



The role of social media in influencing policy

A case of the Groningen gas fields

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# Executive summary

Social media plays a big role in today’s communication especially between organizations and their publics.

The Opening Up project; which is the commissioning party of this research, seeks to unravel new approaches that can contribute towards improving service delivery of businesses and governments […] in the NSR to its citizens via social media. The potential of the North Sea Region is backed by economic activities which through the utilization of natural resources in the member countries could potentially result in environmental issues. Evidently, the earthquakes in the in the Groningen gas fields as a result of gas extraction in the region is a seamless example (Tagliabue, 2014). One which has seen the inhabitants of the region suffer the consequences of earthquake exposure for over a decade, up until the August 2012 earthquake, the worst of its kind, which was largely talked about on social media forcing the Dutch government to make a decision to reduce gas extraction by NAM (Donovan, 2013). The epicenter of the August 2012 earthquake recording a magnitude of 3.6 on the Richter scale was near the village of Loppersum which is one of the worst hit villages in the region (Statistics Netherlands , 2014).

Mixed methods of data collection are therefore used to conduct research, grounded by various theoretical aspects in the field of corporate public relations, social media theories as well as theories on how to measure relationships between stakeholders and its publics.

 The ultimate outcome of this practice-oriented research therefore is to provide knowledge for the Opening Up project that could be beneficial in finding new ways of using social media among their governments and businesses to improve service delivery to its citizens by using the Groningen gas fields as a case study. Service delivery[[1]](#footnote-1) in this case, is used in reference to how the government and NAM have handled the giving and receiving of information to and from the affected inhabitants. Therefore, an evaluation of service delivery of the government and NAM via social media to the affected inhabitants following the 2013 Groningen earthquake in the village of Loppersum is conducted. This report culminates in an advice whose findings are generated by a total of 159 respondents to an internet mediated questionnaire administered to the affected inhabitants of Loppersum.

# 1. Project context

Discovered on July 22nd 1959, the Slochteren 1 well holding 2.8 trillion cubic meters of gas in the porous Rotliegend sandstone formation began its gas production in the year 1963, yielding approximately 100 cubic meters of gas annually in the first decade (Botter, 2014). By 2013, recorded gas field production rates amounted to 53.8 billion cubic meters (*bcm*) a figure exceeding [by roughly 4.8*bcm*] the estimated 49*bcm* initially expected to be the annual outlook by 2020 (Webb & Deutch, 2014). This therefore is an indication that there are higher than planned gas extraction activities taking place in the Groningen gas fields.

While some even claim that the gas revenue allowed the Netherlands to live beyond its means for half a century (Banning, 2009), the discovery of gas in the Netherlands has caused environmental consequences that jeopardize the safety of the region’s inhabitants; due to the fragility of the region which below sea level and protected from the North sea by vast dykes (Tagliabue, 2014). Evidently, with over the 51 years of extraction of natural gas by NAM, Europe’s’ largest gas field has not only succumbed to subsidence but also to a series of over 1000 recorded earthquakes in the northern Groningen region since 1986 (Triebert, 2014).

Despite the financial benefits estimated at 4.5% of the Dutch economy by 2011 (Banning, 2009), the areas worst hit by the earthquakes include Loppersum, Bedum, Middlestum and Scharmer out of the 23 municipalities of Groningen; according to CBS statistics. Loppersum for instance, has dealt with the earthquakes for over a decade; facing the most frequent quakes with 18 earthquakes recorded in the first six weeks of 2014 compared to approximately 20 quakes which occurred each year before 2011 (Gasbevingen Portal- GBB, 2014). Furthermore, experts at Government agencies predict an upward trend in the situation warning that the quakes might increase to magnitudes that range between 4 and 5.

The strongest earthquake recording a magnitude of 3.5 on the Richter scale reported in August 2012 [its epicenter near the town of Loppersum], marked the start of policy changes on gas production in the region as complaints on the damages, such as the cracks on walls, were largely reported on social media (Donovan, 2013). What followed was a public debate that saw the Dutch government commission an inquiry on the issue and thereafter on January 17th, 2014, a decision was made to significantly reduce gas extraction in the region by nearly a quarter by the year 2016 (Triebert, 2014). According to Radian6; a social media analysis tool recording social media activities of moments building up to the government’s decision to reduce gas extraction [November 2013 to present], preliminary research indicate that out of the six types of social media, an estimated 64.3% of total posts were recorded on Twitter, approximately 13.5 on Facebook while shares on Mainstream news accounted for nearly 13.3 % of the total posts (Dashboard, 2013). These estimates account for an estimated 250 days of historical data.

With regards to the consequences of gas extraction activities and the subsequent earthquake exposure, Daniëlla Blanken who is the secretary of an organization (GBB[[2]](#footnote-2)) that is committed to the interests of those who suffer damage caused by earthquakes in the region, draws attention to several core issues being encountered by the inhabitants of Looppersum. She lists damage of property, need for compensation for the damages, attention to psychological problems as well as insecurity caused by earthquakes as the core problems being encountered by the inhabitants of the worst hit Loppersum village (See interview transcript 1 Appendix B. p, 71). She also emphasizes that they do not feel protected by the government and that their safety should be placed first on the agenda. The GBB is chosen for this research owing to its prudent strategies in lobbying for the interests of the affected inhabitants on the national arena as opposed to two[[3]](#footnote-3) other dominant Groningen based organizations which use the aspect of noise instead of prudent lobbying.

In summary, gas extraction in the Groningen gas fields by NAM has caused earthquakes and the region chosen for this practice oriented research is the worst hit village of Loppersum. The August 2012 earthquake [the strongest since 1994][[4]](#footnote-4), caused public debate due to posting and sharing of reports and news on Social media. What followed was a decision by the Dutch government to reduce gas extraction in the region, hereby indicating that social media played a role in policy changes. However, the *actual* problems of the affected inhabitants were not addressed by this decision prompted by the subsequent social media debate (see appendix B, p 71). This therefore poses a question to the effects of social media and the quality of service delivery by NAM and the government to its citizens of Loppersum. Throughout this research report, Facebook and Twitter are the two types of social media tools that are explored given their evident impact on the situation.

# 2. Problem definition and Organization

The client, Opening Up project, is an interreg IVB[[5]](#footnote-5) North Sea Region [NSR] project which started in 2007 and approaching completion in December of 2014. The project involves five municipalities from five countries in the NSR including Norway, Sweden, Denmark, Belgium and the Netherlands (2013). Strategically divided into 6 different work packages, the project intends to build a community of practitioners in the NSR aimed at promoting the adoption and use of social media into government and business service delivery.

The potential of the NSR is backed by economic activities which through the utilization of natural resources in the member countries could potentially result in environmental issues just as gas extraction in the Groningen gas fields has resulted in earthquakes (Tagliabue, 2014). The ultimate outcome of this practice-oriented research therefore is to provide knowledge for the Opening Up project that could be beneficial to the eight partners[[6]](#footnote-6) of the project, In finding new ways of using social media among their governments and businesses to improve service delivery to its citizens by using the Groningen gas fields as a case study. Service delivery[[7]](#footnote-7) in this case, is used in reference to how the government and NAM have handled the giving and receiving of information to and from the affected inhabitants and the channel of interest herein is social media (see also theoretical framework p, 14-18). Therefore, an evaluation of service delivery of the government and NAM via social media to the affected inhabitants following the 2013 Groningen earthquake in the village of Loppersum is conducted. Also, the agenda pursued herein is that of the affected inhabitants of Loppersum seeing as they are on the receiving end of both the policy changes passed by the government as well as the consequences of gas extraction by NAM.

As earlier mentioned, current policy changes by the Dutch government to reduce gas extraction do not meet the *actual* concerns of the affected inhabitants of Loppersum (See Appendix B p, 73). Social media prompted these policy changes by sparking public debate (see p, 4). This research therefore seeks to unravel the current concerns of the affected inhabitants of Loppersum, their social media behavior which impacts the effectiveness of service delivery by NAM and the national government, as well as the subsequent effects on long-term relationships between the Dutch government and its key constituents of Loppersum following the August 2012 earthquake. Primary research activities herein are based entirely on the views of the affected inhabitants of Loppersum. The findings will not only yield knowledge that could contribute towards new approaches to a two-way model which NAM and the government can us to improve service delivery to its citizens, but will also serve as a case study for the other NSR countries partner to the project which could suffer similar possible environmental consequences due to economic activities.

The main problem for research through which subsequent sets of sub-problems are derived, can therefore be described as follows:

*There is a need for an improvement of service delivery by the NAM and the Dutch government due to (1) a lack of knowledge on the current concerns of the affected inhabitants of Loppersum, (2) low effectiveness of both social media behavior of the affected inhabitants and the delivery of services by the national government and NAM to the affected inhabitants via social media, as well as (3) the subsequent effects on the long-term relationships between the Dutch government and NAM with its key constituents of Loppersum, following the August 2012 earthquake.*

## 2.1 Concerns of the affected inhabitants

**There is a need for an in-depth analysis of the current concerns of the affected inhabitants of Loppersum following the August 2012 earthquake.**

As earlier mentioned, this research is conducted entirely from the views of the affected inhabitants who are on the receiving end of both consequences of earthquake exposure caused by NAM and policies passed by government. Apart from material damage and safety issues, research shows that there is a direct correlation between damages caused by earthquakes and psychological consequences of earthquake exposure. In that, these psychological consequences are long lasting and seem to be related to the consequences of earthquakes in terms of damage/loss (Bland, O'leary, Farinaro, Jossa, & Trevisan , 1996). More so, preliminary research indicates that the affected inhabitants do not feel protected by the government and that the current policy changes do not address their actual concerns (See interview transcript Appendix B. p, 73). The first step towards reaching the objective of this research therefore, is to understand the actual (2.1.1) financial concerns of the inhabitants with regard to damage to their property, (2.1.2) their physical concerns in terms of safety issues and also (2.1.3) psychological concerns as a result of the earthquake exposure.

## 2.2 Social media behavior vis-à-vis service delivery

**There seems to be not only an inadequate level of social media behavior by the affected inhabitants regarding their concerns, but also low effectiveness of delivery of services via social media by the national government and NAM to the affected inhabitants following the August 2012 earthquake**

While trying to uncover new approaches that could be useful towards improving service delivery of governments and businesses to its citizens, the second step involves understanding two inter-connected problems; the use of social media by the affected inhabitants [who are the receivers of information] which in turn determines the effectiveness of service delivery from NAM and the government [who are the senders of this information]. Preliminary research indicates that the highest population of Loppersum which is 30%, consists of people aged between 40-65 and is only 32% active on social media networks such as Facebook and Twitter; compared to the lowest 9% population [aged 15-25] who are almost 84% active on social media networks (Akkermans, 2014). Also, just as these statistics show that some social media types were used more than others, there are different types of social media that can be utilized by governments, businesses as well as citizens and in this case, only Facebook and Twitter shall be discussed. This is because they were the two most utilized social media types between the moments of November, 2013 and January, 2014 escalating to the announcement of policy changes by the government (Dashboard, 2013). Twitter for example accounted for a total of 64.3% of the total 2,394 posts on social media, Facebook 13.5% and shares via mainstream news were approximately 13.3% of the total posts (see also p, xx and include radian6 graph in appendix) . Therefore for the purpose of this research, three aspects guide the investigation into the second problem for research and they include:

These statistics pave way for the analysis of (2.2.1) social media behavior of the affected inhabitants of Loppersum based on the seven[[8]](#footnote-8) building blocks of social media (Kietzmann , Hermkens , & McCarthy, 2011), and how Facebook and Twitter have been useful platforms in gaining information from NAM and the government. This analysis is carried out through measuring (2.2.1.1) the inhabitants’ presence and activeness on social media; frequency to visit Facebook and Twitter, (2.2.1.2) their use of social media [in terms of conversation and sharing[[9]](#footnote-9)] on Facebook and Twitter, and thirdly, (2.2.1.3) their accessibility on social media sites in terms of being involved with the government and NAM on Facebook and Twitter.

