites are changing from being young to encompassing a wider range of the population. On May 1, 2008, using Facebook, we found that about 170,000 of a total of 1,136,520 Norwegian Facebook members are over 35 years of age. Moreover, ComScore Media Metrix (Lipsman, 2006) believes that it can perceive a change in typical social networking sites such as MySpace and Facebook. The conclusion is that the age composition of social networking sites reflects that of the general Internet population. Eons ([www.eons.com](http://www.eons.com)) and SagaZone ([www2.saga.co.uk](http://www2.saga.co.uk)) are examples of foreign social networking sites that are now targeting people aged over 50. According to a SINTEF study from March 2007, more than one million people in Norwegian used social networking sites on a daily basis or several times a week, but the majority of users are less than 30 years old (Brandtzæg and Heim, 2008). This is also clearly demonstrated by the above overview of social networking sites, most of which are targeting people between 15 and 25. Although these make up the most active group of social networking site users, we can still see trends in the direction of important demographic changes.
2. Until recently, the norm was to remain anonymous in social networking sites and blogs by using a nickname or «nick». Nowadays, more and more social networking sites are encouraging their members to be open about

their identity. In Underskog, Origo and Facebook, for example, it is usual to upload a photo of oneself, together with one's name, address and general contact information, such as email address and telephone number. Origo has gone even further by encouraging its members to identify and confirm their official social roles (outwith the social networking site), so that everyone will be aware that the information that is disseminated and the articles that are written are by the mayor of Stavanger or by an official in Førde. Origo offers the following justification for this: «If people are to express their opinions on behalf of parties and organisations on false premises, we have introduced a possible way of checking and confirming their official roles in their organisations». On August 8, 2008, 921 members had had their real names confirmed. 745 can sign their contributions with their official roles in parties, companies or organisations. 10715 comments and contributions have been signed with an official role.

Nevertheless, the convention in most social networking sites and sites for user-generated content is not to give out one's full name. Instead, a username or nick is employed. This is also in line with recommendations regarding Internet common sense, passed on via public campaigns such as *dubestemmer.no*. However, a culture of anonymity can have consequences for the quality of the content that is shared over the Internet. An informal analysis of contributions to the blog «NRK-beta» found that the quality of the user-generated content was higher when contributors gave their full names. Anonymous users, on the other hand, contributed less relevant and generally poorer-quality content. (Solstad, 2008): Other studies have shown that openness regarding users' identity creates better conditions for reliable content and communication among Internet users (see e.g. Kelly, Sung & Farnham, 2002).

3. The aim of social networking sites is no longer merely entertainment and chatter; politics, learning, work and information are beginning to become important (Brandtzæg, 2007a). The point of using such sites often seems to start from a topic or common interest whose content is shared by users. It also appears as though a number of social networking sites have already developed, that focus on a special topic or joint interest such as films, religion, books and music. However, the most popular social networking sites are those that have a more general overarching profile, such as Facebook or Nettby, which also offer their users the possibility of creating groups within the social networking site. When networks are big enough, people can meet groups with the unique knowledge and expertise that one is in need of at the time. In such cases, social networking sites function as a collective intelligence or source of knowledge of the masses. For example, on Underskog, one can set out problems and claims via blogs. Within a short time, people will respond to these with relevant contributions and references to articles and other Internet content (Brandtzæg, 2007b).
4. The technology is in a state of continuous change. Social networking sites have become richer and more interactive, in the sense that they consist of more advanced multimodal technologies, such as videos, photos and sound, in addition to a combination of several applications and services in a single solution (mashups\*) and 3D technology. The most highly developed example of the latter is the 3D social networking site called SecondLife.

---

\* A mashup is a simple integration of content and services from several sources into a single solution (e.g. *TheyWorkForYou.com*).

### 4.3 Summary and significance for public-sector ICT policy

All in all, these trends indicate that, to a greater extent than ever before, public-sector ICT policy has the opportunity to adopt and utilise both social networking sites and user-generated content:

- \* towards a wider range of users. More people are using social networking sites, but the majority is still the younger fraction of the population, even though we are seeing a move towards a broader section of the population.
- \* Interests and lifestyle. The number of social networking sites is growing rapidly, and more and more are linked to people's interests and lifestyles. Many of them also reflect useful aspects, such as the study guidance social networking site kaskjer.no.
- \* More openness, less anonymity and high quality. Social networking sites appeal more than they used to, to dialogue and discussion based on open premises, where hiding one's identity has become less usual. This can lead to greater visibility, but also to less harassment and better-quality content.
- \* More varied use. Social networking sites are used for a wider range of purposes, which may mean that they can also become suitable arenas for public-sector information. Social networking sites are now more highly integrated into people's everyday lives, and are no longer simply sites for entertainment and flights from reality.
- \* Higher level of knowledge and greater expertise. Social networking sites give their user experience in content production in an informal and enjoyable way. This competence could be utilised by the public sector. At the same time, it is important to include everyone in the digital network society (as is also emphasised by Parliamentary White Paper 17, 2006-2007). See also the report «New Net Phenomena. The State and the Culture of Sharing», for a similar discussion of digital competence and participation in the Internet community (Storsul et al, 2008).
- \* Combination of different types of data in new contexts. The technology permits the spread and utilisation of communication and information via rich and mobile media. One can also make «content/information/services» more useful for users with the aid of «mashups», which integrate different data sources and services into a single solution.
- \* «Six degrees of separation» and weak links. The Internet community can bring people together more easily and thus make the world smaller. According to the hypothesis of «six degrees of separation» (see e.g. Barabási, 2003; Rasmussen, 2008 for discussions) we can reach any person on the planet via six acquaintanceship links, or perhaps it would be more accurate to say, contact links. Six degrees of separation underlines the fact that we always know someone who knows someone. In that sense, this resembles Granovetter's study and theory of weak and strong links (Granovetter, 1973). One of Granovetter's main points was that the weak links («contacts»/persons with whom we do not have close social relationships) are of great value, because such people form part of other communities and therefore possess other types of knowledge than our own immediate social sphere. It is precisely these points that network services can exploit and simplify: we can build on and maintain large social networks and use them to obtain the information we need (or did not know that we needed).

To summarise: both user circumstances and technological potential in social networking sites and user-generated content make it appropriate to use them

as arenas for public-sector information. Section 6 will study the empirical basis for this claim.

## 5. The Internet culture of participation and democracy

The objective of this section is to demonstrate how the public-sector can utilise the participant culture of social networking sites to encourage democratic «everyday processes».

The growing use of social networking sites is creating expectations of political effects – i.e. that they can encourage democratic «everyday processes» in society in general. The motivation for participating in social networking sites is primarily social, but there also exists a political potential. In this report, we find some indications of just that: Section 4 showed that there is a wide range of activities within social networking sites, and that these reflect and reinforce aspects of «real life». A study described in section 6 of this report shows that some 17% of social networking site participants use them to understand political events. Another study by Brandtzæg & Heim (forthcoming, 2009) of social networking sites, using figures from 2007, reports that 11% of social networking site users regard such sites as important means of expressing political points of view. Social participation and political activity are thus linked to use of social networking sites. Such sites give the ordinary citizen unique opportunities and experience of debating, producing content and participating in the community in the public sphere. The knowledge and competence that are generated via participation in social networking sites may thus have a democratic potential, but can also create greater differences within the population, as well as creating unfortunate echo chambers\*.

The political use of and general social participation in social networking sites is reflected in the political groups found in Facebook and in debates in various blogs. However, the authorities can help to influence their evolution in an even more democratic direction. For example, they can create suitable conditions for greater equality of access, competence development (particularly in schools) and political follow-up of grassroots initiatives. For, although it is tempting to read a democratic essence into social networking sites, the technology has also been socially formed. Social networking sites in themselves do not necessarily promote democracy, but on the other hand, they may lower the threshold for participation in public contexts.

### 5.1 Models of democracy

There exist a number of models of democracy and attempts to differentiate between democratic perspectives (e.g. Ess, 1996; Hage, 1992; Storsul, 2002; van Dijk, 2005). In the Norwegian context, the most relevant is the liberal democracy model, which combines political rights and formal procedures, with a focus on the real possibilities of the citizenry within the political community (Storsul, 2002). The liberal model largely focuses on explicit political processes. The focus of this report is therefore not the political election system or voter involvement, but rather aspects that are often emphasised in participant and deliberative models of democracy. It is «everyday participation» and the involved citizen that we wish to discuss. This underlines the very importance of active citizens. Democracy is a central aspects at all levels of society, and all the parties involved in the democratic process should have the opportunity to advance

\* New media can involve a danger of echo chambers, within which we only cultivate information that supports our own interests and opinions, according to Sunstein (2007). More on this topic can be found in Section 9.

their opinions or share their experiences.

When «everyone» in principle can become a media producer, the participatory democratic model, with its focus on active social citizens, becomes particularly relevant\*, as do deliberative models that emphasize the importance of differences of opinion and arenas for conversations among equal citizens (Habermas, (1962) 1989). While until recently, the mass media enjoyed a virtual monopoly on setting the agenda and premises for public debate, there is now a hope that Internet media will open the door to our fellow citizens' own initiatives and experiences. New forms of communication have often led to a blooming of theories about the power of technology to democratize (given that technology is actually used as a tool for the people rather than for a dominant elite) (Brecht, (1930) 1974; Enzenberger (1970) 2003). A belief in the democratizing power of technology was particularly strong during the nineties (see e.g. Benkler, 2006, for a discussion). However, with general access to and greater expertise in ICT among the general public, the possibilities today are probably greater than ever. To a great extent, the ordinary citizen is a producer of information, even though there still exist wide «digital divides» between those who are capable of generating information on the Internet and those who are not.

## 5.2 The culture of participation and digital divides

The culture of participation on the Internet in general and in social networking sites in particular should be supported by public-sector ICT policy. Any strategies need to be seen in the context of the challenges posed by digital divides within the general public. Digital divides are now no longer merely a matter of access, but also of the availability of, and competence to participate in, new media. Such participation demands a high degree of digital expertise and ability to communicate. Being left outside will have possibly even greater consequences than before. Information, services and joint action are being moved out to the Internet at record speed. Structural inequalities are reflected on the Internet, and the greatest challenge lies in motivating the invisible public to participate (boyd, 2008: 115-116).

Even though danah boyd is speaking here about US society, the challenge in a Norwegian context is identical: in spite of the fact that the technological potential allows «anyone» to contribute to social debates with their own experience, it is not a given that everyone will take the opportunity to do so. One of the most relevant challenges is thus to include people with lower educational qualifications, as well as older groups of the population, who do not always find today that the new technology is adapted to their needs.

## 5.3 Summary

This discussion can be summarised in the following terms:

- \* New Internet services can extend the potential for general participation and debate.
- \* Nevertheless, it is not a given that everyone will grasp the opportunity to participate in society via social networking sites. A consequence of this situation could be that digital divides and differences between population groups may become generally deeper rather than being smoothed out.
- \* Social networking sites have a democratic potential, but general participation in society would best be encouraged via an active public-sector ICT

---

\* The participatory model of democracy also emphasises the importance of direct participation in political decision-making processes. As we have already pointed out, this report does not focus on this aspect of the political system.

policy that focuses on raising the level of digital competence among the general public, as well as ensuring that everyone has access to the Internet and essential web-based services.

## 6. The study: user behaviour, user-generated content and public-sector information

This section describes parts of a study carried out during the project period. The study was coordinated and financed with support from the SINTEF projects RECORD (financed by the Research Council of Norway) and CITIZEN MEDIA Social Change (partly financed by the EU, IST, FP 6).

### 6.1 Methods

In May 2008, we carried out a study with 2000 participants; Internet users nationally representative of the 15- to 75-year-old age group. The study took the form of an Internet questionnaire (Questback) carried out by Norstat.

The age and gender distribution of the sample, as well as its geographical and educational make-up, were representative of the whole country (see Appendix online for details). If the sample has a weakness, it is that it may over-represent technology-interested users, since the sample was drawn from an Internet panel rather than a telephone panel. The response rate was 71 percent.

The list of questions put by the questionnaire was drawn up by SINTEF with a view to shedding light on the problems raised by the eBorger2.0 (eCitizen2.0) project, in addition to questions regarding the use of social networking sites in general.

Our general line of approach was as follows:

- \* We surveyed people's use and experience of access to public information both from the authorities and other user-generated fora, and how these differed in various age groups.
- \* We looked at whether there exists a culture of participation and a willingness to generate and share information with other people, and to help other people with important questions.
- \* We surveyed interest in access to public-sector information in social networking sites and other user generated fora.

### 6.2 Results

The analyses presented in this report are purely descriptive.

#### 6.2.1 Most people make use of public-sector information via the Internet

*In the course of the past six months, have you obtained information from the authorities via the Internet (e.g. regarding taxes, elections, kindergartens, social services, etc.)?*

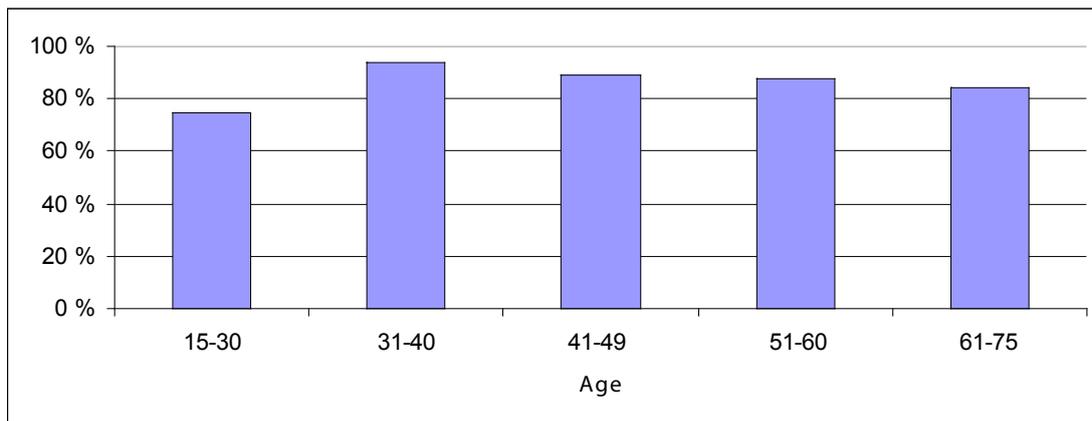


Figure 5. Percentage of respondents who have obtained public-sector information via the Internet.

