

# GIMA

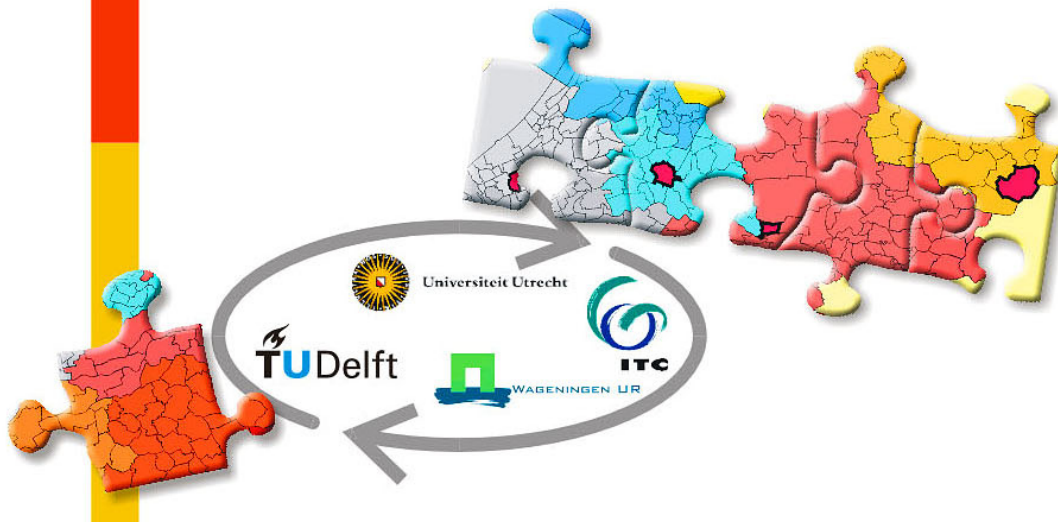
Geographical Information Management and Applications

## Sharing information about spatial plans through social media

Thesis proposal

Student: Jillis Eikelenboom  
Supervisors: Ron van Lammeren and Arend Ligtenberg (Wageningen UR)  
Professor: Arnold Bregt (Wageningen UR)

Version: 0.4  
Date: 19-08-2011  
E-mail address: [thesis@pixualized.com](mailto:thesis@pixualized.com)



## 1 Research background

### 1.1 Public participation in Dutch spatial planning

The Netherlands have quite a long history of public participation in spatial planning at a local and regional level. Since 1965 it has been made possible by legislation (Spatial Planning Act) to appeal against spatial plans made by regional and local governments (Coenen, 2001). Starting around 1970, this instrument was regarded to be overdue in the whole process of spatial planning. Citizens and organisations were not involved in the creation of the plans and could only disagree on plans already defined and finalized. Different forms of consultation in earlier stages of the planning process evolved in the country, partly as a result of citizens' protests against municipal proposals and projects for urban reconstruction.

It wasn't until 1985 that governments were legally required to make the designs for zoning plans available to the public and offer people and organisations the opportunity to give their opinion about these designs. This is still done by inviting the public to submit written or oral, reasoned responses according to legal procedure and by organising information meetings where people can give their opinion. This happens under the condition that the people responding have a proven interest in the plan. Also other plans and regulations, such as traffic plans, can be made subject to public hearing and involvement. Because the importance of public participation is recognized, this is often done.

When this legislation and practice is applied to the ladder of participation by Edelenbos and Munnikhof (1998) – which is based on Arnstein's (1969) work – it concerns the level called 'consult' as can be seen in table 1. In some cases, mostly where a spatial plan has a high impact on a community because of the scale or the public services involved, the public is invited to 'give advice'. Often this takes the form of a choice between two alternative elaborated plans in the design phase of the planning process. The preferred alternative is then processed into a zoning plan which is made subject to consultation.

Arnstein	Level of participation	Edelenbos & Munnikhof
Manipulation, therapy	None	-
Informing	Low	Inform
Consultation		Consult
Placation		Give advice
Partnership	High	Co-produce
Delegated power, citizen control		Co-decide

*Table 1: Ladders of participation*

### 1.2 Issues

Although the concept of consultation is generally working well, a number of issues have been recognized in the past twenty years.

One issue is the lack of involvement of the public. Generally, it's certain types of people and advocacy groups that make use of the opportunities to have their say at information meetings, through letters or talking with a civil servant at city hall (AVV, 2003).

A second one is that there's no legal requirement for the opinions and views given by these people to be taken into account by governments when planning decisions are made. As governments can and do neglect citizens' opinions for e.g. political reasons (Coenen, 2001) the esteem for this form of participation decreases.