Note that for the inhabitants to gain information from NAM and the government, this information has to be provided. Thus the affected inhabitants’ social media behavior impacts (2.2.2) the effectiveness of service delivery of NAM and the government via social media. Therefore, research is subsequently carried out to determine (2.2.2.1) the extent to which there has been adequate provision of information by the government and NAM to the affected inhabitants with regards to their concerns via social media, (2.2.2.2) the extent to which the inhabitants have used social media to issue complaints, ask questions and in making suggestions to the NAM and the government, and also (2.2.2.3) the extent to which social media has been used by the NAM and the government to give feedback to the affected inhabitants.

## 2.3 Effects on long-term relationships

**There seems to be subsequent effects on long-term relationships between the Dutch government and NAM with its key constituents of Loppersum, following the August 2012 earthquake.**

As managing the spread of information from an organization to specific target audience lies within the realms of Public relations, Hon&Gruning (1999) emphasize the importance of measuring and documenting the outcomes of organizations’ long-term relationships with its key citizens. In this sense, outcomes can be viewed from two possible angles. Outcomes not only indicate whether target audience groups received messages addressed to them but also if they understood these messages and retained them ‘in any shape or form’, (p. 2). Furthermore, opinions, attitudes and/or behaviors changes of the target audience as a result of the disseminated messages [in this case service delivery], can also be indicated by measuring outcomes of an organization’s Public relations effectiveness. The latter view is applicable to this sub-problem for research.

Thus, the opinions and attitudes of the affected inhabitants of Loppersum following the dissemination of information by the government and NAM via Social media, as a result of the August 2012 earthquake are the focus indicators of exploring this sub-problem. This is due to the fact that this research follows the outlook of the affected inhabitants and not that of the government or NAM as explained in earlier chapters.

Therefore, six very specific elements as presented by Hon&Gruning are used to measure the existing relationship between the affected inhabitants of Loppersum and the government as well as NAM (p. 3). These elements include (2.3.1) ***control mutuality*** which is indicated by the affected inhabitants’ opinion on the level of control they feel exists between them and the two organizations; (2.3.2) ***trust*** which is indicated by the affected inhabitants’ opinions on the level of integrity, dependability and competence***[[10]](#footnote-10)*** of the two organizations; as well as opinions on whether there are any positive expectations about the existing relationship indicate the affected inhabitants’ (2.3.3) ***satisfaction*** in the two organizations. Furthermore, (2.3.4) ***commitment*** is measured by exploring the extent to which the affected inhabitants feel that their relationship with the government and NAM are worth maintaining; (2.3.5) ***exchange relationship*** is determined by the affected inhabitants’ opinion on whether the two organizations provide benefits or expect something in return in trying to deal with the consequences of the earthquakes; while (2.3.6) ***communal relationship*** is determined by their opinion on whether the two organizations are concerned about their welfare.

# 3. Theoretical framework

Communication between NAM, the government and the affected inhabitants involves disseminating and receiving information by the two organizations; how these two organizations manage the giving and receiving of this information as a service, is hence referred to as service delivery. Social media plays a crucial role in today’s communication between governments, businesses and stakeholders. According to Gerbner’s general model of communication (1956, p. 171), one perceives an event through the information process [horizontal line] and through the communication process [vertical line], channels are used to produce statements or messages about the event; such as how the government and NAM use several channels or means to produce and distribute messages or statements to its relevant publics, social media being one of these channels. These channels are used to *deliver* *services* in the form of information consisting of messages and statements. Following the August 2012 earthquake, the government and NAM have been communicating with the affected inhabitants in the efforts of trying to address their concerns; therefore, in this report, service delivery[[11]](#footnote-11) is used in reference to how the government and NAM have handled the giving and receiving of information to and from the affected inhabitants and the channel of interest herein is social media.

Given its role[[12]](#footnote-12) in policy changes following the August 2012 earthquake [the worst of its kind], social media is the independent variable used to evaluate the effectiveness of service delivery of NAM and the national government (see conceptual Appendix A p,62). This evaluation is based on the opinions of the affected inhabitants; who are the research objects guiding the research process. In order to generate knowledge that can be useful towards generating new approaches to improve service delivery of NAM and the government, relevant research subjects are thus categorically measured by studying (1) the affected inhabitants’ concerns, (2) their social media behavior through which the effectiveness of social media service delivery of NAM and the government is dependent upon and lastly, (3) the effects of long-term relationships between the affected inhabitants and the two organizations which is nurtured through their communication following the August 2012 earthquake.

By focusing on the following key concepts of gradation variation, the theoretical framework of this practice oriented research is therefore embedded in the following theoretical standpoints:

##

## Core concept 1: concerns of the affected inhabitants

As discussed by O’leary et al, research shows that there is a direct correlation between damages caused by earthquakes and psychological consequences as a result of earthquake exposure, implying that not only are these psychological effects long lasting, but that they are also related to damages and loss caused by earthquakes (Long-Term Psychological Effects of Natural Disasters, 1996). Therefore, this first core concept which is also representative of the first problem area for research is intended to not only produce a check-list of the affected inhabitants’ actual concerns (see appendix B, p, 72), but also to indicate whether there is a correlation between damage encountered and psychological effects among the affected inhabitants. It should be noted that the motivation for research into the first problem for research which is uncovering the affected inhabitants’ financial, physical and psychological concerns, is supported by preliminary research and backed by literature review which directly links NAM and the government to the consequences of earthquake exposure (see project context p,6).

Variables of the first core concept therefore are financial concerns on damage to property, physical concerns on safety issues and also psychological concerns as a result of earthquake exposure held by the affected inhabitants of Loppersum following the August 2012 earthquake.

The theoretical standpoint taken into consideration here is applicable to the third variable; psychological concerns of the affected inhabitants.

##

## Core concept 2: social media behavior [of the affected inhabitants] which impacts the effectiveness of service delivery [of NAM and the national government]

Preliminary research indicates that there are various social media functionalities defined by seven building blocks which comprise of presence, relationships, reputation, identity, groups, conversations and sharing, which can all be called the ‘honeycomb of social media’ (Kietzmann , Hermkens , & McCarthy, 2011). The evolutionary functions of social media appear to have ‘democratized corporate communication’ (p,242) by enabling social media users to create, share and use information independent of the control of any given organization.

This is an indication of why organizations should take social media seriously. Following the August 2012 earthquake for example, social media users were able to create, share and use information which ignited public debate about the situation and thus influencing policy on the issue. For this reason, two of the building blocks shall be used to demarcate the scope of research into the affected inhabitants’ use of social media as explained below, together with the implications that they may have on NAM and the government. These concepts guide the research into the second sub-problem for research.

Conversations indicate how people prefer to stay connected online to people with whom they share the same perspective either through short posts or lengthy discussions, thus the organizations are supposed to know when to steer the conversation and when to listen. This impacts how to deliver services to the affected inhabitants as their opinions on the importance of conversations on social media indicates to a certain extent how much the organizations should chip in and steer the conversation.

Sharing indicates how users receive, share and distribute content of things they have in common. Thus for the organizations, through understanding the affected inhabitants’ concerns, how much they believe sharing is important on social media indicates how much the aspect of sharing should be incorporated in the new approaches towards improving service delivery via social media.

This theoretical standpoint establishes functionalities of social media are used to explain the social media behavior of the affected inhabitants and in turn demarcate how much their social media behavior impacts the delivery of services by NAM and the national government.

Alongside these two building blocks, the affected inhabitants’ activeness and accessibility on social media are measured by evaluating their presence and availability on Facebook and Twitter as well as their involvement with the government and NAM on social media respectively. In turn, the extent to which social media has been useful in receiving information, asking questions, making complaints/ suggestions as well as receiving feedback from NAM and the government are evaluated to measure the subsequent impacts of the inhabitants’ social media behavior on the effectiveness of service delivery by NAM and the national government.

Therefore, variables used to measure social media behavior are:

* The affected inhabitants’ use of social media explained by the social media honey comb.
* Their activeness on social media explained by presence and availability on Facebook and Twitter
* Their accessibility explained by their involvement with the government and NAM on Facebook and Twitter.

The inhabitants’ social media behavior can either hinder or facilitate the delivery of services by NAM and the national government through social media; meaning that the affected inhabitants’ social media behavior determines the effectiveness of service delivery by NAM and the national government. Effectiveness herein is determined by the following variables that are used to measure the extent to which the affected inhabitants have:

* received information about their by NAM and the national government through social media
* used social media to issue complaints, ask questions or make suggestions to NAM and the national government
* received feedback from NAM and the government on social media

This theoretical standpoint establishes functionalities of social media used to explain the social media behavior of the affected inhabitants and also demarcates how much their social media behavior could in turn impact the delivery of services by NAM and the national government.

## **Core concept 3: Relationships from a public relations perspective**

As earlier mentioned, the delivery of services by the government and NAM through disseminating and receiving information can be viewed as outcomes of Public relations as explained by Hon&Gruning (1999). These outcomes can indicate two of the following. Firstly, whether the target audience received this information intended for them and if they understood it. Even more importantly, the second indicator of outcomes; which is also the theoretical standpoint for this core concept, is the fact that outcomes can be used to measure attitudes or behavior changes of the target audience as a result of Public relations effectiveness (1999, p. 2). Understanding the effects of long-term relationships between the affected inhabitants and the government as well as NAM provides knowledge that can be used to improve public relations effectiveness through service delivery. For this reason, six very specific elements as presented by Hon&Gruning are used to measure the existing relationship between the affected inhabitants of Loppersum and the government as well as NAM (Hon & Grunig, 1999, p. 3) and these elements/ variables include:

|  |  |
| --- | --- |
| Element | **Description** |
| Control mutuality | The degree to which the inhabitants agree on who has the rightful power to influence the other; ‘stable relationships require that organizations and publics have some control over each other’  |
| Trust | The level of confidence of the affected inhabitants in the government and NAM; indicated by the belief that the government and NAM are fair and just [integrity], the belief that they will do what they say they shall do [dependability] and also the belief that the government and NAM have the ability to do what they say they will do [competence] |
| Satisfaction | The extent to which the inhabitants feel favorably towards NAM and the government because of positive expectations of the relationship between them |
| Commitment  | The extent to which the affected inhabitants believe that the relationship is worth ‘spending energy to maintain and promote’ either through the way things are done or through an emotional orientation |
| Exchange relationships | The extent to which the affected inhabitants believe that the government and NAM expect something from them in return for the benefits they provide.  |
| Communal relationships | Communal relationships measure the extent to which the affected inhabitants feel that the government and NAM are concerned about their welfare.  |

##

**Corporate public Affairs**

Also elaborating further on relationships based on a public relations perspective, the following theories are used for further elaboration of the elements and demarcation of the variables.