Figure 5 shows that citizens aged between 31 and 45 are most active (94%) in finding public-sector information on the Internet. Those aged between 15 and 30 are least active (75%). It is important to bear in mind that these figures are only representative of the Internet population.

### 6.2.2 The youngest users are those least satisfied with public-sector information on the Internet

We wished to examine the degree of agreement with a series of statements regarding public-sector services on the Internet. Only users who answered Yes to the question about whether they had found public-sector information on the Internet in the course of the previous six months were asked. We asked about their degree of agreement with the statement that public-sector information was easily and rapidly found, and that it was easily understood.

The following questions were asked: *How much do you agree or disagree with the following statements (easily and rapidly found/easily understood) about the information that you obtained from the Internet?*

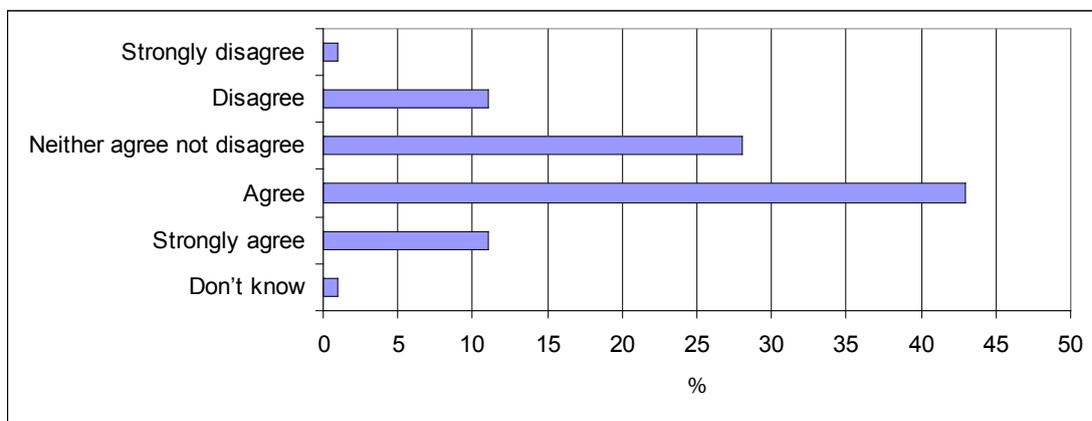


Figure 6. Responses to the statement: «Information could be easily and rapidly found.»

Seventeen percent of the Internet population (who had answered Yes to whether they had obtained public-sector information on the Internet) stated that they did not agree that public-sector information was easily and rapidly found. Most people (54%), however, either agreed or strongly agreed that such information could be found easily and rapidly. In fact, it was the youngest age group, 15 – 30, who most often disagreed (16%) or strongly disagreed (7%) that such information could be found easily and rapidly on the Internet. Among users aged between 61 and 75, the fewest disagreed (11%) or strongly disagreed (1%) with this statement (see appendix for details).

Figure 7 below shows that 10 percent reported that they strongly disagreed (2%) or disagreed (8%) that the information was understandable. Once again, it was the youngest users 15 – 30, who were clearly least satisfied. Eighteen percent

disagreed (14%) or strongly disagreed (4%) (see Appendix for details). The reason why younger users score lowest on whether they regard public-sector information is easily and rapidly available and easily understood is probably that this is the most demanding age group. They use the Internet most and become impatient more quickly than older people. Younger users also expect to find more user participation and interactivity (see Brandtzæg, 2007).

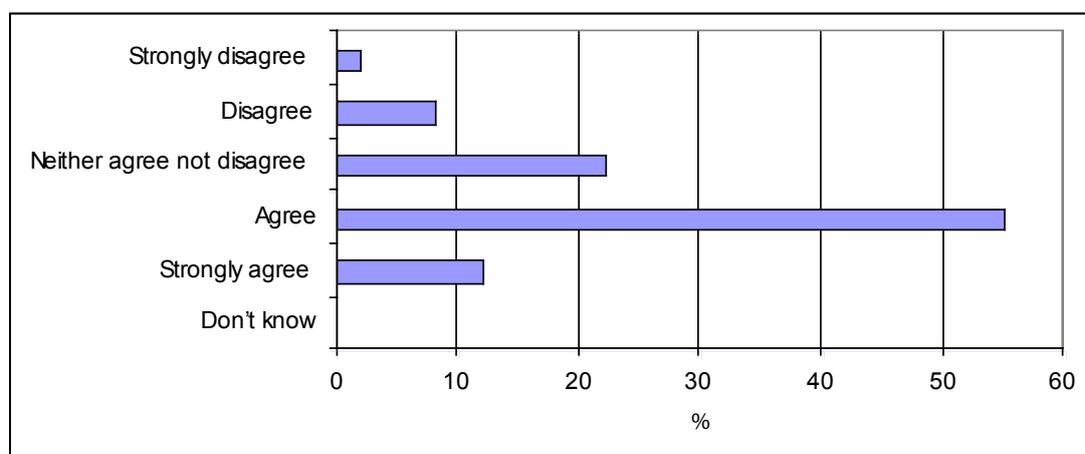


Figure 7. Responses to the statement: «I found the information easy to understand.»

### 6.2.3 Seventeen percent of the population have obtained public-sector information from user-generated fora on the Internet several times a year, or more often

In order to obtain more information about how the Internet population acquires public-sector information and whether this process also takes place in user-generated fora, we asked the following question: *Have you used social networking sites, blogs or discussion fora to obtain information about public services such as taxes, kindergartens, schools, social security, health, etc.?* (scale from 1 to 5, from «never» to «once or more times a weeks»).

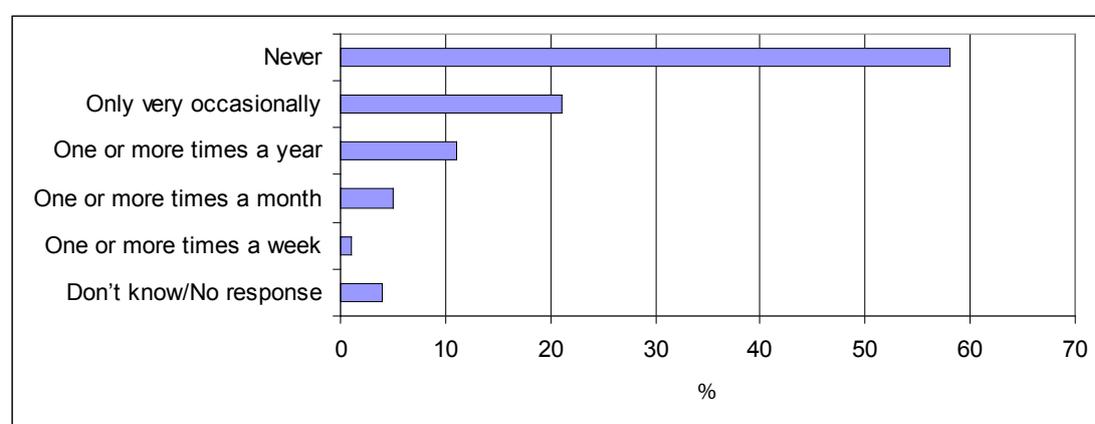


Figure 8. Percentage of respondents who reported that they had acquired public-sector information from user-generated fora on the Internet.

Around 80% of respondents answered «never», «very occasionally» or «don't know», while 17% of the population do this several times a year or more often. Unsurprisingly, it is the youngest age group that is most active in this respect (see appendix).

### 6.2.4 Age distribution of social networking site users

Fifty-three percent of this sample of the Internet population answered yes to the question about whether they used social networking sites. We asked the following question (the same as SSM Mediebarometeret uses): *Have you ever used the Internet to participate in social networking sites such as MySpace, Facebook, Nettby or Blink?*

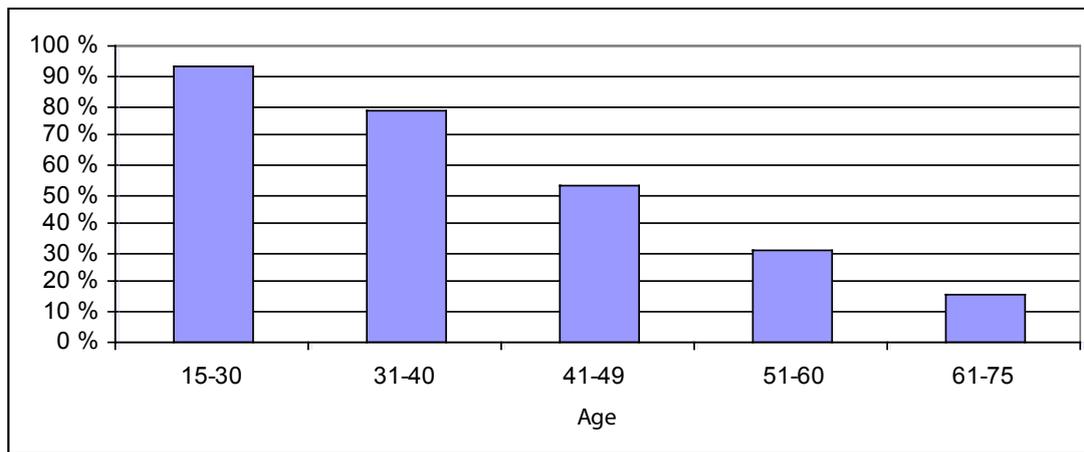


Figure 9. Proportion who use social networking sites (Internet population sample).

Unsurprisingly, most social networking site users are in the 15 – 30 age group; no less than 94%. Only 16% of the sample aged between 61 and 75 have ever used the Internet to participate in social networking sites.

#### 6.2.5 Social networking site users find useful information on the Social networking site

As section 4 of this report shows, there currently exist a large number of social networking sites that provide different types of information, in addition to the fact that social networking site users largely reflect the general Internet population. This meant that we expected to find social networking site users who found various types of useful information in such sites. We asked the following question: *Have you received or found in social networking sites content or information that you have used for the following purposes?*

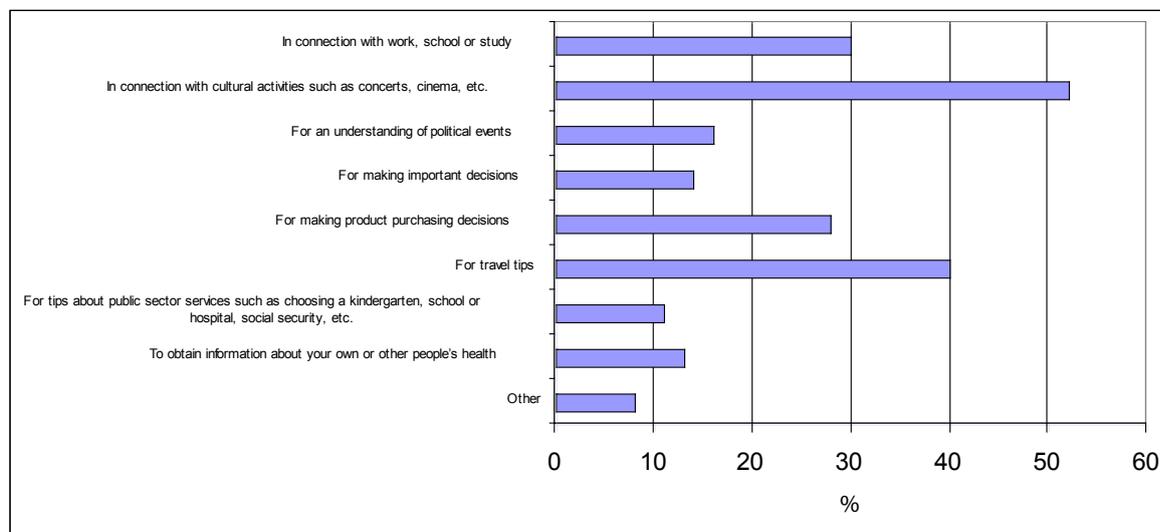


Figure 10. Percentage of social networking site users who have received various types of information.

The most frequent use was to obtain information about cultural activities (53%), followed by travel tips (40%). The third most common information topics were related to work, school and study (30%), followed by purchasing decisions (28%), understanding political events (17%), taking important decision (15%), information about one's own or others' health (14), choice of kindergarten school or hospital (12%) and other (8%).