The third issue is the moment of the consultation phase in the process of spatial planning. The plans already have been created, while people would like to be able to change these plans or contribute to them (Coenen, 2001). This means there is a public

will to participate on a higher level on the ladder, people that are involved want to be partners at least in the planning process, they want to co-produce and rather co-decide.

### 1.3 Opportunities

The internet is an easily and widely accessible channel that can be used to increase the involvement and lift the participation level of the public. Until now, the internet has mostly been used by Dutch local and regional governments by providing the possibility to express views on spatial plans using a digital form or by e-mail. This is hardly a change compared to the non-digital process, although it takes less effort to fill in and send a form on a website than to write and post a letter. And the share of municipalities that provide means for digital consultation is only 5% (Ministerie van Binnenlandse Zaken, 2010).

But the internet has much more possibilities regarding communication and collaboration, which have been the subject of research and development in recent years. These are commonly known as Web 2.0, a term coined by publisher O'Reilly (2005) to mark technological developments at that time. Another term is social media, although this applies to possibilities predating Web 2.0 as well, like internet forums. They include phenomena called social networks (e.g. LinkedIn and Facebook), user-generated content (e.g. Flickr and Youtube), and crowdsourced information (e.g. Wikipedia and OpenStreetMap). Part of this development is the creating of mash-ups (combinations) of digital maps and many types of location-based information (Batty et al., 2010).

The Dutch national government and other governmental organisations recognize the importance of digital public services and increased participation through the internet and have set up several programmes to this cause, under the label of e-government. As a result, there's a fairly large number of local governments that are applying old and new communication solutions to citizen participation. 19,3% of Dutch municipalities has made use of a website for participation in spatial planning between 2008 and 2010, and about 14% uses new media to communicate interactively about local policies (Ministerie van Binnenlandse Zaken, 2010). Recent examples of participation projects that involve the use of social media are those started by the municipalities of Alphen aan de Rijn ("The city of tomorrow"), Borne ("My Borne 2030") and Goes ("#Goes2040").

In other countries, initiatives regarding digital public participation in spatial planning have also been developed and researched, for example via experiments in two municipalities in Finland where people could give their view on plan locations using markers on a digital map (Nuojua, 2009).

## **2 Research definition**

### **2.1 Research objectives**

The current possibilities regarding digital communication and the first experiments and projects using them in the field of spatial planning are promising for solving the issues encountered in public participation in spatial planning.

When the concepts behind communication and collaboration solutions are applied to the spatial planning process, especially the early stages, it should be possible to increase both the number of people involved and the level of participation. The goal would then be to enable as many people as possible to have an active and significant role in creating spatial plans for their environment.

Combining Web 2.0 concepts and public participation in spatial planning isn't done properly without first investigating the current use of social media in spatial planning processes. In this research, social media are considered to be used to make announcements or statements about spatial plans and to discuss them. In these messages and conversations both knowledge about and views on spatial plans can be shared, which is a vital aspect of participatory planning (Healey, 1998). Because the locations and areas related to the plans are key information, the investigation into the use of social media should focus on the sharing of geographical information.

Therefore, the first objective of this thesis research is to analyse in which way geographical information regarding spatial plans is shared through social media. The second objective is to assess whether this enhances participation in the planning process.

### **2.2 Research questions**

The main questions are derived directly from the research objectives: how is geographical information regarding spatial plans shared through social media, and does this enhance participation in the spatial planning process?

To answer the main questions, a number of sub-questions have to be answered:

- which toponyms are being used in social media messages about spatial plans?
- what is their relation to the toponyms used in the spatial plans?
- what is the relation of those sharing the information to the spatial plans?
- what is the nature of the information that is connected to the geographical information?
- what is the added value of the information shared to knowledge and opinion development regarding the spatial plans?

### **2.3 Scope**

The focus of the research objective and question is on the content and not the technology of social media usage. Therefore the applications and (mobile) hardware that are used by the participants in spatial planning aren't subject of this research.

The research will be restricted to spatial plans located in The Netherlands for two reasons. Firstly, the research is considered to be a stepping stone towards the enhancement of the Dutch spatial planning process in particular. Secondly, the foreseen amount of information that could be analyzed is limited in this way to comprehensible proportions.

### 3 Methodology

The first and crucial step in this research is the selection of information sources that are going to be used, and the spatial planning cases that are going to be studied. It is crucial because this step will define the amount and nature of information that will be available for analysis. Known sources with a significant textual component are Twitter, Facebook, Hyves and LinkedIn, but others may be useful as well. Some possible cases have been mentioned (Alphen a/d Rijn, Borne and Goes), more will have to be found.