Public policy decisions [such as that to reduce gas extraction in the Groningen gas field] are made with the intention of addressing societal concerns [e.g. earthquakes in Loppersum]. There are two ways that these decisions can be reached either by voluntarily changing policy or by ‘negotiating with stakeholders to arrive at a mutually acceptable solution’ (Lerbinger, 2006) and may occur at any of the three stages of an issue life cycle. Effective service delivery will ultimately facilitate negotiating with the affected inhabitants to meet their concerns. This theoretical standpoint therefore further addresses the element of control mutuality and trust.

**Public Affairs and openness with stakeholders**

Further elaborating the elements of trust, commitment and communal relationships; theories on Public Affairs show that an open organization is one that promotes stakeholder’s concerns in decision making, one that listens to its stakeholders and one that accepts criticism. When there is a gap between public expectation and a corporations’ social performance, then social responsibility of the relevant organization is in question (Lerbinger, 2006, p. 16).

Corporate Communication

Communication is used to build relationships and In order to maintain good relations with stakeholders […], a framework effectively coordinating all internal and external communication between an organization with its stakeholders can be termed as corporate communication (Cornelissen, 2011, p.12). As earlier pointed out by J.H.Kietzmass et al, the evolutionary functions of social media appear to have ‘democratized corporate communication’ (2011, p. 242) and far as service delivery is concerned, Governments and businesses require an effective framework especially when it comes to issue management. Such a framework is used to provide a foundation for the nature of the two-way communication model intended to be the ultimate outcome of this research.

Considering all the above theoretical standpoints elaborated as per each sub-problem for research and the complexity of the problem area, the ultimate goal of this research is also guided by theories that define the nature and scope of recommendations to be offered herein. In order to provide a feasible recommendation for developing a two-way model of communication that could contribute towards improving service delivery of businesses and governments in the NSR to its citizens via social media, the ‘Pyramid Model’ of PR research as presented by Macnamara will be used (2002, p. 18). The model which is meant to be read from the bottom up, (see appendix B p, 96) indicates key steps of communication needed to reach a desired outcome through an organization’s inputs in terms of formative research into the target audience’s needs and outputs in terms of how to communicate to them and through what means. This therefore means that an organization’s outcomes depend on inputs and outputs that are set to place. As earlier mentioned, outcomes can be used to measure relationships between organizations and its key constituents. Recommendations for the improvement of service delivery by governments and businesses in the NSR that could suffer environmental consequences due to economic activities are reached through researching the Groningen gas fields as a case study. Steps towards reaching the recommendation include formative research into the concerns of the affected inhabitants [inputs], their social media behavior and the subsequent effects on the delivery of services by NAM and the national government [inputs&outputs] which in turn determine the relationship between these two organizations and the affected inhabitants [outcomes]. This model therefore, is used to outline the logical order in which the recommendations are elaborated in chapters that follow.

# 4. Research Design

So far, the main problem area and sub-problem for research have been laid out, and the theoretical framework which is encapsulated into three main concepts has been elaborated. This section therefore further explains the conceptual design by discussing the objective of the research, subsequent central research questions together with sub-questions associated with each central question; and also the technical research design which elaborates key decisions that guide the research strategy.

## 4.1 Conceptual design

Before presenting the objective of the research, it is important to elaborate the nature and scope of the problem used herein. The recommendations offered in this report are directed towards steps that can be used by the Dutch government and NAM in trying to improve service delivery to the affected inhabitants of Loppersum. However, neither NAM nor the national government are the commissioning bodies of this research; this research is commissioned by the Opening Up project which seeks to find knowledge that can be used to contribute towards the improvement of service delivery of governments and businesses in the NSR to its’ citizens. It is for this reason that the Groningen gas field is used as a case study for other similar regions in the NSR that [could] face environmental issues caused by economic activities, just as Loppersum is facing the consequences of earthquake exposure as a result of gas extraction in the region. The affected inhabitants of Loppersum are thus the research objects given the fact that the research is based entirely on their opinions and not those of NAM or the national government.

Having set this distinction, this practice-oriented research is therefore intended to generate knowledge which can be useful to practitioners for an *intervention* to address the following problem area for research:

*There is a need for an improvement of service delivery by the NAM and the Dutch government due to (1) a lack of knowledge on the current concerns of the affected inhabitants of Loppersum, (2) low effectiveness of both social media behavior of the affected inhabitants and the delivery of services by the national government and NAM to the affected inhabitants via social media, as well as (3) the subsequent effects on long-term relationships between the Dutch government and NAM with its key constituents of Loppersum, following the August 2012 earthquake.*

In trying to reach a solution to a given operational problem in the intervention cycle, there are preferred sets of steps that can be undertaken as pointed out by Verschuren and Doorewaard. This intervention cycle is used in the development of the research objective (2010, p. 47) and this research covers the following two stages of the intervention cycle:

**Problem analysis**

The first step of the research involves the exploration of the problem in light of the research objects where it is established that the inhabitants of Loppersum have [possible] financial, physical and psychological concerns due to earthquake exposure caused by gas extraction activities of NAM under the policies passed by the national government. These concerns are fundamental in trying to improve service delivery of NAM and the government to the affected inhabitants. To determine the nature of the problem, research is carried out to explore the inhabitants’ social media behavior which impacts the delivery of services by the two organizations and also the subsequent effects on long-term relationships between the inhabitants and the two organizations are explored, following the August 2012 earthquake. This problem analysis cycle helps to determine what the problem is, why it is a problem and whose problem it is (Verschuren & Doorewaard, 2010, p. 47).

**Diagnosis**

The second step taken after determining the nature of the problem, is exploring the background to these problems with the theoretical framework serving as a guiding light into the scope of detail into the factors that lie behind these problems. The diagnosis stage which determines the types of questions to be asked and culminates in the analysis of interpreting the collected data, paves the way for a course of action intended to address the problem. In this case, determining the factors behind low effectiveness of the delivery of services by NAM and the national government as well as the subsequent effects on the long- term relationship between the two organizations and the affected inhabitants provides knowledge that creates a basis for the formation of applicable and feasible contributions towards the improvement of service delivery not only by NAM and the national government, but also to businesses and governments in the NSR.

## 4.2 Research framework

In light of the theoretical framework and the problem analysis as well as diagnosis steps that need to be taken in order to address the problem area for research, this section provides the internal logic of the research (see Appendix B, p, 61). (1) Concerns of the affected inhabitants, (2) their social media behavior which impacts the delivery of services by NAM and the government as well as (3) the subsequent effects on the affected inhabitants’ long-term relationships with the government and NAM are the three core concepts of this research. These concepts are of gradation variation and are explored through a theoretical standpoint which demarcates the scope of how much is to be researched as backgrounds of the sub-problems for research. The variations for each of the core concepts are studied by evaluating the opinions of the affected inhabitants based on theoretical demarcations as elaborated in the theoretical context. These core concepts and variations are useful in the categorical formation of main research questions and sub-questions (see appendix for interview questions). The opinions of the affected inhabitants [research objects], consequently generate knowledge that can be used by the Dutch government and NAM to improve their service delivery to the affected inhabitants. The Dutch government and NAM **can** use the knowledge generated from this research since the scope is applicable to improving their delivery of services to the affected inhabitants. However, the commissioning body of this research is the Opening Up project which seeks to find new approaches through which governments and businesses in the NSR can use to improve service delivery to their citizens (see p, ). It is for this reason therefore, that the knowledge generated from this pilot research is directed towards producing new approaches that could contribute towards improving service delivery of business and governments in the NSR to its citizens. The Groningen gas field in this research is therefore used as a case study on a national level to generate recommendations on a regional level.

According to Verschuren & Doreward, functional and steering research questions [and definitions] can be arrived at by utilizing prior knowledge and it is important to organize this knowledge in light of existing theories (2010, p. 267). Thus, the established set of prior knowledge required to carry out this research as well as theoretical concepts earlier presented all lead to the following feasible and steering research objective, with sets of main research questions and sub-questions:

### Research objective

*The research objective is to offer recommendations for developing a two-way model of communication via social media that could contribute towards improving service delivery of businesses and governments in the NSR to its citizens […]*

*by*

*evaluating (1) the concerns of the affected inhabitants of Loppersum, (2) their social media behavior which impacts the effectiveness of service delivery by the national government and NAM and (3) the subsequent effects on long-term relationships between the Dutch government and NAM with its key constituents of Loppersum, following the August 2012 earthquake.*

###

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| --- | --- |
| Sub-problem 1:  | There is a need for an in-depth analysis of the current concerns of the affected inhabitants of Loppersum following the August 2012 earthquake. |
| Primary research question 1:  | What are the current concerns of the affected inhabitants of Loppersum following the 2012 August earthquake?   |
| Specific objective 1:  | To understand the economic, physical and psychological concerns of the affected inhabitants to create a check-list of their actual concerns and their opinions of what has been done so far by the government and NAM to try and address these concerns.  |
| Sub-problem 2:  | **There seems to be an inadequate level of social media behavior by the Loppersum inhabitants which in turn impacts the effectiveness of service delivery of NAM and the government to the affected inhabitants regarding the consequences of the August 2012 earthquake.**  |
| Primary research question 2:  | How do the inhabitants of Loppersum make use of social media and in what ways does this affect the effectiveness of service delivery of the government and NAM to the affected inhabitants |
| Specific objective 2:  | Specific objective 2.1: To determine the inhabitants’ presence and activeness on social media; frequency to visit Facebook and Twitter their use of social media [in terms of conversation and sharing] on Facebook and Twitter, and their accessibility on social media sites in terms of being involved with the government and NAM on Facebook and Twitter which all define the inhabitants’ social media behavior. Specific objective 2.2: to determine the extent to which there has been adequate provision of information by the government and NAM to the affected inhabitants with regards to their concerns via social media, the extent to which the inhabitants have used social media to issue complaints, ask questions and in making suggestions to the NAM and the government, and also the extent to which social media has been used by the NAM and the government to give feedback to the affected inhabitants. |
| Sub-problem 3:  | **There seems to be a subsequent effect on the affected inhabitants’ relationship with the government and NAM as a result of the organizations’ delivery of services to address their concerns following the August 2012 earthquake.**  |
| Primary research question 3:  | What are the subsequent effects on the affected inhabitants’ relationship with the government and NAM as a result of the organizations’ delivery of services to address their concerns following the August 2012 earthquake?  |
| Specific objective 3:  | To determine the extent to which the affected inhabitants’ relationship with the Dutch government and NAM have been affected in terms of control mutuality, trust, commitment, satisfaction, exchange relationships and communal relationships; as a result of the organizations’ delivery of services to address their concerns following the August 2012 earthquake.  |

A **general focus research question** that describes the problem area can be formulated as follows:

*How can governments and businesses in the NSR improve service delivery to its citizens by looking at the Groningen gas fields and how can NAM as well as the Dutch government improve their service delivery the affected inhabitants of Loppersum following the 2012 August earthquake?*

## 4.3 Technical research design

According to Verschuren and Doorewaard (2010), there are key decisions that need to be made involving first, choosing between focusing on breadth or depth approach (p. 156/7), secondly, the use of findings can either be approached qualitatively or quantitatively and lastly, choosing appropriate data collection methods. The following sections elaborate the relevant choices made, which are complementary to the theoretical framework and conceptual design, in order to effectively answer the set of main question and sub-questions for research.