#### 6.2.6 Social networking site users contribute mostly tips about travel and culture

*Have you yourself contributed content or information (text, photos, video) to social networking sites in order to help others?... (check off the types of information you have contributed; several if appropriate)*

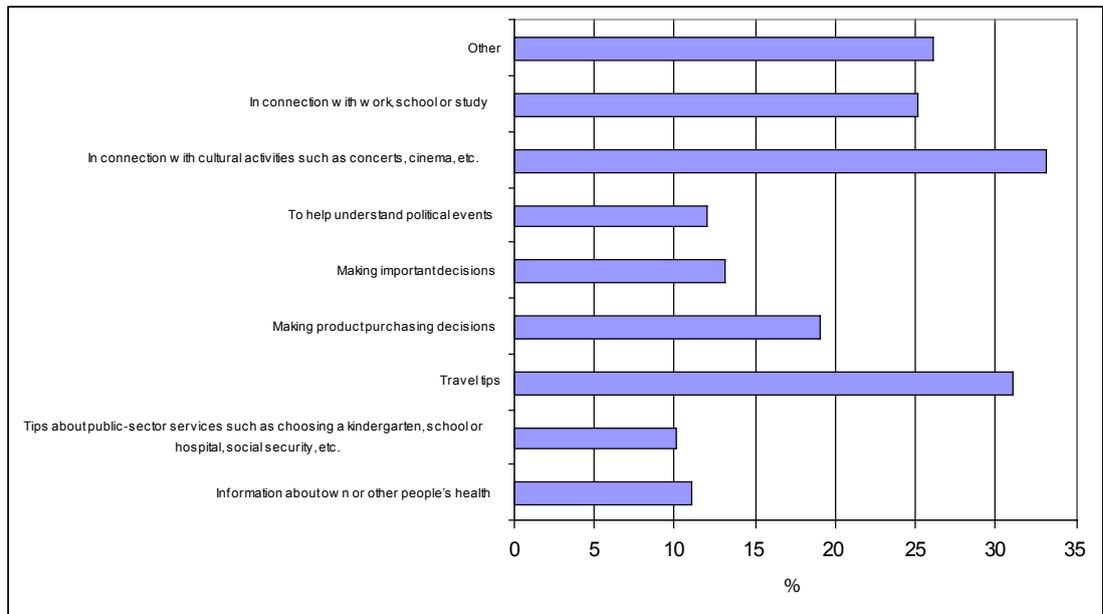


Figure 11. Percentage of social networking site users who have contributed various types of information.

The most frequent type of contribution concerned cultural activities (33%), followed by travel tips (32%). The third most frequent topic was related to work, school or study (25%), followed by tips related to purchasing decisions (19%), making important decisions (13%), understanding political events (12%), information about own or others' health (12%) and choice of kindergarten, school or hospital, etc. (10%).

Unsurprisingly, therefore, fewer social networking site users contribute user-generated content than consume it.

#### 6.2.7 Thirty percent of social networking site users think that access to public-sector information in the social networking site would be useful

The following question was put to respondents who had answered «yes» to the question of whether they were users of social networking sites (53% of the Internet population): *How far do you agree with the following statement: I find it useful to have access to public-sector information via social networking sites.*

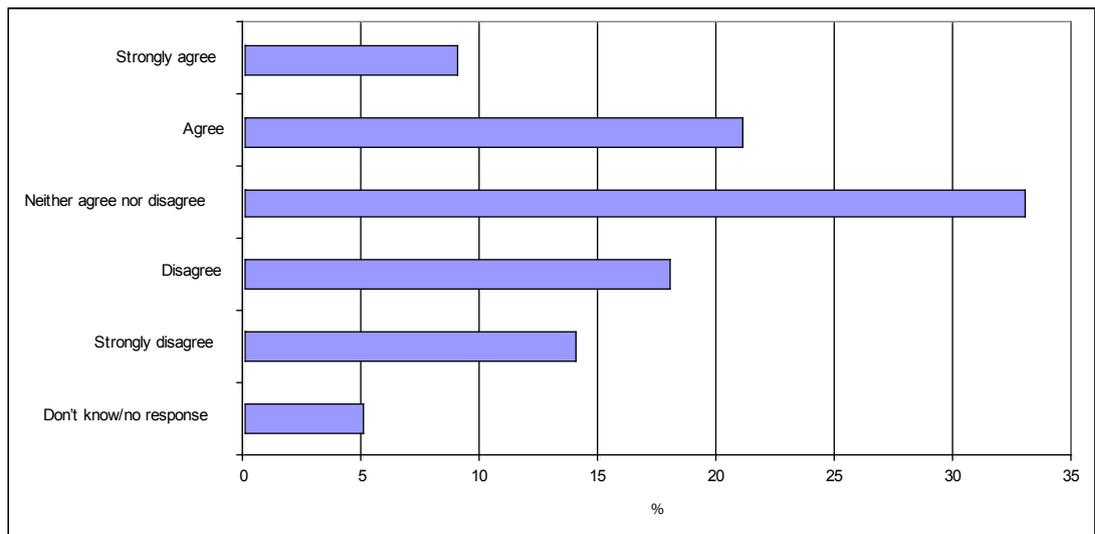


Figure 12. Responses to the statement: «I find it useful to have access to public-sector information via social networking sites.»

### 6.2.8 Wikipedia or Facebook?

The Web encyclopedia Wikipedia and the social networking site Facebook are two of the most popular user-generated web-sites, also with Norwegians. A survey of how widespread use of these sites is could tell us something about the potential for Norwegian public-sector services and public-sector information in new user-generated contexts.

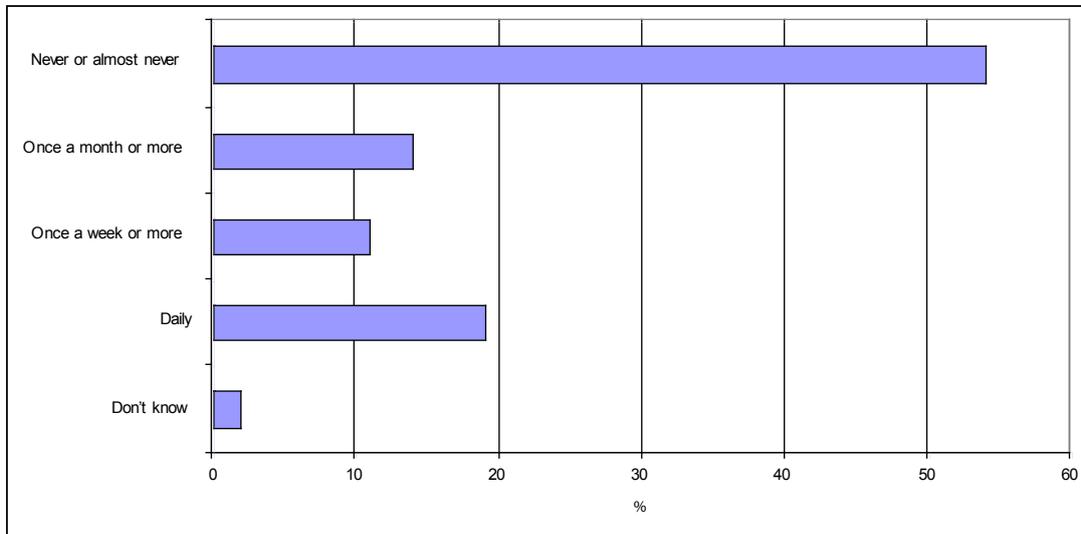


Figure 13. Facebook usage in percent (Internet population).

Almost 20 percent of Internet users aged between 15 and 75 visit Facebook on a daily basis, which is a very high usage quotient. More than 40% of the Internet population state that they use Facebook, compared with only 5% who say that they use Nettby. This might be regarded by many people as surprisingly few users of Nettby. However, the study sample was designed in such a way as to obtain a normal distribution of ages, which would «favour» social networking sites with relatively older users. Most Nettby users are extremely young in comparison with Facebook users, for example. The great mass of Nettby users are younger (less than 15 years old) than the average age of Facebook users. All in all, this may have led to relatively few Nettby users being identified.

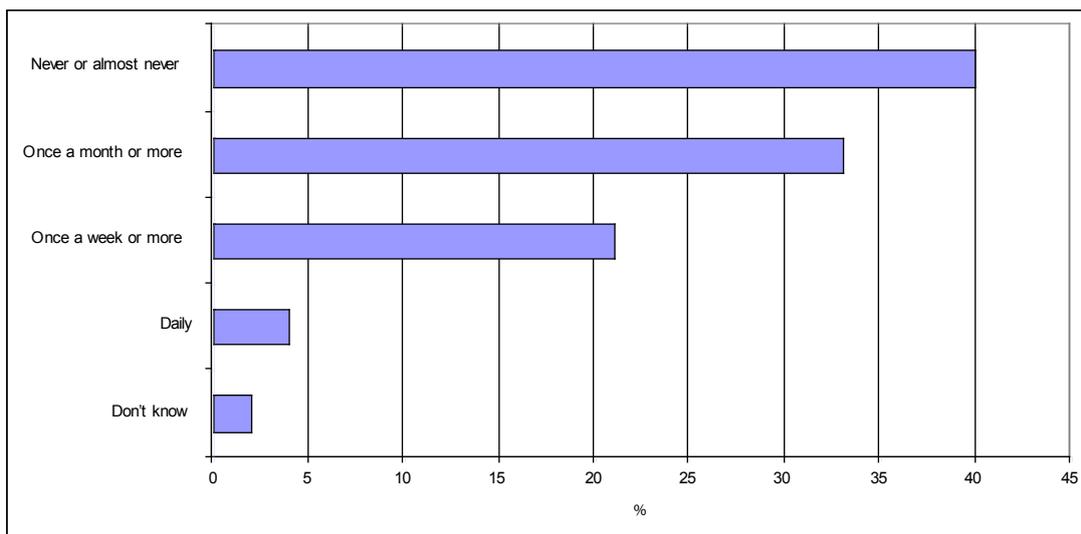


Figure 14. Wikipedia usage in percent (Internet population)

Wikipedia is also popular with Internet users. Almost five percent of them use Wikipedia on a daily basis, while 58% say that they use it once a month or more.

Compared to most other Internet sites, Facebook and Wikipedia are in a class of their own. As we pointed out in section 4, the Facebook social networking

site has more than one million Norwegian members, and relative to population, Norway is the biggest «Facebook nation» in the world.

### 6.3 Summary of new empirical data

Our study shows that it is normal for most Internet users to obtain public-sector information via the Internet. Many people also refer to the fact that they obtain such information via user-generated applications.

More than 80 percent of Internet users have obtained public-sector information via the Internet in the course of the past six months. Around 17% do not agree that such information can be found quickly and easily. The youngest users are least satisfied with public-sector information on the Internet, probably because they are more demanding than older users, and because they are used to a different way of acquiring information over the Internet.

Seventeen percent of Internet users fetch information from user-generated fora on a regular basis, several times a year or more. The youngest user groups are most active in finding public-sector information in new contexts. Social networking site users also find a wide range of useful information in social networking sites, ranging from cultural and travel tips to advice about choosing kindergartens and hospitals.

Thirty percent of social networking site users also report that access to public-sector information via social networking sites is useful. Facebook and Wikipedia are two of the most popular user-generated services available today. Almost 20% of our sample aged between 15 and 75 visit Facebook on a daily basis.

## 7. Survey of international trends

This section analyses international trends and examples of best practice. Its aim is to identify services that, in various ways, address the matter of how users can generate public-sector information and services. At the same time, these examples may address potential conflicts with respect to possibilities and limitations.

In the course of the past few years, we have seen emerge several examples of user-generated Internet services run by political actors, public authorities or so-called eGovgeeks (i.e. public-spirited users who develop services for other citizens on a hobby and voluntary basis).

The list of services of this sort is too long for us to include all of them here. However, we will mention some of the most relevant ones\*:

1. User-generated Internet services run by central politicians
2. User-generated initiatives from the authorities and the public sector
3. User-generated public-sector services created by eGovgeeks
4. Citizen journalism initiatives.

The eGovgeeks list will be particularly descriptive of how future services could function in different contexts. We have chosen to focus on this group, since this project deals with how citizens themselves can help one another as suppliers of public-sector information and services.

Finally, we summarise some important reports that have appeared in the course of the past year.

\* A complete collection of services and examples has been tagged and is available on <http://del.icio.us/petterbb/FAD>

## 7.1 The use of social media by well-known politicians

The local government elections in Norway in 2007 were a limited and only partly successful attempt to move parts of the election campaign over to the Internet. The degree of involvement of most local politicians was low, and their presence less than professional (Lüders, 2007). During the 2009 general election, we can expect our politicians to exploit the Internet much more frequently, particularly in the form of social networking sites such as Facebook. For example, Prime Minister Jens Stoltenberg has recently started to use Facebook\*.

Experience from other countries, the USA in particular, shows that the advantages of having a presence on several social networking sites are considerable. A recent American study by the respected company Pew Internet (Smith & Rainie, 2008) shows that almost half (46%) of all US citizens actively used the Internet during the nomination campaigns in 2007-2008, both to keep up-to-date with political news and to share their political points of view with others on the Internet. Video services such as YouTube and social networking sites like Facebook have taken off, particularly among Barack Obama's supporters.

Both YouTube and Facebook are examples of consumer technologies that offer simple, cheap and efficient ways to tell the general public what politicians are doing at any point time, and what ideas and thoughts they are having. The advantage of these technologies is that communication with the individual citizen is perceived as being more direct and personal, at the same time as they are capable of creating a sense of community, belonging and dialogue around the political agenda, the political party and the government on the one hand, and the citizenry on the other. The use of this form of communication also enables politicians themselves, rather than the mass media, to steer the dialogue and the agenda.

It appears to be particularly British and US politicians who exploit this potential by establishing and adopting user-generated social networking sites such as Facebook, MySpace, YouTube and Twitter\*\*. In the course of the past year, Twitter has become popular with politicians who want to have an immediate, direct channel of communication with their supporters. At the same time, there are wide differences in how individual politicians (or their information staff) have used this service. Figure 15 below shows screen-shots of the White House's Twitter site, and that of No. 10 Downing St.

---

\* The Prime Minister's Facebook home-page: [www.facebook.com/pages/Jens-Stoltenberg/21646763580](http://www.facebook.com/pages/Jens-Stoltenberg/21646763580)

\*\* Twitter is a free social networking sites and/or microblogging service, on which users can continually post updates about what they are doing (known as «tweets»; text-based posts up to 1450 characters in length) to Twitter's web-site via SMS, instant messaging, or third-party applications such as Facebook or Twitterific.