Once the sources and cases have been selected, all possible information, i.e. messages and conversations will be gathered. The method for this depends on the nature of the information source. If it's mainly real-time such as Twitter, the current flow of information will be tracked using one of the many tools available in social media analysis for e.g. marketing purposes<sup>1</sup>. If there's an archive of recorded real-time information kept by or for a municipality, this will be obtained. Otherwise, the available sources will be accessed on the web and the information gathered.

Tracking and selecting information will generally make use of tags (key words) that are part of or attached to the messages, tags that are known to refer to a spatial planning case.

The first part of the analysis of the gathered information will focus on the pure geographical component. From the messages all terms and names referring to a location or area will be deducted. These toponyms will then be compiled to a list for each case. Then they can be put side-by-side to the toponyms used in the spatial plans to be compared.

Deriving toponyms from texts poses challenges because of the ambiguous nature of place names. Context is often needed to know which of the available options is to be used. This is especially true for social media sources because of their limited amount of information and informal and imperfect nature (Ireson, 2010).

Not all messages related to a planning case might contain a reference to a location or area. The comparison of toponyms and the proportion of messages without toponyms will give a first insight into the way spatial plans are being discussed in social media.

Secondly, the analysis focuses on who is sharing the information and what their involvement in the spatial planning process is. This is a matter of discerning the social media users that are creating messages and having conversations. Then these users will be counted and categorized, with a respect to their privacy i.e. the data will be anonymised. Also, the relationships between the users will be analysed using the established principles of social network research (Scott, 2010), enhanced with techniques aimed at social media (Menon, 2010). This part of the analysis will result into a description of the social networks of the spatial planning cases.

Thirdly, the non-geographical portions of the information enclosed in the messages will be deducted so the nature of this part of the information can be determined. It can be either objective, providing verifiable facts about a spatial plan, or subjective, giving opinions or sentiments (Pang, 2008). It can also be about the planning project and process or about the actual content of the plans. These and other discretions yet unknown will further enhance the insight in the way spatial plans are discussed in social media.

Finally, using the acquired insights on locations being discussed, the social network involved and the content of the discussions, conclusions are drawn about the added value of the information shared through social media to knowledge and opinion development regarding the spatial plans. And thus to participation in the spatial planning process (Healey, 1998).

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<sup>1</sup> see for example <http://www.pamorama.net/2010/04/26/20-top-twitter-monitoring-and-analytics-tools/>

## 4 Feasibility

When the sources and cases are selected, it should be taken into account that a part of the social media available (i.e. Twitter) mainly provides real-time information. Therefore, research on historical information needed for past spatial planning cases is dependant on archives kept by governmental organisations. To diminish this dependency and the risks involved, the research should focus on information being shared currently or in very recent history when using a source like Twitter, and therefore on current spatial planning cases.

## 5 Time schedule

### 5.1 Milestones

From the GIMA thesis regulations some milestones and related deadlines can be derived. The mid term presentations and thesis defences are scheduled four times a year during the contact periods. Taking into account the time needed for the research, the milestones can be coupled to a set of dates leading to table 2.

Milestone	Date
go/no-go decision by supervisors and professor	18-08-2011
mid-term presentation (Enschede)	02-09-2011
submission of thesis (= > 4 weeks before defence)	24-02-2012
thesis defence (Wageningen)	23-03-2012

Table 2: Milestones

### 5.2 Schedule

The methodology and milestones are combined into the chart provided in table 3. Each phase in the schedule will result in a deliverable, i.e. a chapter of the thesis. At the end of the last phase the thesis should be finished and ready to be submitted and reviewed. This marks the end of the research and is planned for the end of 2011. The thesis defence follows three months later, which allows for some flexibility in the planning.

Phase \ month-year	08-11	09-11	10-11	11-11	12-11	01-12	02-12	03-12
Prepare presentation								
Midterm (2-9)		X						
Case selection								
Gather information								
Toponym analysis								
Network analysis								
Non-geographical								
Added value								
Finish thesis								
Thesis defence (23-3)								X

Table 3: Schedule

### 5.3 Appointments for supervision

At the end of one or two phases in the schedule, a meeting with the supervisors will take place to discuss the results and the next phase. At that time the next appointment will be made.

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### Related literature:

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Many references on e-participation, web 2.0 and spatial planning are available at the website of the Participatory Geoweb project: <http://rose.geog.mcgill.ca/geoide/resources>