### Purpose of research

To recap, social media plays a big role in today’s communication between organizations and its publics; one of these roles is that of the delivery of services through disseminating and receiving information to and from a specific target audience.

The Opening Up project; which is the commissioning party of this research, seeks to unravel new approaches that can contribute towards improving service delivery of businesses and governments […] in the NSR to its citizens via social media. The potential of the North Sea Region is backed by economic activities which through the utilization of natural resources in the member countries could potentially result in environmental issues. Evidently, the earthquakes in the in the Groningen gas fields as a result of gas extraction in the region is a seamless example (Tagliabue, 2014). One which has seen the inhabitants of the region suffer the consequences of earthquake exposure for over a decade, up until the August 2012 earthquake, the worst of its kind, which was largely talked about on social media forcing the Dutch government to make a decision to reduce gas extraction by NAM (Donovan, 2013). The epicenter of the August 2012 earthquake recording a magnitude of 3.6 on the Richter scale was near the village of Loppersum which is one of the worst hit villages in the region (Statistics Netherlands , 2014).

It is for this reason that the Groningen gas field is used as a case study to investigate the ways in which service delivery of the national government and NAM can be improved following the August 2012 earthquake and the knowledge generated from the research can be used by the Opening Up project to find new approaches into how businesses and governments in the NSR can improve service delivery to its citizens[[13]](#footnote-13). The Groningen gas fields is representative of service delivery improvement on a national level while the knowledge generated from the research is intended to be used on a regional level to address similar situations in the other NSR countries involving environmental consequences as a result of economic activities. The overall research strategy hereby, is a case study.

Thus, considering the complexity of the problem for research in light of the project context and how the knowledge generated from the research will be used, a depth approach is chosen. This means that a small-scale approach is directed towards elaborating the problems for research and making a diagnosis of the backgrounds to the problems in a way that provides a solid ground for addressing the solutions to the problems. Accordingly, Recommendations for a two-way communication model to improve service delivery of the national government and NAM to the affected inhabitants of Loppersum are arrived at by analyzing the opinions of the affected inhabitants who are in this case, the research objects herein.

Preliminary research indicates that the highest 30% population of Loppersum consists of people aged between 45 and above are only 32% active on social media networks while the lowest 9% population [age 15-25] are almost 84% active (Statistics Netherlands , 2014); this report focuses on the former, larger population bracket. Therefore, based on Saunders (2009, p. 281), the sample selection size for research is calculated as follows:

|  |
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|  |
| n: Minimum sample size estimate  | n1 : the adjusted minimum sample size estimate  |
|  *n*= 30 x 70 x 1.65 2 10*n*= 2100 x 0.1652  *n*= 2100 x 0.027  *n*= 57  | n1 = 57 1+ 57 10,196 n1 = 57  1..015   n1=56.15   n1 = 56 with 90% level of conficence.  |
| n= minimum sample requiredp%= proportion belonging to the specified categoryq%= proportion not belonging to the specified categoryz= value corresponding to the specified category e%= margin of error required.N= total population |

Mixed methods of data collection are used for all central research questions and sub-questions thus increasing validity of the research (see LRFM p,61) .

Quantitative internet mediated, self-administered questionnaires with a depth approach (see interview questions in appendix) are distributed to the affected inhabitants of Loppersum, seeking 56 responses which according to the calculations above, will generate findings bearing a 90% level of confidence. The questionnaires are sent to the members of the GBB via email and the groups’ Facebook page. The demographics of the members of the GBB fit the selection criteria for the sample population bracket required for the research as according to Daniella Blanken, secretary of the organization, the average age of these members is 57. In comparison with the 56 responses that were needed to bear a 90% level of confidence for the research, a total of 359 responses were collected from the internet mediated questionnaires and are thus the basis of the analysis sections that follow.

Qualitative focus group interviews are also conducted with four out of six board members of the GBB[[14]](#footnote-14) to follow up on the survey questions. The board members are selected owing to their deep knowledge of the situation; their input is used for clarity of findings. The research questions guiding the focus group interviews are the questions which are also used to build the internet mediated questionnaires and thus, validity and clarity to the research findings are ensured.

Literature review is also carried out to generate theoretical knowledge which is the basis of defining concepts and evaluation of findings.

It is important to emphasize that this research is fully focused on the opinions of the affected inhabitants and not of NAM or the national government. Investigative questions are asked *about* the national government and NAM with regards to what the affected inhabitants feel about their service delivery as well as the relationship that exists between them, but the agenda followed is that of the affected inhabitants; social media strategies of the NAM and the national government for example, are outside the scope of this research and therefore they are not researched.

Also, while carrying out the analysis as presented in chapters that follow, even though NAM and the national government respectively represent businesses and government entities in the bigger picture of the SNR perspective to which the problem area for research addresses, analysis of the third problem sub-problem for research will mostly combine the two organizations. This is because:

* NAM is a (for profit) business in its own right but its gas extraction activities are made possible by the policies passed by the national government. Therefore the two organizations’ functions in contributing to the effects on long term-relationships which is the core concept of the third sub-problem for research, are interconnected.
* This interconnection is visible in the nature of data collected for this third sub-problem for research (see p, 14) as the patterns of feedback rankings from the internet mediated questionnaires are similar for both organizations, and also most answers given in the focus group interview were presented as the same for both organization.

# 5. Research results

This section presents the findings collected from 359 responses to a self-administered internet mediated questionnaire (see appendix) and also findings collected from focus group interview conducted with four out of six members of the GBB using the interview questions similar to those administered in the questionnaire so as to offer clarity of concepts. Throughout the sections that follow, *(RoQ)* will be used to stand for the findings indicated by the 359 respondents of the internet mediated questionnaires while *(FgQ)* will be used to stand for the findings collected from the Focus group Interview questions.

## Research objective

*The research objective is to offer recommendations for developing a two-way model of communication via social media that could contribute towards improving service delivery of businesses and governments in the NSR to its citizens […]*

*by*

*evaluating (1) the concerns of the affected inhabitants of Loppersum, (2) their social media behavior which impacts the effectiveness of service delivery by the national government and NAM and (3) the subsequent effects on long-term relationships between the Dutch government and NAM with its key constituents of Loppersum, following the August 2012 earthquake*

**Problem for research**

*There is a need for an improvement of service delivery by the NAM and the Dutch government due to (1) a lack of knowledge on the current concerns of the affected inhabitants of Loppersum, (2) low effectiveness of both social media behavior of the affected inhabitants and the delivery of services by the national government and NAM to the affected inhabitants via social media, as well as (3) the subsequent effects on the long-term relationships between the Dutch government and NAM with its key constituents of Loppersum, following the August 2012 earthquake.*

## Focus area 1: The concerns of the affected inhabitants of Loppersum (3 sub-areas)

The concerns of the affected inhabitants in this case consists of three sub-areas which are divided into economic concerns due to damage of property, physical concerns in terms of safety issues and also psychological concerns as a result of earthquake exposure following the August 2012 earthquake. These concerns are explored by investigating the economic, physical as well as psychological concerns of the affected inhabitants and seeking their feelings and opinions towards efforts by the government and NAM to address these concerns.

### Economic concerns due to damage of property

**Findings of the 359 RoQ**

Out of a total of 359 respondents, the biggest percentage consisting of 169 respondents (47.2 %) reported little damage followed by1 00 respondents (27.9%) who reported to be badly damaged. 38 respondents (10.6%) reported very little damage closely followed by 36 respondents (10.1%) who reported no damage at all, while only 15 respondents (4.2%) reported their property to be very badly damaged by the earthquakes

**Findings of the FgQ**

To follow up on these financial concerns, those who reported to be aware of any efforts by the government and NAM to try and address these damages accounted for 306 respondents (85.5%) compared to 52 respondents (14.5%) who reported not being aware of these efforts. Furthermore, 110 respondents (30.7%) feel satisfied with these efforts of NAM and the government in trying to address their financial concerns of damaged property while 248 respondents (69.3%) do not feel satisfied. 

Findings on economic concerns of damage to property collected from the focus group interview yielded the following responses from the interviewees consisting of four out six board members of the GBB. On a scale of 1-5, the responses to the amount of damage to property are as follows:

* + 1. Not at all (1 interviewee)
	+ 2. Very little (1 interviewee)
	+ 3. Little
	+ 4. Badly (1 interviewee)
	+ 5. Very badly (1 interviewee)

All the interviewees are aware of efforts by the government and NAM directed towards addressing these issues but all the interviewees are not satisfied with these efforts.

### Physical concerns in terms of safety issues.

**Findings of the 359 RoQ**

The highest percentage of respondents accounting for 42.9%, 137 of total responses are uncertain about their state of safety closely followed by a 39.8%, 127 of those that feel quite safe, slightly on a bigger percentage on the safety ranking. The smallest percentage of 11 respondents feel extremely safe while 23 respondents who do not feel safe at all are closely followed by 21 respondents who feel just a little bit safe; only a small percentage of the safety ranking.

**Findings of the FgQ**

To follow up on safety issues, the affected inhabitants were asked how their current state of safety makes them feel and they were allowed to choose more than one of the following: anxious, angry, uncertain, sad and frustrated. In order of most percentage (approx. 49%, 34%, 31%), the feelings largely chosen by the respondents are uncertain, angry and frustrated respectively. 58 respondents reported to be feeling sad while 34 respondents feel anxious.

The difference between those that were aware of efforts by the government and NAM in trying to address these issues only differed by a margin of 2% as 156 affected inhabitants admitted to being aware of these efforts while 163 admitted to not being aware of any such efforts by the government and/or NAM. On being asked whether they are satisfied with these efforts by the government and NAM, 90.3% of the total respondents report not being satisfied while the remaining 9.7% indicate that they are satisfied.