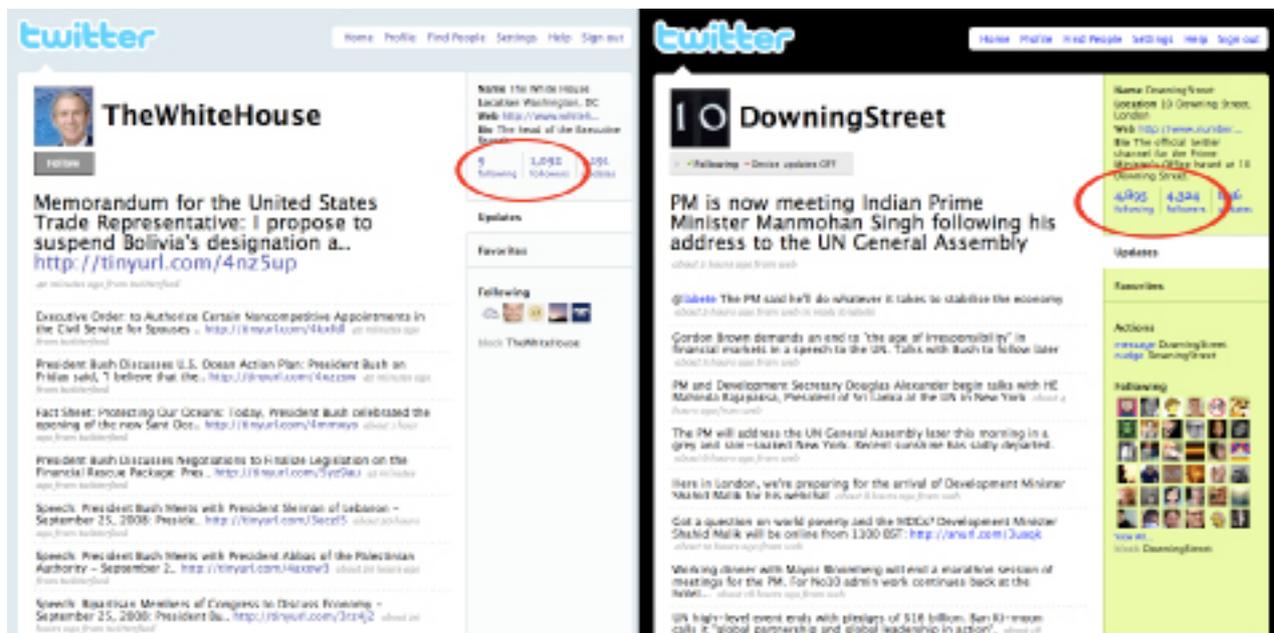


Figure 15. The White House and No. 10 Downing St. on Twitter.

Contact lists on Twitter are not necessarily symmetrical, as they are on Facebook, for example. This means that anyone can choose to follow the White House on Twitter without the White House accepting them or choosing to follow their tweets. Note that the White House has a very skewed distribution of «following-profile» and «Followers-profile». The White House uses Twitter as a one-way channel, or megaphone, to the (relatively few) people who have chosen to follow the doings of the President of the USA. On the other hand, Gordon Brown and no. 10 Downing St. add on everyone who signs up for Downing St. tweets, in this way making for a more symmetrical communication. This impression is further underlined by the fact that the Downing St. staff actually take time to respond to questions and comments that turn up in the Twitter universe.

It is worth noting that even though Twitter has aroused a great deal of media interest in the course of the past year, it is still to a great extent a communication arena with a limited number of users. With a following of 56,196 on August 12, 2008, few people have a larger number of supporters than the Democrats' presidential candidate Barack Obama (though Obama is slightly beaten by Kevin Rose, the founder of Digg.com\*). However, in comparison with the over 1.3 million supporters on Obama's official Facebook page, (against fewer than 200,000 for McCain), Twitter is still a minor service.

The below list offers a limited impression of which social networking sites various western politicians have adopted. The list is by no means exhaustive:

- \* UK Prime Minister Gordon Brown (or rather his team) uses both Twitter: <http://twitter.com/DowningStreet> and YouTube: <http://www.youtube.com/10DowningStreet>.
- \* George Bush, President of the USA, and the White House uses Twitter: <http://twitter.com/thewhitehouse>.
- \* Barack Obama uses both Twitter, Facebook, MySpace and Flickr: See: [www.facebook.com/barackobama](http://www.facebook.com/barackobama) and [www.myspace.com/barackobama](http://www.myspace.com/barackobama).
- \* Hilary Clinton uses Twitter, YouTube and Facebook: [www.facebook.com/hillaryclinton?ref=s](http://www.facebook.com/hillaryclinton?ref=s), [www.hillblazers.com](http://www.hillblazers.com) and <http://www.youtube.com/hillaryclinton>.

\* [http://www.twitdir.com/index.php?top=topfollowed&auto\\_update=on&search=pchere](http://www.twitdir.com/index.php?top=topfollowed&auto_update=on&search=pchere)

- \* Nick Clegg, leader of the Liberal Democrats in the UK, uses something called Friendfeed (a news feed), which provides updates about political information via various social media and about which videos Clegg is downloading and what content he is tagging via social bookmarks on the Internet: <http://friendfeed.com/nickclegg?num=30&start=30>.
- \* During the 2007 local elections, Norwegian politicians blogged: e.g. at <http://www.vg.no/nyheter/innenriks/valg-2007>.
- \* For a long time, Carl Bildt has had an influential blog: <http://carlbildt.wordpress.com>.
- \* Jens Stoltenberg's (prime Minister in Norway) Facebook profile: <http://www.facebook.com/pages/Jens-Stoltenberg/21646763580>.

During the current presidential campaign, it is Barack Obama's campaign team who should be credited with the most successful strategy for the use of new media, particularly social networking sites. Obama's campaign web-page has links to 16 social networking sites, each of which is continually kept updated with information about the presidential candidate's election campaign. Participation of this sort lays the foundations of a quite novel personal presence compared to what is normally possible via the traditional mass media. Contact with the public is perceived as being more direct. At the same time, even younger citizens understand how services of this sort are being used by high-profile politicians (see Figure 15).

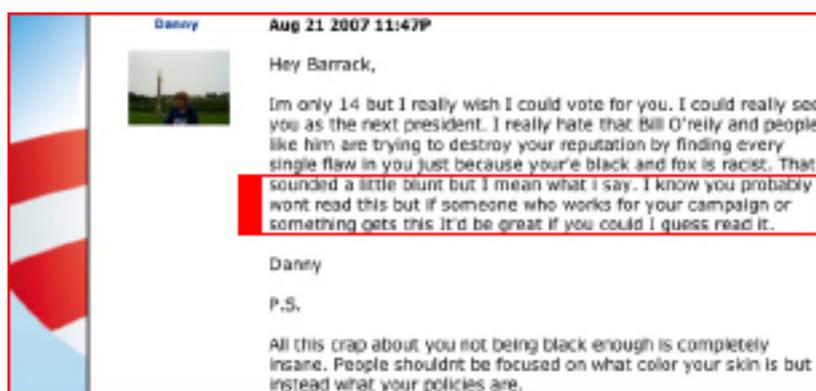


Figure 16. From presidential candidate Barack Obama's MySpace profile.

The renowned Internet researcher Rheingold (2008) points out that the Obama campaign's mobilisation of self-organising supporters via social networking sites could represent a turning point in the use of the Internet in election campaigns similar in importance to the Kennedy-Nixon TV debate in 1960. Similarly, Phil Noble claims that Obama's success to date is one result of how the campaign has banked on the potential of the Internet to mobilise resources at local level, both in terms of collecting campaign funds and mobilising more and more volunteers (Schifferes, 2008). Obama's success in net-mediated arenas is further confirmed in a study carried out by Pew Internet & American Life Project (Smith & Rainie, 2008).

The threshold for contributing time and money is low in social networking sites, and combinations of various network services have shown themselves to be efficacious arenas for fund-raising in the US election campaign. In 2004, the democratic candidate Howard Dean pioneered the use of the Internet as a source of donations. In the course of 2007 and 2008, Obama has received no less than USD 7 million from the grassroots via the Internet. Instead of counting on the support of large private organisations, Obama has used the Internet to ask people to support him with small contribution of five or ten dollars.

Obama's Internet campaign is not necessarily a simple strategy. On the contrary, a large team is needed to keep Obama's supporters updated on these social networking sites. This is an extremely important point for any Norwegian politicians who might wish to use social networking sites to create a more symmetrical contact with the general public. Even though it is obviously not essential to employ such a large organisation as the US presidential candidates, efforts on the Internet need to be characterised by high quality in terms of content and communication with the public.

The relatively unsuccessful attempts at blogging, in Facebook groups and videos on YouTube and Snutter.no during Norway's local elections in 2007 are an example of why it is important to understand the genre of this form of communication. These efforts were characterised by a lack of understanding of how new Internet arenas should be utilised, and two problems in particular turned out to be very central: amateur content and communication, and lack of dialogue between politicians and voters (Lüders, 25 August, 2007).

The fact that blogs and network services require resources and personal effort is also clearly demonstrated by Anne Krogstad's (2007) analysis of Kristin Halvorsen's blogs in 2004 and 2005. Even though these blogs gave Halvorsen a more direct channel to the voters, the tendency was quite clear: as the election campaign became more intensive in 2005, its principal focus turned to participation in the traditional mass media (where she reached more voters).

In a Scandinavian context, on the other hand, Carl Bildt's blog is a more interesting example, which also shows how it can gradually become more and more difficult to maintain a symmetrical process of communication with readers. Bildt started his blog in February 2005. Until January 2007 he wrote in English, but then decided to write in Swedish in order to be able to communicate more directly with his Swedish readers. Since he was Sweden's Minister of Foreign Affairs, many readers also regarded this as a natural choice. At first, Bildt often responded to his readers' comments on his blogs. Today this seldom happens, which is not particularly surprising. In the course of spring 2007, Bildt was receiving more and more comments; as many as several hundred >>per blog<<??. Blogs are not necessarily symmetrical, but fluctuate between symmetrical interpersonal communication and the asymmetrical mass media form of communication (Lüders, 2008a). For politicians, blogging has an extremely important function in that it avoids the «angling» of the mass media and their editing of political matters and initiatives. Bildt has maintained a high level of blogging activity and he comments on international events on an ongoing basis.

However, we need to point out that the use of social networking sites by politicians plays a subordinate role in this report. Nonetheless, this initiative reflects interesting aspects of citizen-driven information services. The political initiatives tell us something about how these function, which in turn says something about how the public sector can utilise this in a type of information strategy in which citizens play a more active role.

## 7.2 User-generated initiatives from various international eGov bodies

The development of independent information services and user-generated social networking sites by eGov is increasing. Some examples follow:

**Oxygen:** an intranet designed as a social networking service for employees of the authorities aged less than 35 in Southern Australia (Griffiths, 2007).

**Ung.no:** an integrated information service that gives its young users a good opportunity to comment and contribute relevant information. The authorities

ought perhaps to focus more on experience with Ung.no, which is a 2.0 service that the authorities already support.

**The Swedish embassy in SecondLife:** The aim of this virtual embassy has been to create an information portal for Sweden. One cannot obtain a passport or a visa there, but help in obtaining one in the real world is available\*.

SecondLife is an advanced social networking site, a 3D world that was opened in 2003 by LindenLabs. In March 2008, SecondLife had 13 million users or «inhabitants». A number of major companies have opened virtual offices in SecondLife.

**GovGab** (<http://blog.usa.gov>) is a blog written by a Federal Citizen Information of the United States of America that aims to give the public a more informal information and communication channel. It can also be accessed by mobile phone: [mobile.usa.gov](http://mobile.usa.gov)\*\*.

**eCitizen Singapore** (<http://www.ecitizen.gov.sg/>): Singapore is known for its policy of restricting information to its citizens. All media, including Internet service providers, are owned either by the state or by persons or companies with close links to the governing party. The government controls people's access to the Net, and offers no tolerance to critical bloggers, for example (Freedom House, 2007). However, Singapore has launched the eCitizen Internal portal, on which people are encouraged to become active citizens, and to provide feedback and offer suggestions.

**ePeople Korea:** In South Korea, people can offer suggestions regarding politics and the authorities. Interesting suggestions that have the potential for implementation are displayed on the web-site in small pop-up windows, together with the name of whoever made the suggestion ([www.epeople.go.kr/](http://www.epeople.go.kr/)). The aim is to increase active participation by the public by making it simpler to express opinions in an arena in which there is a real possibility of being heard.

**CNDP in France:** The French National Commission of Public Debate (CNDP) has an innovative web-site that permits debate on public-sector projects in France. The site offers the public well-documented proposals on topics that are about to be debated. In this way, citizens can obtain information and form their opinions in advance. The site also includes a calendar of events and of when debates will be held in various cities. People can thus contribute their opinions both in person and online.

**Digital pioneer in the Netherlands** (<http://www.digitalpioneers.org/>): Digital Pioneers is not a single specific service, but rather a programme in support of innovative projects in the Netherlands. The project was launched in 2002, when the Ministry of Education, Culture and Science started a fund whose threshold for applying for finance was not to be excessive. The project is steered by the independent think-tank Kennisland (<http://www.kennisland.nl/en>), which is also responsible for the 15 rounds of applications advertised to date. In the first 14 rounds, 143 projects have received financial support. One of the most relevant projects is «Ask questions about politics», which was inspired by the British service WriteToThem (see section 7.3). The project manager [hetnieuquestemmen.nl](http://hetnieuquestemmen.nl) gathered contact information and data about politicians and thus made it simpler for Dutch citizens to make contact with them.

**Discussion-forums in Norwegian municipalities:** In the Norwegian context, it is relevant to mention the research project «ICT and Local Democracy (2003 – 2007)» (<http://www.iktoglokaldemokratiet.com/>). The background for

\* You can read more about Sweden's SecondLife embassy at [www.sweden.se/templates/cs/Article\\_\\_\\_16345.aspx](http://www.sweden.se/templates/cs/Article___16345.aspx)

\*\* See also a case study of this service: <http://vivisimo.com/docs/caseusagov.pdf>

this project was the network society and democratic challenges. One of its sub-projects discusses, among other things, the use (or lack of use) of the Internet debate forums in four municipalities (Stavanger, Tromsø, Drammen and Førde).

Local politicians had great expectations of participation on the part of the public, but were disappointed by the actual level of participation. The local authorities' debate pages were little used (Skogerbø & Winsvold, 2008), and the few contributions posted were characterised by what the local government politicians regarded as polemical, ill-considered debate (Due, 2007). Skogerbø & Winsvold (2008) suggest some causes for the lack of success of these efforts and point primarily to the fact that local media already occupy the arena for debates on local politics. In any case, members of the public do not usually receive an answer when they take up something in the local authorities' debating fora, and the debating pages came to be regarded more and more and part of the local authorities' information strategy than as an integral aspect of their politics.

In other words, it is not sufficient to establish discussion-forums and wait for constructive and «useful» comments from the local population. Arenas for user-generated content must be given a relevant, political context. People must perceive that their input, comments and proposals actually have a possibility of being carried further in political processes. Expectations that the debate will always be serious and useful must be lowered.

**MyParl.eu:** This is a cooperative project initiated by the European Parliament, and conceived of as a social networking site for European parliamentarians. Its aim is to create an arena for debate on European topics.

### 7.3 User-generated services created by eGovgeeks and non-public sector participants

The internet can help to improve the civic lives of ordinary people, but only if it is based on a different principle. E-democracy should not be primarily about representation, participation, or direct access to decision makers. First and foremost, it should be about self-help (Crabtree, 2007)\*.

According to James Crabtree (2007), eDemocracy is not necessarily a matter of direct communication between you and me and the decision-makers such as Prime Minister Jens Stoltenberg or Minister of Finance Kristin Halvorsen, but rather a dialogue between the general public, so that the population can be better able to help itself. That citizens are a resource that can be regarded as a partner for the public sector rather than a merely a passive recipient of public-sector information and services. In other words, there is an information potential for the public sector in taking a step away from traditional one-way communication. Today's user participation in the form of sharing information, user-generated content and dialogue can and should be exploited much better.

The following list demonstrates yet again that UK and US services dominate. The British organisation MySociety and the American EveryBlock are probably the world leaders as far as experience of developing and using such services is concerned. Tom Steinberg took the initiative to develop My Society, a voluntary/charitable project whose aim is to test out new methods of disseminating information, and to train the general public in voluntary work and the authorities in openness as regards information and services.

The following services have been identified:

**FixMyStreet.com** (launched March 7, 2007; developed by MySociety.org). This service enables people to discuss and report deficiencies and other matters in their own neighbourhood; e.g. graffiti, rubbish, vandalism and street lighting,

\* Civic hacking: a new agenda for e-democracy (2007). James Crabtree: <http://www.opendemocracy.net/debates/article-8-85-1025.jsp>

etc. See

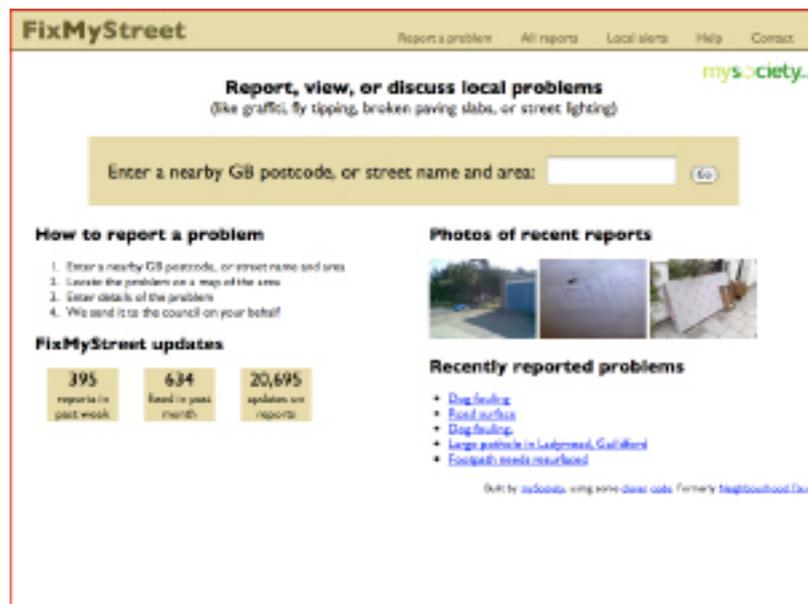


Figure 17. FixMyStreet allows you to discuss and report deficiencies in your own neighbourhood.

A similar service in Norwegian neighbourhoods ought to have a good chance of being widely used, but if it is to be successful in the long term, the problems reported must be followed up. This is a point that applies to all types of services. The research project «ICT and Local Democracy» showed that local authorities' fora for debate have already been used in this way (even though the fora were actually not used very much).

Who has the responsibility for removing slippery road surfaces at Åsen nursing home in Haukåsstub Road? (Stavanger City Council's web-site, debate forum, January 21, 2006) (Skogerbø & Winsvold, 2008: 53).

**NotApathetic.com** (launched April 7, 2005; developed by MySociety.org). NotApathetic was developed with the idea of giving people who neither did vote nor intended to vote in the UK General Election on May 5, 2005, the possibility of justifying the unwillingness to vote. NotApathetic was visited by more than 40,000 people in the course of the election campaign, and was the subject of discussion in several news media from New Zealand to South Africa.

**WriteToThem.com** (launched February 14, 2005; developed by MySociety.org) This is a web-site on which you can contact representatives of your district in the UK. To do so you enter your postcode, and the site tells you who your local representative is. This site has received a prize as a good service that promotes democracy.

**TheyWorkForYou.com** (launched June 6, 2004; developed by MySociety.org) This is a searchable version of everything that is said in Parliament, as well as useful pages about and measures of the activity of individual MPs and local members who work for your city or district. The service is a typical mashup and is therefore dependent on open standards that enable it to tap information simply. TheyWorkForYou obtains its information from Hansard (daily debates in the House of Commons) (see Dutton & Peltu, 2007). This suggests that Norwegian public-sector information services should also be based on open standards if they are to be of use to eGovgeeks.

**E-Petitions.com** (launched November 14, 2006; developed by MySociety.org) No. 10 Downing St's e-Petitions is a service that enables people to apply to the Prime Minister with specific questions. It has been developed using a very open code, so that it can be used elsewhere.

MySociety has also developed other useful services that generally speaking support the process of communication between the general public and the authorities: e.g. HearFromYourMP.com and PledgeBank.com

**OpenAustralia.org** (launched in beta on June 16, 2008 by a voluntary group with links to the UK's TheyWorkForYou). The service has the same aims as its British predecessor: to make it easier for the general public in Australia to follow what is happening in Parliament. This gives citizens easier access to what individual MP's actually stand for.

**EveryBlock.com.** Another major project (besides the above-mentioned MySociety projects) is EveryBlock, which is operational in Chicago, New York and San Francisco. EveryBlock is a voluntary project that aims to make public-sector information more accessible, useful and user-friendly. EveryBlock gets its data from the public sector, but also fights for access for everyone, not just itself. EveryBlock believes that it is important that independent organisations rather than just the authorities themselves should develop services of this sort. The service downloads and aggregates enormous quantities of data from several different sources; photos from Flickr, «lost and found» from Craigslist, and restaurant and café recommendations from Yelp, though most of the data come from the public sector.

The aim of EveryBlock is to give the general public access to «hyperlocal» information about building permits, criminality, restaurant inspections, etc. These data are often available on the Internet, but are buried in public-sector databases that are difficult to find. In other cases, they are not available online.

**YourStreet.com.** YourStreet gathers and organises information from thousands of local news items, blogs and discussions on the Net at street level. This is another example of how information recycling can generate hyperlocal services that are useful for people who live in a particular neighbourhood. Users can also join in the discussions, contribute content and enter their own profile in the map service.

**WikiCrimes.org.** This is a service that enables citizens themselves to map and report crimes in Brazil while identifying criminality in a mapping service from Google. It is based on the same concept as Wikipedia, where people cooperate in the creation of an encyclopedia. In this case, the cooperate in creating a criminality map of Brazil. The project has been developed on a voluntary basis by Vasco Furtado, a professor at the University of Fortaleza in Brazil\*.

**WikiMetro.org.** This is a local social networking site that enables other local users (such as neighbours, etc.) to collaborate and share local information with each other, based on wiki technology.

**Farmsubsidy.org.** This was developed by an independent group of individuals, with the aim of providing a service that provides information about who has been awarded agricultural subsidies by the EU. The service makes it possible to research everything from individuals to major corporations in for example tobacco or alcohol. The data have been generated from 17 of the 25 member nations, and you can easily break down data by country, region and individual. The aim is to create a more open EU management system.

**U.S. Congress Votes Database.** This web-page is hosted by washingtonpost.com, and it provides openness about all the votes that have been cast in Congress since 1991 (for example, by senators in the 109th congressional ses-

---

\* WikiCrimes has also been described in a BBC news item on April 14, 2008: <http://news.bbc.co.uk/1/hi/technology/7347101.stm>

sion). Data and information are fetched directly from several official Internet resources.

The service then publishes RSS feeds for each individual vote by each individual member of Congress, and feeds for recent votes in both chambers. The site is updated several times a day, and has been developed by Adrian Holovaty in [washingtonpost.com](http://www.washingtonpost.com) and Derek Willis of The Post.

**OpenTheGovernment.org.** This organisation is dedicated to liberating public-sector information in the USA. It contains a number of useful resources of relevance to how the public sector can open up information and data.

**PatientsLikeMe.com.** PatientsLikeMe (PLM) is a private company which aims to help patients to help each other. In other words, it is a social networking site on which people can share their health data and experiences as patients. However, this social networking site is more than an exchange of patient experiences: information entered by individuals is systematized on an ongoing basis by advanced software, enabling patients to follow the course of their own illnesses and the expected results of treatment. For example, we can enter:

- \* Medical history, with date of diagnosis and onset of symptoms
- \* Medication taken, including start data, final date and dose
- \* Description of symptoms.

These data are worth a lot to the pharmaceutical industry, medical advisers, research groups and non-profit organisations, and they are PLM's greatest resource. The costs of running the social networking site are covered by the partners, who obtain access to anonymised data from the social networking site. For this reason, PLM also has a detailed personal data protection policy.

We have already emphasised that there is a tendency for social networking site users to be open about their own identity (see section 4). Where health-related social networking sites are concerned, however, there may be good reason to use a pseudonym. However, there are great potential benefits of participation: patients gain by knowing one another's medical histories and treatments, and also have the opportunity to relate to other people who are in the same situation (Frost, 2008).

There are a number of similar initiatives for which we have no room here. All can be found at the following web-site of this project: <http://del.icio.us/peterbb/FAD>. Other good examples can be found in the report «Web 2.0 in Government: Why and how?» (Osimo, 2008).

#### 7.4 Citizen journalism

With the developments that have taken place in the Internet in the course of the past few years, the mass media no longer have a monopoly on disseminating (and constructing) images of reality (Lüders, 2008a). This situation is expressed in the shape of personal blogs and social networking sites, but perhaps to an even greater extent via collective citizen journalism projects. Well-known examples are described in the following box:

##### **OhMyNews**

The pioneer of citizen journalism initiatives is this South Korean net-based news service. OhMyNews began to publish its fellow citizens' own news items as early as February 2002, and has grown into the best known and well-established citizen journalism news service in the world. It has produced an international edition since 2004.

##### **Wikinews**

Wikinews is one of Wikipedia's sister projects. The beta version of Wikinews was launched

in December 2004. The project has not been as successful as Wikipedia.

#### **Indymedia.com**

Indymedia was established by independent alternative media organisations in 1999, with the aim of offering alternative coverage of the protests during the WTO meeting in Seattle. Anyone can open an account and contribute news items. Indymedia also comes out in a Norwegian edition (Indymedia.no)

#### **ABC Nyheter Borger**

ABC Nyheter (News) was established in February 2007. An important part of the newspaper is ABC Nyheter Borger (ABC News Citizen), to which readers themselves can contribute articles and publish opinion pieces and contributions to debate.

Box 1: Well-known examples of citizen journalism projects.

Before we summarise this chapter, we take a look at some central, relevant reports published in the course of the past year on the subject of how web 2.0 technologies can be utilised in public-sector information and services.

### 7.5 Central reports on eGov and web 2.0

The following four reports that discuss public-sector services and web 2.0 are particularly relevant:

1. The Power of Information
2. Government and Web 2.0: The Emerging Midoffice (Gartner, 2007)
3. The E-Government Hype Cycle Meets Web 2.0 - Goodbye Portals, Hello Web Services (Gartner, 2007)
4. Web 2.0 in Government: Why and how? (Osimo, 2008).