### Psychological concerns a result of earthquake exposure

**Findings of the FgQ**

Two interviewees do not feel safe at all in their own homes and these are the interviewees that have indicated damage to their property. One interviewee feels just a little bit safe; only a small percentage higher in the safety ranking. Only one interviewee feels extremely safe. Those that reported no damage to their property also reported to feel safe in their homes. However, if for example their children are playing in a house down the street which has been damaged by earthquakes, then the respondent feels less safe because anything might happen to their children (see appendix). To follow up on these safety concerns, based on how safe they feel; three of the interviewees indicated that their current states of safety make them feel anxious, uncertain and frustrated. The interviewee with the most damage indicated feelings of frustration, anxiety and uncertainty. The interviewee with the least damage, who indicated to feeling extremely safe, also indicated feelings of uncertainty as to how long the odds shall be favorable. The two interviewees who feel a little bit safe and extremely safe also indicate that they feel anxious and uncertain because it is not only about the damage caused to their property but also about the safety of their children (see appendix).

All the interviewees are aware of efforts by the government and NAM in trying to address these safety concerns but they are all not satisfied with these efforts.

**Findings of the 359 RoQ**

Results indicate a close 13% gap between a recorded 173 respondents who feel psychologically affected and 133 of those who do not feel affected psychologically. On being asked to what extent the affected inhabitants feel psychologically affected, 104 respondents showed psychological concerns of little extent while 13 respondents indicated to be very much psychologically affected. 59 respondents indicated no psychological effects while 56 respondents closely indicated a lot of psychological effects as a result of earthquake exposure. A relatively high 24% of the total respondents reported psychological concerns only to a very little extent.

Simultaneously representative findings indicate that 76 respondents are aware of efforts by the government to try and address these psychological concerns while 28 respondents are satisfied with these efforts. 230 respondents are not aware of any efforts by the government to try and address these issues and 278 respondents (90.8%) are not satisfied by these efforts. Comparatively, 48 respondents are aware of efforts by NAM to try and address these psychological concerns while 25 respondents are satisfied with these efforts. 84.3% of the total respondents are not aware of any efforts by NAM to try and address these issues and a total of 91.8% of total respondents are not satisfied with these efforts.

**Findings of the FgQ**

All the interviewees indicated to be affected psychologically as a result of earthquake exposure and to what extent varied between very little, little, a lot and very much each accounting for one of the four interviewees.

The interviewees that recorded little to no damage of their property, admitted to feeling slightly safe and extremely safe respectively; amidst feelings of uncertainty as they are not only worried about the possible damage to their property but also the safety of their children. These interviewees also indicated to experiencing little to very little psychological effects. Two of the interviewees recorded who recorded damage to their property felt less safe and also indicated to be experiencing high psychological effects.

All the interviewees indicated not to be aware of any efforts by NAM and the national government in trying to address these psychological concerns and therefore all the interviewees are not satisfied by the efforts of the two organizations in trying to address psychological concerns.

####  Key summary points of concerns of the affected inhabitants RoQ in light of FgQ

* Financial concerns, safety issues and psychological concerns cause the affected inhabitants to live in anxiety, uncertainty, frustration and anger.
* Interviewees of the FgQ who have less damage to their property admit to feeling safer.
* The Interviewees who feel uncertain because of their safety issues owe it to the fact that it is not only about the damage to their property but also about the safety of their children.
* Interviewees that have less damage also admit to having little to no psychological effects as a result of earthquake exposure while those with more damage show higher psychological concerns.

## Focus area 2: Social media behavior of the affected inhabitants of Loppersum which in turn impacts the effectiveness of service delivery by the government and NAM. (6 sub-areas)

The second focus area is divided into six sub-areas. Social media behavior of the affected inhabitants consists of (1) activeness on social media, (2) social media use and (3) accessibility on social media. This first set of three sub-areas are measured by evaluating how often the affected inhabitants visit Facebook and Twitter, how they use Facebook and Twitter in terms of conversations and sharing, and thirdly; how much they are involved with the government and NAM on Facebook and Twitter.

### Social media behavior of the affected inhabitants of Loppersum

**Findings of the 359 RoQ**

**Activeness on Social media**

Out of the total 359 received responses to the internet mediated questionnaires, 51.2% of the total respondents have a Facebook account and 23.7 have a Twitter account, while 48.8% do not have a Facebook account and 76.3% who admit to not having a Twitter account either. The highest percentages of the respondents never visit Facebook or twitter accounting for 128 to 196 respondents respectively. Only 11 respondents visit Twitter several times a day, 17 of them at least once a day 12 visit Twitter once every other day while 38 respondents rarely visit Twitter. Scores for activeness on Social media are significantly higher for Facebook as 51 respondents visit Facebook several times a day, 42 at least once a day, 27 of the respondents visit Facebook once every other day while 43 respondents rarely visit Facebook.

**Social media use**

In terms of social media use, 66% find social media useful in having conversations with people who share their point of view while 100 respondents feel otherwise. 63 respondents believe that social media is useful in having conversations with people who share the same perspective, 48 respondents do not know whether social media could facilitate conversations while those who believe social media is useful for facilitating conversations account for 74 respondents who are closely followed by 72 respondents who think the opposite.

In terms of sharing, the least percentage of 12 respondents use social media to share their experiences such as images of the damage to their property and also the least percentage of 21 respondents find sharing on social media to be very important. 96 respondents sometimes make use of the sharing aspect of social while 66 respondents think that the sharing aspect of social media is important. The highest percentage of 183 respondents never makes use of the sharing functionality of social media while 204 respondents believe that sharing on social media is not so important.

**Accessibility on Social media**

Only 7.6% of the respondents are involved with the government and NAM on social media while 269 respondents are not. Reflectively, 67 respondents are aware that NAM is on Twitter compared to 224 respondents who are not aware that NAM recently set up a Twitter account.

These variables impact the service delivery of NAM and the national government in terms of (4) the provision of information via social media, (5) receiving information through social media, and also (6) receiving feedback through social media. This second set of sub-areas are measured by evaluating how social media has facilitated the receiving of information, sending of information through asking questions, issuing complaints or making suggestions as well as receiving feedback to and from the government and NAM through Facebook and Twitter.

**Role of social media in service delivery through receiving information from NAM and the government**

Since the August 2012 earthquake, a total number of 66 respondents admit to have used social media to access information from the government and NAM but 33 of the respondents indicate thet information was not useful while an equal 33 respondents indicate that the information was useful. A larger 77.3% of the total respondents have not used social media to access information from NAM or the government. For those who have used social media to access information from NAM and the government on Social media, 140 respondents do so rarely, followed by 38 respondents who seek information on social media from NAM and the government every other day, while only 5 respondents do so on a daily basis compared to 2 respondents who seek for information on social media several times a day. For those who seek information on social media, the highest number of 57 respondents think that the information provided by NAM and the government has been little and not useful, 40 think that little to no information has been provided on social media closely followed by 43 respondents who think that the information has been little and useful. Only 5 respondents think that the information provided has been a lot and useful.

Looking at the respondents’ opinions on how much information has been generally provided by NAM and the national government [not only on social media], the highest percentage of 94 respondents say that the information has been little and not useful, followed by 78 who say the information has been little and useful, those who say the information provided has been very little to none and those that say the information has been a lot and not useful account for an equal 33 respondents each respectively, and lastly only 20 respondents think that the information provided has been a lot and useful.

**Role of Social media in service delivery through sending information to the government and NAM by asking questions, issuing complaints or making suggestions**

A total of 247 respondents have not used Facebook or Twitter in asking questions to the government and NAM. Out of these respondents, 57% think that social media cannot be useful in asking questions to NAM and the government while a smaller 39% think that social media could facilitate the asking of questions to the two organizations. Only 9 respondents have used Facebook or Twitter in asking questions to the government and NAM; and out of these 9 respondents, social media proved to be useful for only one respondent compared to the other 8 who stated that social media was not useful to them in asking questions. The same pattern is observed in the use of social media to issue complaints to NAM and the government with the highest percentage of 155 respondents being those that have not used social media in issuing suggestion and neither do they believe that social media could be useful in issuing complaints to NAM and the national government. 90 respondents have not made use of social media in issuing complaints but they believe that it could be useful issuing complaints. Only 8 respondents used Facebook and Twitter to issue complaints and they say it was not useful while 3 respondents are the one ones who not only used social media for this reason but they also say that it was useful.

**Role of Social media in service delivery through receiving feedback from NAM and the government**

Not only have a total number of 153 respondents attest to not having received feedback from NAM and the government via social media, but they also believe that Facebook and Twitter could not be useful in giving feedback. 77 respondents who have not received feedback on social media on the other hand, believe that Facebook and Twitter could be useful in giving feedback. 13 respondents have received feedback through social media and they indicate that the information was useful while an equal number of 13 respondents also received feedback on social media but they indicate that the information was not useful.

**Findings of the FgQ on social media behavior of affected inhabitants**

Three of the interviewees have a Facebook and Twitter account while only one interviewee is not involved with Social media. The three interviewees are generally active on social media as they visit Facebook and Twitter often. One interviewee who visits Facebook and Twitter all the time both for conversational or sharing purposes indicates that the government has tried to provide all the relevant documents bearing useful information to the affected inhabitants but finding these documents is a problem; the documents are not accessible and thus hard to find. The three interviewees emphasize that social media is very important and useful in staying informed about the situation. However, they also point out that the inhabitants of Loppersum are of an older generation (averagely above 50) thus not only are they are not as active on Social media as they perhaps should be but they are also less willing to use social media. The members of the GBB also do not use social media as often as they should. The interviewees believe that if the average age of the inhabitants of Loppersum was younger than it is now, then maybe there would be more information on social media about the effects of the earthquakes in the region.

The interviewees place emphasis on the importance of Twitter, in that it is very useful in providing short messages, it is easy to share and also it has a limit of characters that can be used therefore it is good to be used for informing people. However, the interviewee indicated that unless it is an emergency, NAM only responds to tweets between 9-5 and it is almost not possible to have a normal conversation with NAM on twitter. The government and NAM use social media just to inform and not to engage the publics.

Also, the interviewees agree that it would be good for the government to use social media to inform the general public about the facts of the consequences of gas extraction in the Groningen gas fields. According to the interviewees, the government currently only uses social media for propaganda and the information that is offered is not honest; for example, the figures of the total amount that were reported to be issued as compensation were not honest figures.

All the interviewees unanimously point out that it would be good for the government and NAM improve their service delivery via social media but only one thing stands in the way of the people believing in the information they provide; trust. The affected inhabitants’ trust in the government and NAM has been broken and the interviewees believe that trust is vital for the inhabitants to fully get onboard the ‘service delivery via social media’ wagon. However, they point out that as soon as NAM set up a Twitter account, they instantly had thousands of followers and this is an indication that the people are actually interested in what the government and NAM have to say.

#### Key points on the affected inhabitants’ social media behavior which impacts the service delivery of NAM and the government via social media RoQ in light of FgQ

* A large number of the affected inhabitants do not make use of Social media despite its usefulness in staying informed about the situation, sharing of ideas and also having conversations on matters of common interest.
* The largest percentage of respondents is not involved with NAM or the government on social media.
* Those that are involved with NAM or the national government on social media believe that generally, the information provided by NAM and the government both on social media and off social media has been little and not useful information, following the August 2012 earthquake.
* Even though it is a good thing for the government to work towards improving the delivery of services through social media, the affected inhabitants’ trust in the government and NAM has been damaged.
* Having trust in NAM and the government determines how much the inhabitants will believe in the information offered by these organizations.
* More respondents estimated at 228 believe that neither is the sharing functionality of social media important nor can social media be useful in facilitating the sending and receiving of information [service delivery] to and from the relevant organizations.
* However, a significantly high number of respondents estimated at 147 believe that not only is the conversation functionality of social media is useful but also that social media could facilitate the service delivery of NAM and the national government.