These reports are briefly summarised below:

#### **7.5.1 «The Power of Information»**

Mayo and Steinberg's\* (2007) report «The Power of Information» recommends strategies for how national authorities (in the UK) can involve users and operators of user-generated content services (eGovgeeks) in a common social goal for better and more relevant information access. It also stresses how the public sector can encourage the recycling of public-sector data so that these can be reused in innovative ways for the benefit of the public in the course of time. The authorities should support measures aimed at increasing the digital competence of the public (because the amount of information available is overwhelming and cannot always be relied on), and helping excluded groups to benefit from the advantages of the networked society.

The report mentions a number of examples and studies in which sharing user-generated content has had beneficial consequences for the general public and the community.

The recommendations of the report generally concern strengthening cooperation with private creators of user-generated content services. Individual ministries should attempt to map out the services that would be of relevance for them, and should actively collaborate with these, as well as creating self-help fora for public-sector services and information. Support schemes for non-commercial participants, as well as giving such participants access to public-sector data with which they can experiment, are also among the most interesting measures

\* Tom Steinberg leads MySociety, mentioned above.

recommended. Detailed information about all of the above recommendations can be found in the report.

### 7.5.2 The Gartner reports

Unfortunately, it has been difficult to obtain the two new reports from Gartner about eGov and web 2.0. At this point, we have only had access to a research article that discusses these reports, and a summary. Their main message is that large public-sector «all-in-one» portals will lose their importance. The use of such portals has also already turned out to be modest. For many people, searching directly on Google will also be an alternative to entering Norge.no, for example, when they want public-sector information.

Gartner believes that public-sector services can be integrated into social networking sites and other Internet sites that are not under state or local authority control. (For example, if we need a building permit, such a service could also be offered by banks, insurance companies and so on; institutions that we need to contact in any case at this phase of construction). Information will also flow between the public and private sectors to a greater extent than hitherto.

What people use as their personal home-pages today are not public-sector portals (such as MinSide or Norge.no), but rather pages that match their lifestyles, preferences and interests, such as a social networking site, search engine or newspaper, i.e. more consumer-oriented sites. We therefore need to ask ourselves whether public-sector services ought not to be integrated to a greater extent into other more «private» solutions.

Gartner believes that eGov and web 2.0 will be much more important in the future. At the same time, Gartner advises against uncritically embracing the web 2.0 wave during the next couple of years. The public sector should rather go in for a limited number of controlled, focused projects that maintain control of security, ID and personal data protection.

### 7.5.3 «Web 2.0 in Government: Why and How?»

This report appeared in May 2008, and has something of the same aims as the present document, namely, to find out how user-generated applications can be used to carry out public-sector tasks. On the basis of a run-through of existing initiatives in the public and private sectors, it argues that such applications can influence both public-sector services and the way in which the national authorities operate and communicate internally. In this connection, the report mentions a number of areas such as regulation, cooperation among different authorities, knowledge management, offers of services, political participation and openness, and legal security.

Like the present report, it highlights a number of case studies and discusses how web 2.0 is already being used by various public-sector activities. The conclusion of the report is that user-generated applications of this sort appear both to be safe in use and a potentially useful tool for experimentation. They are safe because information of this sort, and its spread are already in large-scale use, and the future will see wider use of user-generated applications in the context of public-sector activities.

According to the report, the authorities thus have no option other than to begin to take this type of information generation and dissemination seriously. They are in a position which leaves them no choice, because this is what is taking place anyway. Experimenting with applications and information sharing is therefore probably the safest option for the authorities. Most applications are also free or extremely cheap, which makes experimenting simpler. Opening a blog or a wiki on a public-sector web-site will not in itself increase public participation. Rather, it is a matter of moving in the direction of a more open and transparent relation-

ship with users. Several of the solutions that have been presented in this report (and in this section) have been implemented via trial-and-error strategies, in an iterative development process through «beta» solutions. According to this report, therefore, a learning and development strategy of this sort could also be appropriate for the national authorities.

### 7.6 Summary of international trends

New technology has given citizens more power and greater possibilities of choosing and cultivating their own interests and niches, both via tips from other people and by searching through an infinite universe of choices. The possibility of finding niche information adapted to the needs of the individual has thus become far greater via social networking sites and user-generated services. We can thus identify a trend that can be summarised under ten main headings:

1. User participation
2. User-generated content
3. Culture of sharing among citizens
4. Collective intelligence and the knowledge of the masses
5. Decentralisation of information and services
6. Virtually direct communication between politicians and citizens
7. Person-oriented niche information
8. Hyperlocal services
9. Greater openness and available information
10. eGovgeeks who create user-generated information services based on data from the public sector combined with other types of information and services.

While major public-sector ICT systems (such as MinSide) are often meeting resistance, we see that consumers are adopting a range of Internet technologies on a large scale. They are also often suppliers of content to such systems, which include Facebook, YouTube, Wikipedia, etc. It is an open question whether it would be possible to enable user-driven systems (consumer technology and web 2.0 tools) to be integrated into the design of public-sector solutions, both in order to encourage their use and to make them more user-friendly.

One clear trend is user participation on the part of the general public and eGovgeeks in the field of public-sector information and services. New information services are being created via the recycling of existing public-sector information in combination with other solutions and information. However, this will require easy access to public-sector data. We will examine access to metadata and to data in the following section.

## 8. The authorities and access to data

This section offers a brief introduction to the status of access to public-sector data, as well as a vision of how this should be changed in order to enable data to be re-used in new contexts to create new user-generated public-sector services. This section also refers to a case study in this eCitizen2.0 project: an interview with Even Westvang and Simen Svale Skogsrud in Bengler (see Box 2).

There are several advantages in offering free, open data related to the public sector. Among these is that creative individuals, i.e. technology experts who

do not work for the public sector, can create new services based on data made available by the public sector; services that the public sector might not have thought of offering itself (see examples in previous sections). The problem is that public-sector data are to be found in a digital but closed patchwork quilt (see case study described in following box). There also exist few or no good mechanisms that allow large datasets to be downloaded, or metadata from local or national authorities that would allow alternative services such as They-WorkForYou or EveryBlock to be created. Public-sector metadata are virtually non-existent.

For this reason, the authorities should study the possibilities linked to openness for API'ers (the Application Programming Interface is a tool used in software development); i.e. a sharper focus on Open Source, the concept that the source code of a product or application should be free for anyone to use or modify. Furthermore, that the possibility of mashing up data and combining different sources and services, such as backstage BBC and yr.no, should be investigated. In that connection, what is needed is the possibility of mashing up public-sector data from the State Cartographic Authority and other public-sector services, for example.

There is an enormous potential inherent in openness regarding data. It would therefore be of great advantage if the authorities were to go in for more openness and access to public-sector data. It would also be desirable to encourage a development in the direction of allowing public-sector information to be utilised by private information services or what are known as independent user-generated services. By and large, this would require the following actions on the part of the public sector.

- \* Promote common and/or standard publishing solutions for public-sector data, at state and local authority level.
- \* Develop good descriptive and structured metadata that cut across public body boundaries, capable of promoting openness and access to public-sector information.
- \* Provide access to effective tools for downloading metadata and large datasets for other people (e.g. eGovgeeks).

It should also be mentioned that the new Public Sector Information Act came into force on July 1, 2008. This requires the public sector to be open and transparent. The paragraph that describes the objectives of the Act also states that it is to provide the necessary conditions for re-use of public-sector information. This project must therefore also be seen within the context of making political processes as transparent as possible.

The leader of the National Centre for Telemedicine, Steiner Pedersen (2007), describes the development of ICT in the health sector as lacking central control. The result is a digital patchwork quilt made up of a number of fragmented solutions that do not communicate with each other. He illustrates the situation by showing that five regional health authorities have purchased electronic medical records software from three different suppliers – without any requirement that patient information must be capable of being transferred securely between hospitals.

The problem is not only poor IT services, both within and between public-sector bodies, but in addition, fragmented and closed public-sector information activities. This was confirmed in the course of an interview we conducted on March 12, 2008, with Even Westvang and Simen Svale Skogsrud in Bengler, who run the social networking sites Origo and Underskog. Strictly speaking, it is impossible to gain access to public-sector data that they use in their

Internet services. These data are inaccessible unless you pay large sums of money for them (payment per click). The solution is to use Google Maps data instead.

Another problem to which they refer is that common and/or standardised publishing solutions for the state and local authorities are practically non-existent. Public-sector information is published in the form of Word, PDF, html files, etc. Skogsrud and Westvang wished to see standard web publishing solutions that would enable information to be reused. They also mentioned that there is a need for a better overview of such data as do exist, although there are indications that there exist a great deal of data in various branches of the state over which there is no real overview. In other words, what are needed are metadata that describe the data that do exist. This is also emphasised by the project manager of Karde AS who, in an article in Computerworld (Solli 13.07.08), claims that the greatest challenge facing public-sector bodies is that of developing a solution that will make existing data accessible and developing metadata for this purpose.

This is not to say that public-sector data that can be used in principle do not exist. Large amounts of public-sector information are available via the «Digital Norway» service. The problem is that this service includes data that are not available to people who do not work in the civil service. The possibility of re-use of datasets by other «non-professionals» who wish to create alternative services thus does not exist.

A final problem that we observed in our interview with Skogsrud and Westvang is the importance of local data about where you live. Local information was something they regarded as critical in the Origo social networking site, where local politicians complained about being invisible in local traditional media, while users in small local communities were missing substantial local information. For example, how can one easily get access to decisions made by the town council in Førde? Overseas services such as EveryBlock and TheyWorkForYou typically cover such needs.

Box 2: Case: Interview with Skogsrud and Westvang in Bengler.

## 9. Dimensions of conflict – potential and challenges

As we mentioned in the Introduction, this report studies how the authorities should deal with new possibilities and the challenges associated with them, presented by user-generated content services. The possibilities and challenges can be set up as a series of conflict dimensions. The most central conflict dimensions are listed in the table that follows below. In future efforts to develop a public-sector information policy and investment in social networking sites and user-generated content, the problematic aspects will need to be included as factors. At the same time, it is important that the challenges should not be interpreted as being unavoidable. Awareness of the challenges must not get in the way of willingness to take chances. Few people, for example, could have anticipated the success of the Internet encyclopaedia Wikipedia.

Table 3 below illustrates how possibilities are regularly followed by corresponding challenges, thus suggesting that it is extremely important to continue efforts to determine how the possibilities can be exploited and the challenges faced.

| Conflict dimensions  |  |
|--|--|
| Possibilities  | Challenges   |
| <p><b>Strengthening democracy</b></p> <p>Opportunities for debate and expression, democratisation and greater participation. This will bring political processes closer to the people concerned (see section 5).</p>   | <p><b>Uneven distribution –deeper social divides</b></p> <p>Deeper social divides, because people who are active offline will also be active online, and because participation requires a high level of digital expertise (Dutton &amp; Peltu, 2007; Hanssen &amp; Vabo, 2008). For this reason, it is important that the public sector continues its efforts to promote access to digital media and competence in using these (see «The digital rights of everyone» in White Paper 17, 2006 – 2007).</p>  |
| <p><b>Reinforces freedom of expression</b></p> <p>§100 of the Norwegian Constitution affirms the right to freedom of expression, which implies at everyone has the right to express themselves to other people. Freedom of expression is also laid out in the European Convention on Human Rights, article 10. Developments in the course of the past few years have undoubtedly strengthened the real rights of citizens to express themselves, and also to actually be heard in the context of public affairs.</p> | <p><b>Limitations on freedom of expression</b></p> <p>Freedom of expression is not without its limitations: libel, threats, certain types of pornographic expression, racist expressions and disturbances of the peace and not protected by §100 of the Constitution (Bing, 2008; Sejerstad, Freedom of Expression Commission, and Ministry of Justice and Police, 1999). On the Internet, it is easy to publish opinions that go beyond the limits of freedom of expression.</p>  |
| <p><b>Greater information exchange</b></p> <p>The fact that more people have the possibility of being suppliers and sharers of information and public content will lead to greater exchange of information. It will be simpler to find relevant information in easily understandable language.</p>   | <p><b>Content of poor quality</b></p> <p>One of the most central challenges concerns the quality of content: will user-generated content impoverish the quality of public-sector information and can we trust information from our fellow citizens? According to The Digital Future Report of 2008, the credibility of Internet information has fallen among American in the course of the past eight years. This is probably due to the fact that more web-sites are run by non-professionals. However, it may also be because more attention has begun to be paid to criticisms of the Net. However, when we look at sites such as Wikipedia, we can see that there is also a willingness to supply trustworthy facts among «non-professionals».</p> |

| Conflict dimensions  |   |
|--|---|
| Possibilities  | Challenges  |
| <p><b>Greater mutual trust between the public and the authorities</b></p> <p>The Internet leads to a rapid flow of information and offers an easy and rapid means of expressing one's own opinions, a situation that can be perceived as promoting democracy. In this way, the Internet could lead to a real transfer of power from the governing classes to the governed, in turn leading to greater mutual trust. The public will have greater confidence in the political elite, and the politicians will have greater confidence in the ability of the general public to contribute useful relevant information.</p> | <p><b>Disappointed citizens</b></p> <p>Politics can be a slow-moving process, and there is thus a danger of over-hyping what new services can offer within the perspective of democratization. Users who have high expectations may be disappointed. It is therefore important to ensure that the expectations are realistic; for example, participants need to perceive that their voices and experiences are listened to, but of course, it is impossible to promise that all contributions will lead to concrete political changes.</p>  |
| <p><b>Wider range of choices</b></p> <p>Large amounts of content and a wider range of choices for the ordinary citizen, including the production and sharing of public-sector information.</p>   | <p><b>The rich get richer</b></p> <p>It is true that the Internet gives everyone who has access to it the possibility of contributing and expression their opinions. But not everyone will be heard by very many others. In blogging circles, there is much discussion of A-list bloggers; the few large, well-established bloggers with a large public. Network structures are not necessarily «fair», but follow so-called «power laws» (Barabási, 2003): most nodes in a network are small, with few inward links. These exist side by side with a few large network hubs, which may become more and more significant because of their size. The rich get richer. It is important to keep this network dynamic in mind, in particular in order to avoid a situation in which participation in network debate find themselves disappointed by this.</p> |
| <p><b>Rapid, flexible exchange of content</b></p> <p>The Internet is a rapid and flexible tool, and it is a simple matter to copy and spread its content.</p>  | <p><b>Breaches of copyright law</b></p> <p>The fact that digital information is so easy to copy and distribute makes important demands of how intellectual property rights and creative works should be protected.</p>  |

| Conflict dimensions  |   |
|--|---|
| Possibilities  | Challenges  |
| <p><b>Openness</b></p> <p>The norm is moving in the direction of greater openness and less anonymous participation on the Internet. This situation has the potential for more reliable user-generated content. Studies have shown that openness regarding users' identities are more likely to result in reliable content (see e.g. Kelly, Sung &amp; Farnham, 2002).</p>  | <p><b>Privacy</b></p> <p>Systems in which the users register their personal data create challenges concerning surveillance, personal protection and confidence. Orwell's «1984» presents the reverse of the medal, which we must avoid. See also «Identity Parade» /The Economist, February 14, 2008), and Lüders, 2008b).</p>  |
| <p><b>Spirit of cooperation</b></p> <p>User-generated social networking sites are characterised by active user participation, involvement and idealistic spirit of cooperation.</p>  | <p><b>Commercial exploitation</b></p> <p>Commercial operators already exploit user involvement in products and services. How can we create a clear distinction between commercial and public interests?</p>   |
| <p><b>Cooperation and communities of interests</b></p> <p>People who share the same interests and values create communities that are easily maintained via social networking sites. These enable their voices to become stronger, and give them greater opportunities to influence public debate. This is particularly important for groups that are under-represented in the reality presented by the mass media. A relevant example of this is how the Oslo-based Internet media channel Democratic Voice of Burma (DVB) gained in importance as a supplier of information during the demonstrations in Burma in autumn 2007. Even though DVB is a media channel with professional journalists, it is still heavily dependent on informants and grassroots contributors.</p> | <p><b>Echo chambers</b></p> <p>According to Sunstein (2007) there is a danger of echo chambers, in which we only look for information that supports our own interests and points of view. This may be particularly problematic where racist/Nazi groups are concerned, but also in the case of pro-anorexia or pro-bulimia («pro-ana» and «pro-mia») sites. Echo chambers of this sort create poor conditions for the ideal of public fora for exchanges of opinions (Habermas, (1962) 1989).</p> |
| <p><b>eGovgeeks</b></p> <p>Initiate cooperation with eGovgeeks.</p>  | <p><b>Small-scale crowdsourcing</b></p> <p>The population of Norway may be too small for it to be sensible to count on and collaborate with eGovgeeks who can contribute high-quality services for the general public. User-generated public services require the masses (crowdsourcing) to contribute in the role of information bearers. All the same, Norway does appear to be the keenest nation in the world in its use of social networking sites.</p>                                      |

| Conflict dimensions   |   |
|---|---|
| Possibilities   | Challenges  |
| <p>More and more users are finding relevant public-sector information in public user-generated fora.</p>  | <p>There is a gap between what users actually do today and the plans and efforts of eGovgeeks and the public sector (e.g. Origo and MySociety).</p>   |
| <p><b>Openness as an ideal</b></p> <p>More openness to public-sector information and re-use of public-sector information in new contexts and for the development of new innovative services for the general public.</p>   | <p><b>Reality: closed information processes</b></p> <p>Public-sector information and metadata are not widely available. The problem with public-sector information and data is that they are often designed precisely for delivery to end-users. However, at present there are no good mechanisms that permit large datasets or metadata from the public sector (local and national authorities) to be downloaded in order to create alternative sites such as TheyWorkForYou or EveryBlock. The public sector does not make it easy to create innovative mash-ups, thus losing the opportunity to develop innovative, interesting projects. Nor are there standardised publishing solutions for national or local authorities.</p> |
| <p><b>Saves resources</b></p> <p>Transferring effort from the information producer to the user saves resources for public-sector information activities. Mayo &amp; Steinberg (2007), for example, emphasise how user-generated social networking sites could even make public-sector information services superfluous. For this reason the public sector should be trying to ensure that public-sector information services complement citizen-initiated projects (see recommendation #3 in «The Power of Information»).</p> | <p><b>Poorer reliability</b></p> <p>This challenge is closely related to the challenge «Poor-quality content» discussed above. Information must be reliable and accessible to everyone. Effort put into user-generated net services may save resources, but only to a certain extent, given that they require resources for follow-up and information quality assurance. The main challenge involves developing good mechanisms for ensuring that information is reliable. For example, it ought to be simple to report incorrect or imprecise content quality, and feedback of this must be followed up.</p>   |

Table 3: Possibilities and challenges of increased citizen participation.

These conflict dimensions form the backcloth for the following recommendations regarding information strategies and measures.

## 10. Ideas and perspectives

This section describe a number of ideas and perspectives that the authorities could put into effect in order to renew both the public sector's ICT policies in general and public-sector information strategy in particular. All of these recommendations support new conditions for the coordination and content generation of public-sector information, in which the ordinary citizen (or eCitizen2.0 ) could play a more active role.

The ideas and perspectives that we put forward below are based on national and international trends and the empirical facts that we have documented in this report. There is a clear trend in the direction of citizens both producing their own information and consuming that of other citizens. In the future, user-generated services will increase in scope. The widespread use of Facebook and Wikipedia is an example of this trend.

The role of the state as a supplier of information and services can benefit from this development, by taking a step away from traditional one-way dissemination of information in the direction of more symmetrical communication processes. A not inconsiderable proportion (17%) of Norwegian citizens already consume, generate and share public-sector information in user-generated fora. The authorities cannot therefore ignore user-generated fora as important arenas for public-sector information and services, as has also been pointed out by Osimo (2008) in an EU report. The authorities should therefore consider rapidly launching measures to ensure higher-quality public-sector information and services, also in user-generated fora.

### 10.1 WikiNorge.no

The main point made by this report is that the public sector needs to regard the general public as a partner rather than as a mere passive recipient of information. We offer the radical proposal that the state should launch and support a «Wikipedia» for public-sector information: a WikiNorge.no, in which citizens could informally enter and edit all possible types of public-sector information, from changing one's doctor, through rules for changing school to tax and social security regulations. This will bring about easier access to public-sector information for very many user groups who find the current system complex and difficult to understand. At the same time, the system could support collaboration among citizens who could help one another.

The challenges outlined in the previous chapter under the heading of Conflict Dimensions would of course be relevant, particularly as regards quality of content, breaches of intellectual rights and the reliability of information. However, if we invest in resources and mechanisms for quality assurance, the challenges can be met.

### 10.2 Openness and reusable data

Public-sector information must be freely available and reusable on the Internet. The authorities must open up and make available public-sector electronic information, data and metadata, so that the general public (and private individuals and developers) can utilise, publish and share such information in new forms and contexts. To a great extent, this will require common and/or standardised publishing solutions at state and local government level. Providing these would offer services and information back to the public sector, via a combination of public-sector data (such as map data) and other available data (i.e. mash-ups), as well as giving citizens the power to take responsibility and inform both

themselves and other people. The authorities would thus be able to put more resources into making public sector metadata and other data available in a universal format, thus improving the quality of services and information at the other end.

Opposing openness is not compatible with the objective of making the activities of the public sector open and transparent. Chapter 7.3 demonstrates the potential represented by mashups. Today, however, these are difficult to implement in a Norwegian context, due to the extremely closed information exchange solutions utilised by the public sector. See also Chapter 8 for more details of how public-sector data should be made available.

Openness in public-sector should also be encourage, for example with extra founding.

### 10.3 Pilot programmes

The public sector should set up pilot programmes for the development of user-generated services, in collaboration with eGovgeeks for small but useful local services\*, like FixMyStreet.com elsewhere. Such services can help to involve citizens to a greater extent at local level. Digital Pioneers in the Netherlands and MySociety in the UK are projects from which Norwegian authorities could learn (see Chapter 7).

The threshold for applying for funding should be low, because voluntary participants have limited funds available to implement their ideas, although they may be of great social value and have the potential for private financing. It is also important to counteract the possibility of commercial exploitation and misuse of personal data (see above-mentioned challenges).

### 10.4 The beta culture

As a supplement to pilot programmes, we could (as suggested by Rune Røsten at the FAD seminar on the social web 2.0 on May 20, 2008), exploit the beta culture\*\*. One typical Norwegian example on this is how NRK make use of the so-called «beta culture», the involvement of voluntary and interested Internet users (often super-users) in to the development process. Users or customers give feedback on everything from ideas to finale solutions to further improve and expand existing ideas and solutions by discussion and reflections in large scale networked collaboration, for example via a blog (just as NRKBeta is doing at present to develop its web-portal).

This approach can also be used to get relevant and new forms of feedback on everything from ideas to solutions for new public-sector services. A similar approach for the public sector in the UK is at [www.showusabetterway.co.uk](http://www.showusabetterway.co.uk), where the following text can be read:

The UK Government wants to hear your ideas for new products that could improve the way public information is communicated.

This measure is a direct consequence of the report «The power of Information» by Mayo and Steinberg (2007), and is a cheap and efficient way to involve citizens in the development process of new public-services. The competition in UK is open to everyone who wishes to offers suggestions about how public-sector

\* Local roots for such services are an advantage: the individual citizen is better informed about local conditions, and they can also generate more enthusiasm among the general public at local level.

\*\* There is often a focus on digital divides with regard to how a technologically well-informed elite are the first to use innovative services (as we have also described above in Conflict Dimensions). In terms of the development of services of this type, however, such super-users can be a valuable resources. Nor should we take it for granted that this type of approach will only involve super-users. Beta testing can involve large-scale user-friendliness and user experience testing.

information can be re-used in better and more effective ways. Good proposals can be given funding to carry out their projects. The competition was launched on June 18 this year, and closed at the end of September. To date, it has received an overwhelming response: (<http://www.showusabetterway.co.uk/call/ideas/>) and includes proposals and ideas such as «Map-based Citizens' Engagement Tool», «The Law Says» and «How green is my hood»\*.

On such a beta site, people can also launch beta versions of new public-sector services and receive feedback about these from interested users.

### 10.5 Experimenting and taking chances

The above points about pilot programmes and launching beta versions emphasise the importance of daring to experiment and take chances. A characteristic of social networking sites is their flexibility, which allows them to

Be scaled up relatively simply, from functioning among small user groups to serving really large numbers of people. This is a different strategy to that often employed by the public sector – where complex services (e.g. [www.norge.no](http://www.norge.no)) are developed in the course of several years and are only launched when they are regarded as ready for use. Instead, we should make «snappier» and fresher efforts, without demanding that a service should be perfect and scaled to serve the whole population from the very beginning.

### 10.6 Sharing public-sector information on all channels

State-of-the-art consumer technology such as blogs, wikis and social networking sites should be exploited to modernise the publication of public-sector information. Taking such a step would contribute to better dialogue, more citizen involvement, more openness, and a rise in quality on the part of public-sector bodies. Social networking sites are also typical channels for efficient information-sharing, since they often function as means of integrating different information and sharing services. If the authorities wish to spread a particular message or information in general and increase the number of hits in Google, for example, this would be a potential strategy to adopt.

### 10.7 Politicians on social networking sites

Politicians can exploit state-of-the-art consumer technology such as blogs, wikis and social networking sites. Such technologies offer a unique possibility to engage with the individual citizen, particularly young users aged below 35. Politicians also have greater control over how they and their policies are presented than they do under the editorial power of the mass media. Social networking sites make political thinking, ideas and efforts more visible: with the aid of simple, mobile consumer technology such as Twitter, Facebook and YouTube, profiled politicians can keep the public continuously informed about what they are actually doing on a day-to-day basis, as well as what thoughts and ideas they have. This is being done today by leading US and UK politicians. An example of this also being done in Norway (admittedly one of very few) is that Prime Minister Jens Stoltenberg has recently joined Facebook.

---

\* This point must be considered in connection with the point about pilot programmes.

## 11. Conclusions

This report has described what new media developments, in the sense of wikis, social networking sites and user-generated content, could mean for the goals and principles of the public sector in ICT policy in general and information policy in particular. The aim of the report has been to develop ideas and perspectives regarding how the public sector can exploit user-generated content. A central question discussed by the report has concerned how eGov can utilise net users as active participants and contributors of information. It also looks at how this would also give citizens a better range of information and services.

The report has studied and surveyed the following topics:

- \* The scope of and trends in social networking sites and user-generated content in Norway.
- \* The involvement of Norwegian Internet users in public-sector information in user-generated fora.
- \* The challenges involved in access to and re-use of digital public-sector information.
- \* International trends in eGov services and user-generated eGov services.

On the basis of knowledge of trends both among the Norwegian population and internationally, the report concludes that new technology and active user participation both can and should be exploited by the authorities to create new public-sector services. Access to new technology and new user-generated services in combination with greater ICT competence in a large proportion of the general public has created unique opportunities for generating and sharing one's own and others' content. Today, a large group of persons can create a valuable amount of information by each doing a little bit and coordinating their efforts via the Internet (i.e. «crowdsourcing»). Wikipedia is a good example of how competent people can come together to create good and important information.

From the general perspective of communication, we have moved from a «one to many» model (sender to recipient), with eGov as the controlling information producer and broadcaster, to a «many to many» model, in which citizens themselves are both active producers and distributors of public-sector information and services. Although there are many challenges involved, these can be overcome. It is important to take our point of departure in new needs, patterns of use and a new world of information in which new principles for future state information policy will be developed.