## Focus area 3: The subsequent effects on long-term relationships between the Dutch government and NAM with its key constituents of Loppersum, following the August 2012 earthquake.

## This third focus area is divided into six sub-topics which include (1) control mutuality, (2) trust, (3) satisfaction, (4) commitment, (5) exchange relationships and lastly (6) communal relationships. As earlier mentioned, these variables are measured by evaluating how much the affected inhabitants agree or disagree to different sets of six scale questions per variable (see appenxix blah) These questions are based on six very specific elements as presented by Hon&Gruning (1999) which are used to measure the existing relationship of the affected inhabitants of Loppersum with the government as well as NAM within the realms of Public relations.

### Subsequent effects on the level of control mutuality

**Findings of the 359 RoQ**

Control mutuality in this case means the extent to which the affected inhabitants feel satisfied with the amount of control that exists between them and NAM as well as the government in the course of their relationship (Hon & Grunig, 1999, p. 3). The statements used to guide the respondents’ through this research variant are paraphrased into sub-sections for the ease of understanding the findings herein.

With regard to whether the affected inhabitants believe that NAM and the government are attentive to what they have to say; 33.8% of the total respondents strongly disagree while 2.37% strongly agree. 33.4% disagree to the same while 5.82% of the respondents who agree that the NAM and the government are attentive to what they have to say. Based on this aspect therefore, an average 33.6% of the affected inhabitants are not satisfied with the amount of control that exists between them and NAM as well as the government while 4.09% of the respondents feel satisfied with the same.

When asked whether the respondents think that the government and NAM believe that their opinions are legitimate/reasonable; 25% of the total respondents strongly disagree while 2.37% strongly agree, compared to 8.62% who agree and 28.88% who disagree to the same. Based on this aspect therefore, an average 26.94% of the affected inhabitants are not satisfied with the amount of control that exists between them and NAM as well as the government while 5.50% of the respondents feel satisfied with the same

When asked whether the inhabitants feel that the NAM and the government tend to show that they are in power while dealing with them; 5.39% of the total respondents strongly disagree while 18.1% strongly agree, compared to 42.52% who agree and 10.13% who disagree to the same. Based on this aspect therefore, an average 30.31% of the affected inhabitants are not satisfied with the amount of control that exists between them and NAM as well as the government while 7.82% of the respondents feel satisfied with the same

When asked whether the respondents feel that NAM and the government really listen to what they have to say; 34.26% of the total respondents strongly disagree while 4.74% strongly agree, compared to 5.6% who agree and 32.76% who disagree to the same. Based on this aspect therefore, an average 33.5% of the affected inhabitants are not satisfied with the amount of control that exists between them and NAM as well as the government while 5.03% of the respondents feel satisfied with the same.

When asked whether the respondents feel that NAM and the government give them enough say in the decision making process; 38.36% of the total respondents strongly disagree while 5.17% strongly agree, compared to 4.74% who agree and 30.8% who disagree to the same. Based on this aspect therefore, an average 34.58% of the affected inhabitants are not satisfied with the amount of control that exists between them and NAM as well as the government while 5.05% of the respondents feel satisfied with the same.

**Findings of the FgQ**

Based on whether the interviewees believe that the government and NAM are attentive to what they have to say; one interviewee agreed and 3 strongly disagreed. Thus on this level, the ratio of those satisfied vs those not satisfied with the level of control in their existing relationship with NAM and government is 1:3.

1 satisfied:3 not satisfied

Based on whether the interviewees feel that the government and NAM believes that their opinions are legitimate/ reasonable; one member disagrees while three members strongly disagree to the same. Thus on this level, the ratio of those satisfied vs those not satisfied with the level of control in their existing relationship with NAM and government is 0:4.

0 satisfied: 4 not satisfied

When asked whether they feel that the government and NAM tend to show who is power while dealing with them; all the four members agree and thus on this level, the ratio of those satisfied vs those not satisfied with the level of control in their existing relationship with NAM and government is 0:4.

0 satisfied: 4 not satisfied

Based on whether the interviewees feel that the government and NAM really listens to what they have to say; one member disagrees while three members strongly disagree to the same. Thus on this level, the ratio of those satisfied vs those not satisfied with the level of control in their existing relationship with NAM and government is 0:4.

0 satisfied: 4 not satisfied

Based on whether the interviewees feel that the government and NAM gives them enough say in the decision making process; one member disagrees while three members strongly disagree to the same. Thus on this level, the ratio of those satisfied vs those not satisfied with the level of control in their existing relationship with NAM and government is 0:4.

0 satisfied: 4 not satisfied

**Subsequent effects on the level of the inhabitants trust towards NAM and the government**

**Findings of the 359 RoQ**

Trust in this case indicated the affected inhabitants’ confidence in NAM and the government and their willingness to open up to the two organizations. (Hon & Grunig, 1999, p. 3)

With regard to whether the affected inhabitants believe that NAM and the government treats them fairly and justly; 28.57% of the total respondents strongly disagree while 3.69% strongly agree. 35.02% disagree to the same while 6.22% of the respondents agree that the NAM and the government treat them fairly and justly. Based on this aspect therefore, an average 31.80% of the affected inhabitants lack confidence in the government and NAM and thus are not willing to open up to them, while 4.95% of the respondents feel the contrary.

When asked whether the affected inhabitants know that NAM and the government will be concerned with them while making an important decision; 29.95% of the total respondents strongly disagree while 3.92% strongly agree. 36.87% disagree to the same while 5.07% of the respondents agree. Based on this aspect therefore, an average 30.90% of the affected inhabitants lack confidence in the government and NAM and thus are not willing to open up to them, while 4.50% of the respondents feel the contrary.

In terms of whether the affected inhabitants feel that NAM and the government can be relied on to keep its promises; 29.50 % of the total respondents strongly disagree while 3.46% strongly agree. 29.03% disagree to the same while 4.61% of the respondents agree. Based on this aspect therefore, an average 29.26% of the affected inhabitants lack confidence in the government and NAM and thus are not willing to open up to them, while 4.04% of the respondents feel the contrary.

When asked whether the affected inhabitants feel that NAM and the government takes their opinions into consideration when making decisions and whether they believe that the two organizations have the ability to achieve what it says it will do; 29.50 % of the total respondents strongly disagree while 4.73% strongly agree. 26.73% disagree to the same while 18.78% of the respondents agree. Based on this aspect therefore, an average 28.12% of the affected inhabitants lack confidence in the government and NAM and thus are not willing to open up to them, while 11,8% of the respondents feel the contrary.

**Findings of the FgQ**

On matters of whether the affected inhabitants feel that they are treated fairly and justly by NAM and the government; the interviewees generally disagree. They also generally disagree that the respective organizations are concerned about the affected inhabitants in making decisions, thus they feel that the two organizations cannot be relied on to keep its promises. While not taking the opinions of the affected into consideration when making decisions, the interviewees also feel that the government and NAM have the ability to accomplish what they say they will do. These findings therefore indicate that the interviewees have not lost confidence in the government and NAM, but they have lost their trust with the respective organizations.

*‘The government and NAM can work towards improving their service delivery but the question here is whether or not the people will trust their information. The trust has been broken, ‘BM.2. (SEE AIBAIXABDUH)*

### Subsequent effects on the level of the inhabitants’ satisfaction with NAM and the government

Satisfaction in this case takes the definition of the extent to which the affected inhabitants feel favorably towards the NAM and the government because there are positive expectations of the relationship.

**Findings of the 359 RoQ**

When asked if the affected inhabitants are happy with NAM and the government, with their interactions with the organization and also if they are pleased with the relationship that the two organizations have established with them; 1.75% of the total respondents strongly agree, 3.34% agree 30.38% strongly disagree and 38.9% disagree. Therefore based on these aspects, 34.64% of the respondents do not feel satisfied with the two organizations while 2.54% of the respondents feel satisfied.

With regard to whether the affected inhabitants feel that together with the NAM and the government, they benefit as well from the existing relationhsip between them and whether they enjoy dealing with these two organizations, 3.11% of the respondents agree, 1.79% strongly agree, 32.65% disagree while 34.92% strongly disagree. This therefore indicates that 33.78% of the total respondents are not satisfied with the NAM and government while 2.45% of the total number of respondents feels satisfied with the two organizations.

**Findings of the FgQ**

Generally, the affected inhabitants are neither happy with the government and NAM nor are they happy in their interactions with them. They are not pleased with the relationship established with them by the government and NAM and they feel that they do not benefit from the relationship.

### Subsequent effects on the level of the inhabitants’ commitment with NAM and the government

Commitment in this case refers to the extent to which affected inhabitants believe that their relationship with NAM and the government is worth spending energy to maintain (Hon & Grunig, 1999).

**Findings of the 359 RoQ**

Based on the communication between the affected inhabitants and the NAM and the government, they were asked whether they feel that there is a long lasting relationship between them and the organizations, if the organizations are trying to and want to maintain these long-term relationships. Also, if compared to other organizations if they feel they value their relationship with NAM and the government more; 35.27% of the respondents disagreed, 28.90% strongly disagreed, 7.57% agreed while 1.38% strongly agreed. This therefore indicates that based on these variants, an estimated 4.47% of the total number of respondents believe that their relationship with NAM and the government is worth sending time on, while 45.5% do not feel committed to their relationship with the NAM and the government.

Despite this apparent lack of commitment from the affected inhabitants to pursue the existing relationship with the respective organizations, when asked if they affected inhabitants would rather work with the NAM and the government in trying to address these concerns, an average of 25.48% are willing to spend energy on the existing relationship, while a smaller 10.34% of the respondents show that they are not willing to spend energy on the relationship.

**Findings of the FgQ**

Majority of the feedback indicates that the interviewees feel that the government and NAM are not trying to build a long-term commitment with the affected inhabitants of Loppersum and neither do they see these efforts coming from the government and NAM. For this reason, they feel that there is no long lasting bond between them and that despite all this, they have not lost confidence in the respective organizations to have the ability to deliver what it says.

*“I feel that the government and NAM would like to develop a relationship with us but the efforts put towards building these relationships is not convincing. For example, the dialogue table is not proving to be beneficial to the inhabitants. The question here is whether the government and NAM want to maintain a relationship with us. There is a relationship already because we have to communicate with each other about the consequences and ways to try and solve the problem.” B.M1*

*(See interview blahbahubd)*

### Subsequent effects on the exchange relationship between NAM, the government and the affected inhabitants of Loppersum.

As the name suggests, this variable refers to the extent to which the affected inhabitants feel that the government and NAM will try to address the consequences of the earthquakes in the region only when it expects something in return (Hon & Grunig, 1999, p. 3).