It is important to point out that user-generated services already occupy an important place on the Internet. In many ways, such services have become Internet users' new portals, displacing more unidirectional information portals. In our study, more than half of Internet users report that they use social networking sites. We therefore recommend that the public sector should adopt an active position vis-à-vis these new user trends. Such forms of information may also have greater informational value for the public. The public sector can influence user-generated fora in a direction that makes them as useful as possible for their users, particularly for young users under the age of 25.

Openness and access to public-sector data are an important challenge if we wish to create good conditions for user-driven information and communication services. In order to generate highly trustworthy information and innovation, the authorities need to open up and make available public-sector data, so that these can be re-used in new contexts and to develop new services. At present, there are few or no good mechanisms that enable us to download large data-

sets, metadata from the public sector (local or national authorities) in order to create alternative services similar to TheyWorkForYou or EveryBlock. Metadata from public-sector sources are virtually non-existent.

A strategy of this sort also requires ICT policy to regard users as a partner rather than a passive recipient of information. eGov needs to do its best to exploit the surplus energy and creativity of members of the public. The authorities should also organise data sources that are searchable and accessible to independent players outwith the public sector itself. «Standardisation» and «open source» are keywords here. Other central suggestions include cooperating with eGovgeeks, and creating the conditions whereby users can help each other in a new public-sector eGov wikipedia, and to integrate public-sector services in other relevant user-generated fora.

## 12. Acknowledgement

We would like to thank our SINTEF colleagues Asbjørn Følstad and Jan Håvard Skjetne for useful input and tips. Many thanks are also due to Even Westvang and Simen Skogsrud in Bengler, who run the Underskog and Origo social networking sites, for useful conversations during the project.

## 13. References

- AAD (2001), Arbeids- og Administrasjonsdepartementet. *Informasjonspolitik for statsforvaltningen. Mål, prinsipper og konsekvenser*. Revidert utgave 2001.
- Barabási, A.-L. (2003). *Linked: how everything is connected to everything else and what it means for business, science, and everyday life*. New York: Plume.
- Benkler, Y. (2006). *The Wealth of Networks: How Social Production Transforms Media Freedom*. New Haven, Conn.: Yale University Press.
- Bing, J. (2008). *Ansvar for ytringer på nett: særlig om formidlerens ansvar*. Oslo: Universitetsforlaget.
- boyd, d. (2008). Can Social Network Sites Enable Political Action? In A. Fine, M. L. Sifry, A. Rasiej & J. Levy (Eds.), *rebooting america. Ideas for Redesigning American Democracy for the Internet Age* (pp. 70-74): Personal Democracy Press.
- Brandtzæg, P.B. & Heim, J. (forthcoming, 2009/paper still in review). Social networking sites – a user typology. Submitted CHI '09 Proceedings on Human Factors in Computing Systems (Boston, USA, April 05 - 10, 2008). CHI '09. ACM, New York
- Brandtzæg, P.B., & Heim, J. (2008). User Loyalty and Online Communities: Why Members of Online Communities are not faithful. INTETAIN. Proceedings of the 2008 ICST Second International Conference on Intelligent Technologies for Interactive Entertainment, ACM press, ISBN 978-963-9799-13-4. Playa del Carmen, Cancun, Mexico. 8-10 January, 2008.
- Brandtzæg, P. B. (2007a). Kronikk: Staten inn på Facebook. *Dagbladet*, lørdag 13. oktober, 2007, s. 48. Online: <http://www.dagbladet.no/kultur/2007/10/13/514923.html>
- Brandtzæg, P. B. (2007b). Kronikk: Verdiskapning 2.0. *Ny Tid*, nr. 23 årgang 55, 15. juni 2007. s 30-31. Online: [www.nytid.no/?sk=urix&id=4183](http://www.nytid.no/?sk=urix&id=4183)
- Brandtzæg, P. B & Heim, J. (2007). «Participation in Online Communities», in Brandtzæg, P.B. (eds) *Initial context, user and social requirements for the CITIZEN MEDIA applications: Participation and motivations in off- and online communities*. P6-2005-IST-41 (038312), CITIZEN MEDIA, D1.2.1. Available online: [www.ist-citizenmedia.org](http://www.ist-citizenmedia.org)
- Brecht, B. ([1930] 1974). Radioteori. In E. Thygesen (Ed.), *Folkets røst: offentlig adgang til massemediene*. København: Tiderne Skifter.
- Crabtree, J. (2007). *Civic hacking: a new agenda for e-democracy*. <http://www.opendemocracy.net/debates/article-8-85-1025.jsp>
- Digital Future Report (2008). The Center for the Digital Future at the USC Annenberg School, <http://www.digitalcenter.org>
- Due, B. (2007). Viktige overraskelser: Ideer om uforusigbar teknologibruk. In M. Lüders, L. Prøitz & T. Rasmussen (Eds.), *Personlige medier: Livet mellom skjermene* (pp. 38-55). Oslo: Gyldendal akademisk.
- Dutton, W. H., & Peltu, M. *Reconfiguring Government-Public Engagements: Enhancing the Communicative Power of Citizens*. Oxford: Oxford Internet Institute.
- Enzensberger, H. M. ([1970] 2003). Constituents of a Theory of the Media. In N. Montfort & N. Wardrip-Fruin (Eds.), *The NewMediaReader* (pp. 259-276). Cambridge, Mass.: MIT Press.
- Ess, C. (1996). The Political Computer: Democracy, CMC, and Habermas. In C. Ess (Ed.), *Philosophical Perspectives on Computer-Mediated Communication* (pp. 195-230). Albany, NY.: State University of New York Press.
- Freedom House. (2007). *Map of Press Freedom 2007*. Retrieved 8 August, 2008, from <http://www.freedomhouse.org/template.cfm?page=251&year=2007>
- Frost, J. H. (2008). Social Uses of Personal Health Information Within PatientsLikeMe, an Online

- Patient Community: What Can Happen When Patients Have Access to Another's Data. *Journal of Medical Internet Research*, 10(3).
- Furuli, K., & Kongsrud, S. (2007). «Mypage and Borger.dk - a Case Study of Two Government Service Web Portals». *The Electronic Journal of e-Government*, 5(2), 165-176.
- Granovetter, M. S. (1973). The Strength of Weak Ties. *The American Journal of Sociology*, 78(6), 1360-1380.
- Griffiths, M. (2007). Oxygen: Social Intranets, Collective Intelligence, and Government Practices. *The Electronic Journal of e-Government*, 5(2), 177-190.
- Habermas, J. (2006). Political Communication in Media Society: Does Democracy Still Enjoy an Epistemic Dimension? The Impact of Normative Theory on Empirical Research. *Communication Theory*, 16(4), 411-426.
- Habermas, J. ([1962] 1989). *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society*. Cambridge: Polity.
- Hagen, I. (1992). Democratic Communication: Media and Social Participation. In J. Wasko & V. Mosco (Eds.), *Democratic communications in the information age* (pp. 16-27). Toronto: Garamond.
- Hanssen, G. S., & Vabo, S. I. (2008). Styringsdilemmaer i lokaldemokratiet - økte utfordringer med digitalisering? In G. Enli & E. Skogerbø (Eds.), *Digitale dilemmaer: nye medieformer, nye utfordringer* (pp. 18-38). Oslo: Gyldendal akademisk.
- Kelly, S. U., Sung, C., & Farnham, S. (2002). Designing for improved social responsibility, user participation and content in on-line communities. Proceedings of the SIGCHI conference on Human factors in computing systems: Changing our world, changing ourselves. Minneapolis USA. ACM press: 391-398
- Krogstad, A. (2007). En bok, en blogg og en blondine. Personlig politisk lederskap i nye medier. *Sosiologisk tidsskrift*, 15(3), 195-225.
- Lüders, M. (25 August 2007). Nettvalgkamp til stryk. Dagens Næringsliv.
- Lüders, M. (2008a). Conceptualizing personal media. *New Media and Society*, 10(5), 683-702.
- Lüders, M. (2008b). Synlighet og personvern. In G. Enli & E. Skogerbø (Eds.), *Digitale dilemmaer: nye medieformer, nye utfordringer* (pp. 103-124). Oslo: Gyldendal akademisk.
- Mandagmorgen (2006). Nye opinionsledere surfer på bloggølgen. Undersøkelse om blogging i Norge: Online: <http://mandagmorgen.no/artikkel.shtml?id=2033>
- Mayo, E., & Steinberg, T. (2007). *The Power of Information*. Online: [http://www.ncc.org.uk/nc-cpdf/poldocs/NCC160pb\\_power\\_of%20information\\_review.pdf](http://www.ncc.org.uk/nc-cpdf/poldocs/NCC160pb_power_of%20information_review.pdf)
- Moderniseringsdepartementet. (2005). *eNorge 2009 - det digitale spranget*. Online: [http://www.regjeringen.no/nb/dep/fad/Tema/it-politikk\\_\\_enorge/eNorge-2009.html?id=439499](http://www.regjeringen.no/nb/dep/fad/Tema/it-politikk__enorge/eNorge-2009.html?id=439499).
- Natvig (2007). Info bare for de sterkeste. Kronikk *Aftenposten* 23.08.07: <http://www.aftenposten.no/meninger/kronikker/article1952598.ece>
- O'Reilly, T. (2005). What Is Web 2.0? Design Patterns and Business Models for the Next Generation of Software. Online: <http://www.oreillynet.com/pub/a/oreilly/tim/news/2005/09/30/what-is-web-20.html>
- Osimo, D. (2008). Web 2.0 in Government: Why and How? Authors: David Osimo; EUR Number: 23358 EN; Publication date: 5/2008. European Commission, Joint Research Centre, Institute for Prospective Technological Studies: Online: <http://www.epractice.eu/document/4724>
- Osimo, D. (2007). Kommentar i blogginlegget av DiMaio: What Does Web 2.0 Mean for Government? Scenario Planning Again. <http://blog.gartner.com/blog/government.php?itemid=1852>

- Pedersen, S. (2007). Et digitalt lappeteippe: Kronikk I *Nordlys* 9.02.07 <http://www.telemet.no/et-digitalt-lappeteippe.429495-80451.html>
- Preece, J. (2000). *Online communities: designing usability, supporting sociability*. Chichester: Wiley.
- Rasmussen, T. (2008). *Nettverksformelen. Hvordan det sosiale livet henger sammen*. Oslo: Unipub.
- Rheingold, H. (2008). Smartmobbing Democracy. In A. Fine, M. L. Sifry, A. Rasiej & J. Levy (Eds.), *rebooting america. Ideas for Redesigning American Democracy for the Internet Age*: Personal Democracy Press.
- Schifferes, S. (2008). Internet key to Obama victories. Online: <http://news.bbc.co.uk/1/hi/technology/7412045.stm>
- Sejersted, F., Ytringsfrihetskommisjonen, & Justis- og politidepartementet. (1999). «Ytringsfrihed bør finde Sted»: forslag til ny Grunnlov § 100: utredning fra en kommisjon oppnevnt ved Kongelig resolusjon 26. august 1996 Oslo: Statens forvaltningstjeneste, Statens trykning.
- Skogerbø, E., & Winsvold, M. (2008). Nettet som debattarena. In G. Enli & E. Skogerbø (Eds.), *Digitale dilemmaer: nye medieformer, nye utfordringer* (pp. 39-60). Oslo: Gyldendal akademisk.
- Smith, A., & Rainie, L. (2008). The internet and the 2008 election. Online: [http://www.pewinternet.org/PPF/r/252/report\\_display.asp](http://www.pewinternet.org/PPF/r/252/report_display.asp)
- Solstad, Ø. (2008). Foredrag på Seminaret om rike medier, brukervennlighet og personvern. 12. juni, 2008, SINTEF, Oslo.
- Sollie (2008). Vil tvinge fram samspill. *Computerworld* nr 22. 13.07.08 s.22-23.
- Storsul, T. (2002). *Transforming telecommunications: democratising potential, distributive challenges and political change*. Oslo: Faculty of Arts Unipub.
- Storsul, T., Arnseth, H. C., Bucher, T., Enli, G., Hontvedt, M., Kløvstad, V., et al. (2008). *Nye nettfenomener. Staten og delekulturen*. Oslo: University of Oslo.
- Stortingsmelding nr. 17 (2006-2007). *Eit informasjonssamfunn for alle*. Det kongelige fornyings- og administrasjonsdepartement.
- Sunstein, C. (2007). *Republic 2.0*.
- Tapscott, D., Williams, A. D., & Herman, D. (2007). *Gov 2.0: Government, Wikinomics & Democracy*: New Paradigm Learning Corporation.
- The Economist. (14 February 2008). Technology and Government: Identity Parade. *The Economist*, from [http://www.economist.com/specialreports/displaystory.cfm?story\\_id=10638196](http://www.economist.com/specialreports/displaystory.cfm?story_id=10638196)
- van Dijk, J. (2005). *The Network Society: Social Aspects of New Media* (2nd ed.). London: Sage.
- Wikipedia (2008a) Geek: <http://en.wikipedia.org/wiki/Geek>
- Wikipedia (2008b). Wikipedia:Size comparisons. Retrieved online 08.02.08.: [http://en.wikipedia.org/wiki/Wikipedia:Size\\_comparisons](http://en.wikipedia.org/wiki/Wikipedia:Size_comparisons).
- For a complete, more extensive list of references consulted by this project, see the tags on the following bookmarks site: <http://del.icio.us/petterbb/FAD>

## 14. Appendix

Contact Petter Bae Brandtzæg: [pbb@sintef.no](mailto:pbb@sintef.no)

A SINTEF-report written for the Ministry of Government Administration and Reform 2008  
ISBN: 978-82-14-04411-9