**Findings of the 359 RoQ**

When asked if the inhabitants feel that despite the fact that they have had a relationship with NAM and the government for a long time, the organizations are likely to compromise their concerns if they will gain something and if the organizations expects something in return for offering something to them; 9.91% of the respondents strongly agree, 34.22% agree, 13.82% disagree while 1.78% strongly disagree. This therefore indicates that 7.80% of the total respondents feel that the government and NAM still value their relationship while 22.1% feel that the respective organizations do not value the relationship they have with them.

**Findings of the FgQ**

Generally, the interviewees unanimously agree that they feel that the government and NAM are not considerate of their problems and concerns and that these organizations expect something in return in the case that they offer something to the affected inhabitants.

*“Generally, the government is willing to listen to us when we are not critical on the situation. With this I mean that I feel as though the government is willing to listen to us if we approach the situation with leniency and not being critical about the consequences and what we would like to be done to combat the problems. In this case, the government and NAM expect something in return from us if they are to offer any aid or assistance to us. I am not sure if the government could compromise our safety to benefit itself but then again, money comes above all and therefore I am not sure whether they would compromise our safety for financial benefits. The government only enjoys helping itself and does not take into consideration the welfare of other people.” B.M 1*

*SEE HABDBAF*

### Subsequent effects on the communal relationship between NAM, the government and the affected inhabitants of Loppersum.

Closely related to exchange relationships, this variable refers to the extent to which the affected inhabitants feel that the government and NAM will try to address the consequences of the earthquakes in the region because they are concerned about the welfare of the affected inhabitants (Hon & Grunig, 1999, p. 3).

**Findings of the 359 RoQ**

When asked if the affected inhabitants feel that NAM and the national government do not especially enjoy giving others aid and whether they feel that these organizations take advantage of people who are vulnerable; 16.75% of the total respondents strongly agree, 36.75% agree, 28.5% disagree while 3.15% of the total number of respondents strongly disagree. This therefore is an indication that 15.81% feel that NAM and the government are concerned about their welfare while 26.75% of the respondents feel that these respective organizations are not concerned about their welfare.

**Findings of the FgQ**

Generally, the interviewees feel that the government and NAM do not generally enjoy giving others aid and that the organizations are not concerned with the long-term relationships with the affected inhabitants.

#### Key summary points of subsequent effects on long-term relationships as a result of service delivery following the August 2012 earthquake: RoQ in light of FgQ

* There seems to be a direct link between mistrust in the organization among those that feel that these organizations do not take their concerns into consideration
* As a result, the affected inhabitants do not trust the messages coming from these organizations
* There are more negative effects on long term relationships compared to the positive ones based on the delivery of services by NAM and the national government following the August 2012 earthquake (see content under conclusion p, aa)

# 6. Conclusions

To recap, this practice-oriented research commissioned by the Opening Up project, is intended to generate knowledge which can be useful to practitioners in generating new approaches that could improve service delivery of business and governments in the NSR via social media. Social media played a significant role in influencing policy applicable to the Groingen gas fields following the August 2012 earthquake (Botter, 2014). It is for this reason that the Groningen gas field is used as a case study for other similar regions in the NSR that [could] face environmental issues caused by economic activities, just as Loppersum is facing the consequences of earthquake exposure as a result of gas extraction in the region (Tagliabue, 2014). The recommendations offered in this report are directed towards steps that can be used by the Dutch government and NAM in trying to improve service delivery to the affected inhabitants of Loppersum via social media. Analysis of the opinions of the affected inhabitants therefore is conducted to realize the following research objective:

*The research objective is to offer recommendations for developing a two-way model of communication via social media that could contribute towards improving service delivery of businesses and governments in the NSR to its citizens […]*

*by*

*evaluating (1) the concerns of the affected inhabitants of Loppersum, (2) their social media behavior which impacts the effectiveness of service delivery by the national government and NAM and (3) the subsequent effects on long-term relationships between the Dutch government and NAM with its key constituents of Loppersum, following the August 2012 earthquake*

## The concerns of the affected inhabitants RoQ in light of FgQ

Preliminary research not only indicates that the affected inhabitants do not feel protected by the government, but also suggests that psychological concerns among those exposed to earthquakes are long lasting and seem to be related to the damages and/loss caused by earthquakes (Bland, O'leary, Farinaro, Jossa, & Trevisan , 1996). Therefore, the first step towards improving service delivery to its citizens is for the government and NAM to understand the concerns of the affected inhabitants as a result of earthquake exposure. The research findings of the quantitative self-administered internet mediated questionnaires as supported by the focus group interview findings show that financial concerns, safety issues and psychological concerns cause the affected inhabitants to live in anxiety, uncertainty, frustration and anger. The interviewees of the FgQ who identified to having less damage to their property admit to feeling safer. Also, Interviewees that reported to having less damage also admit to having little to no psychological effects as a result of earthquake exposure while those with more damage show higher psychological concerns.

“*I live in uncertainty because it is not only about the possible damages to property, but also about the safety of our children” B.M 1*

Majority of the respondents of the questionnaire indicated that they are not aware of any efforts by NAM or the government to try and address these economic, physical as well as psychological concerns. A smaller equivalent indicated to know about such efforts but they dismissed them for not being satisfactory. This therefore leads to the opinions of the affected inhabitants about the effectiveness of the delivery of services by NAM and the national government via social media which is in turn determined by their social media behavior. Service delivery in this case refers to how NAM and the national government handle the dissemination and receiving of information to and from the affected inhabitants of Loppersum via social media following the August 2012 earthquake.

The highest population of 30% in Loppersum consists of people aged between 45-65 and is only 32% active on social media networks while the lowest 9% population [age 15-25] are almost 84% active (Statistics Netherlands , 2014). The former age bracket defines the target sample size for this research estimated at 57 in number. By distributing self-administered internet mediated questionnaires, a total of 359 respondents generated significant knowledge into the social media behavior of the affected inhabitants of Loppersum which in turn impacts the delivery of services of NAM and the national government via social media to the affected inhabitants

## The affected inhabitants’ social media behavior which impacts the service delivery of NAM and the government via social media RoQ in light of FgQ

The largest percentage of respondents is not involved with NAM or the government on social media and this can be explained by the fact that a large number of the affected inhabitants do not make use of Social media despite its usefulness in staying informed about the situation, sharing of ideas and also having conversations on matters of common interest.

Baked by social media theories, the sharing functionality of social media indicates how users receive, share and distribute content of things they have in common (Kietzmann , Hermkens , & McCarthy, 2011), for example how the affected inhabitants of Loppersum could use Facebook or Twitter to share images of showing the damages to their property. A large number consisting of a total 228 respondents believe that neither is the sharing functionality of social media important nor can social media be useful in facilitating the how the government and NAM use deliver services in the form of messages and statements directed to them.

The conversations functionality on the other hand indicates how people prefer to stay connected online to people with whom they share the same perspective either through short posts or lengthy discussions, thus allowing the organizations to determine when it is supposed to know when to steer the conversation and when to listen (Kietzmann , Hermkens , & McCarthy, 2011). Contrary to the scores of sharing functionality, a significantly high number of respondents estimated at 147 believe that not only is the conversation functionality of social media useful but also that social media could facilitate the service delivery of NAM and the national government. This therefore impacts service delivery of the relevant organizations and also goes to show that the affected inhabitants are interested in the information and indicates to a certain extent how much the organizations should chip in and steer the conversation. Even more indication that the government and NAM should chip in and steer the conversation; those that are involved with NAM or the national government on social media believe that generally, the information provided by NAM and the government both on social media and off social media has been little and not useful information, following the August 2012 earthquake.

*“The NAM recently opened a twitter account and in no time, there were over 1000 followers and this shows that people are interested in what they have to say. NAM and the government use social media only to inform the public and not to engage the people,” B.M 3.*

Follow up focus group findings however indicate that having trust in NAM and the government determines how much the inhabitants will believe in the information from the organizations. The interviewees point out that even though it is a good thing for the government and NAM to work towards improving the delivery of services through social media, the affected inhabitants’ trust in the government and NAM has been damaged.

### Subsequent effects on long-term relationships between the Dutch government and NAM with its key constituents of Loppersum, following the August 2012 earthquake RoQ in light of FgQ.

Data collected from 359 respondents presents the following statistics as a way to measure how long-term relationships between the affected inhabitants and the government as well as NAM have been affected following the August 2012 earthquake, evaluating six very distinct elements of measuring relationships within the realms of Public Relations including Trust as one of these elements:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Element | Total positive attibutes | Total negative attributes | Implications on element | Implication on Long-term relationship |
| Control mutuality | C:\Users\Ru\Documents\year 4\Data collection Loppersum\thumbs-up-and-down-buttons_full.jpg27.49% | C:\Users\Ru\Documents\year 4\Data collection Loppersum\thumbs-up-and-down-buttons_full.jpg158.93% | 27.49% feel positively towards the level of control existing within the relationship while 153.93% are do not | 153% of total respondents are NOT satisfied with the how NAM and the government makes use of its position in control of the situation while 27% of the respondents are satisfied  |
| Trust | C:\Users\Ru\Documents\year 4\Data collection Loppersum\thumbs-up-and-down-buttons_full.jpg 39.98% | C:\Users\Ru\Documents\year 4\Data collection Loppersum\thumbs-up-and-down-buttons_full.jpg 64.85% | 39.98% of respondents have confidence in the government and NAM and thus willing to open up to them; 64.85% of respondents lack confidence in the two respective organizations and are this unwilling to open up to them. | 39.98% of respondents trust the government and NAM while 64.85% of respondents do not trust the Government and NAM.  |
| Satisfaction |  C:\Users\Ru\Documents\year 4\Data collection Loppersum\thumbs-up-and-down-buttons_full.jpg2.54% | C:\Users\Ru\Documents\year 4\Data collection Loppersum\thumbs-up-and-down-buttons_full.jpg34.21% | 2.54% have positive expectation to the existing relationship while 34.21% do not.  | 2.54% of the respondents are happy with the existing relationships because they feel that they also benefit from it, while 34.21% are unhappy with the relationship and do not feel like they are benefiting also from it. |
| Commitment | C:\Users\Ru\Documents\year 4\Data collection Loppersum\thumbs-up-and-down-buttons_full.jpg29.95% | C:\Users\Ru\Documents\year 4\Data collection Loppersum\thumbs-up-and-down-buttons_full.jpg 55.84% | 29.95% of the total respondents are committed to building a log-lasting relationship and are thus willing to spend energy on the relationship while 55.84% of the respondents feel the opposite | 29.95% see, recognize and are satisfied with the efforts of NAM and the government in maintaining a long-term relationship while 55.84% feel the opposite. |
| Exchange relationships |  C:\Users\Ru\Documents\year 4\Data collection Loppersum\thumbs-up-and-down-buttons_full.jpg 7.80% |  C:\Users\Ru\Documents\year 4\Data collection Loppersum\thumbs-up-and-down-buttons_full.jpg 22.1% | 22.1%of the total respondents feel that the government and NAM generally expect something in return whenever they offer anything, while 7.80% feel the opposite. | 22.1% of the total respondents feel that NAM and the government will compromise with them (exchange above relationship) if they are to gain something even though they have had a relationship for a long time. |
| Communal relationships | C:\Users\Ru\Documents\year 4\Data collection Loppersum\thumbs-up-and-down-buttons_full.jpg 15.81% | C:\Users\Ru\Documents\year 4\Data collection Loppersum\thumbs-up-and-down-buttons_full.jpg  26.75% | 15.81% of the total respondents feel that NAM and the government are generally concerned about their welfare even when there is no exchange to be offered, while 26.75% think the opposite.  | 26.75% of the total number of respondents believe that NAM and the national government are not concerned over their welfare while 15.81 of the total respondents hold an opposing opinion.  |

In summary, there seems to be a direct link between psychological concerns as experienced by the affected inhabitants, and financial damage to property. Also, safety issues are seen to have a correlation to psychological concerns as well. This link/ correlation is one of direct proportionality as those that reported damage to property, also reported not feeling safe and thus indicated higher levels of psychological effects as a result of earthquake exposure, (see p,ss). Most of the affected inhabitants are not satisfied by the efforts of NAM and the government in trying to address their concerns and one of the findings that elaborates this dissatisfaction, is the larger number of respondents who feel that the information which has been provided by the two respective organizations have not been useful to them. Provision of information through statements and messages, is one of the ways that NAM and the government have been delivering services to the affected inhabitants following the August 2012 earthquake. Delivery of services via social media lies at the center of this research and the generated knowledge seeks the find ways of improving this ‘phenomenon’ that has been described as ‘revolutionary’ to the functioning of an organizations’ public relations; due to the power that it takes from the PR practitioners and places in the hands of the public; who are free to construct, use and share information about the organization without needing permission to do so (Kietzmann , Hermkens , & McCarthy, 2011). Research findings show that the affected inhabitants of Loppersum are not as active on social media, but they are interested in what these respective organizations have to say; and subsequently, research goes further to indicate that the government and NAM should use social media to engage the public and not just to inform.

However, there is a question of how much the affected inhabitants trust the two organizations as they lack positive reinforcements about long-term relationships. On the contrary, it is noted that a significant number of the affected inhabitants have not lost their confidence in the government This therefore suggests that there is a ray of hope in trying to mend the broken Trust levels with the affected inhabitants which will in turn reflect on the effectiveness of how the inhabitants’ receive information provided by NAM and the government.

*“To try and solve the psychological concerns, the government and NAM should be honest in the way they communicate with the people. Honesty could increase the level of trust that the people have in the government and NAM.”*

# 7. Advice

Steps taken towards trying to improve service delivery of NAM and the government to its citizens can be viewed a cycle which involves input from NAM as well as the government so as to impact the attitudes of the affected inhabitants.

Improvement of service delivery is determinant on the inhabitants’ social media behavior; but irrelevant of how much information is offered by the two relevant organizations, most of the affected inhabitants do not trust the government or NAM. This low level of trust in the two relevant organizations has a significant effect on the affected inhabitants’ attitudes towards their long-term relationship with the significant organizations herein. These attitudes are determined by how strongly the affected inhabitants feel the organizations take their financial, physical and also psychological concerns into consideration. Consequently this means that in light of sufficient knowledge about these concerns, the organizations need to understand the social media behavior of their constituents so as to establish what information to offer; when to steer the conversation, when to listen and when to engage their audience. At this point, the cycle is complete and by communicating as honestly as possible especially about the facts of the situation, the organizations will be able to slowly gain trust from their audience and thus the attitudes of the affected inhabitants will gradually change on a positive scale.

An illustration of this two-way model can be illustrated as follows

***Two-way model for social media service delivery improvement in the Groningen gas fields***

In light of the concerns of the affected inhabitants’ concerns, In order to improve service delivery, the government and NAM need to…

To provide an answer for the main problem area for research which seeks to generate knowledge that could be useful in improving service delivery of governments and business in the NSR to its citizens, the information presented above is hereby translated [see appendix for elaboration ] into Macnamara’s ‘Pyramid Model’ of PR research (2002, p. 18). The model which is meant to be read from the bottom up, (appendix B p, 92) indicates key steps of communication needed to reach a desired outcome through an organization’s inputs in terms of formative research into the target audience’s needs and outputs in terms of how to communicate to them and through what means. This therefore means that an organization’s outcomes depend on inputs and outputs that are set to place. As earlier mentioned, outcomes can be used to measure relationships between organizations and its key constituents.

Similar to the two way model, steps that should be taken to improve service delivery of governments and businesses in the NSR therefore include formative research into the concerns of the citizens [inputs], their social media behavior and the subsequent effects on the delivery of services by businesses and governments [inputs&outputs] which will help the organization determine what information to provide; how to handle this information and in so doing, the attitudes of the citizens towards the government and businesses in the NSR will gradually make a positive shift. This positive attitude shift is likely to positively impact service delivery in terms of how the governments and businesses provide information, receive complaints, how the citizens can ask questions, make suggestions and also receive feedback. This in turn determines the citizens’ relationship with the governments and businesses of the NSR [outcomes].

This model therefore, is used to outline the logical order of this advice: in which the recommendation is illustrated as shown below:

**Two way model for social media service delivery in the** **NSR**

**Outcomes:** possible attitude change

**Inputs and outputs:** determine what information to provide and establish effective ways to manage this information

**Inputs:** Ensure an understanding of the social media behavior of the target citizens

***In light of the citizens’ concerns***

Like turning wheels, all the steps set other consecutive steps in motion. When one step is stuck, for example caused by a lack of proper knowledge of the citizens’ concerns or a lack of trust, then the consecutive steps are more likely to also experience glitches.

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Appendix A

1. Research Framework Schematic Presentation
2. Conceptual model
3. Logical research framework matrix

# Research Framework Schematic Presentation

Primary research activities through focus groups and interviews

Service Delivery

Subsequent effects on long-term relationships of the affected inhabitants with NAM and the government

Social media behaviour of the affected Loppersum inhabitants vis-a-vis service delivery effectiveness

Concerns of the affected Loppersum inhabitants

Results of analysis

Corporate Communication in service delivery through social media

Types and building blocks of Social media

Strategic two-way model of improving service delivery by NAM and the government to the affected inhabitants of Loppersum

Results of analysis

Results of analysis

How to measure relationships in line with corporate Public Affairs

|  |  |
| --- | --- |
| *Figure 1: Conceptual model** Social media behavior of the affected inhabitants impacts the effectiveness of Service delivery. Also through investigating the subsequent effects on the long-term relationship between the affected inhabitants and NAM as well as government, knowledge on how to improve service delivery will be gained..

  |  * This means Social media behavior of the affected inhabitants and subsequent long term relationhip effects are both dependent on service delivery. Socia media (Facebook and Twitter) is the independent variable because it remains constant and it is in no way affected by the other variables.
 |

1. **Logical Research Framework Matrix (LRFM)**

|  |
| --- |
| ***LOGICAL RESEARCH FRAMEWORK MATRIX ( LRFM)*** |
| ***Preliminary Title:* The role of social media in influencing policy: a case of the Groningen gas fields.*****Focus question:***  **How can governments and businesses in the NSR improve service delivery to its citizens by looking at the Groningen gas fields and how can NAM as well as the Dutch government improve their service delivery the affected inhabitants of Loppersum following the 2012 August earthquake?** ***General Research objective: The research objective is to offer recommendations for developing a two-way model that could contribute towards improving service delivery of businesses and governments in the NSR to its citizens […]*** ***by******evaluating (1) the concerns of the affected inhabitants of Loppersum, (2) their social media behavior, and (3) low effectiveness by the national government and NAM in delivering services following the August 2012 earthquake.******Problem for Research:* There is a need for an improvement of service delivery by the NAM and the Dutch government due to a lack of knowledge on the current concerns of the affected inhabitants of Loppersum, their social media behavior and low effectiveness by the national government and NAM in delivering services following the August 2012 earthquake.**  |
| ***Primary research question (s)*** | **Expected research outcomes** | **Subsidiary research questions** | **Research activities:****secondary** | **Research activities: primary** |
| ***Sub problem for research:*** There is a need for an in-depth analysis of the current concerns of the affected inhabitants of Loppersum following the August 2012 earthquake.***Primary research question 1:*** What are the current concerns of the affected inhabitants of Lopeprsum following the 2012 August earthquake? ***Specific research objective 1*** ***To understand the economic, physical and psychological concerns of the af-fected inhabitants to create a check-list of their actual concerns and their opinions of what has been done so far by the government and nam to try and address these concerns.*** | **Sub topic 1:**  **financial concerns of the inhabitants following the 2012 August earthquake.**RO1.1: To produce a checklist of the financial concerns of the inhabitats of Lopeprsum.**Sub topic 2: concerns of the affected inhabitants on safety issues following the August 2012 earthquake.** RO1.1: To establish a checklist of safety issues that the affected inhabitants are concerned about. **Sub topic 3: psychological concerns of the affected inhabitants following the 2012 August earthquake.** RO1.1: To produce an overview of the psychological concerns of the affected inhabitants of Loppersum. And to determine whether there is a link to damage to propety or safety issues | **Sub topic 1:** SR1.1. What are the financial concerns of the affected inhabitants of Loppersum following earthquake exposure?**Sub topic 2:** SR.1.2. What are concerns of the affected inhabitants on safety issues following earthquake exposure?**Sub topic 3:** SR.1.3. What are the psychological concerns of the affected inhabitants following earthquake exposure?  | * 1. Jan H. Kietzmann \*, K. H. (2011)
	2. (Bland, O'leary, Farinaro, Jossa, & Trevisan , 1996)
	3. http://www.stuff.co.nz/
	4. Radian6. (2013)
	5. http://www.cbs.nl/
 | 1. internet mediated, self-administered questionnaires to an estimated sample size of 57 the inhabitants of Loppersum 2. Focus group using the Basic Conversation method (ORID)Purpose: To clarify on the affected inhabitants’ concerns over financial, physical as well as psychological consequences of earthquake exposure.Person: six board members of the GBB |
| ***Primary research question (s)*** | **Expected research outcomes** | **Subsidiary research questions** | **Research activities:****secondary** | **Research activities: primary** |
| ***Sub problem for research:*** There seems to be an inadequate level of social media behavior by the Loppersum inhabitants which in turn impacts the effectiveness of service delivery of NAM and the government to the affected inhabitants regarding the consequences of the August 2012 earthquake. ***Primary research question 2:***  How do the inhabitants of Loppersum make use of social media and in what ways does this affect the effectiveness of service delivery of the government and NAM to the affected inhabitants***Specific research objective 2:*** To analyze the activeness of the inhabitants on social media as well as their use of social media so as to understand their accessibility on social media  | **Sub topic 1:** The inhabitantspresence activeness on social media; their frequency to visit social media sitesRO2.1: To measure the extent to which the inhabitants of Loppersum actively visit social media sites by evaluating social media sites used to send information to the NAM and government. **Sub topic 2:** The inhabitants’ use of social media [in terms of conversation, sharing and relationship],RO2.2: To identify the inhabitants use social media based on social media buildig blocks**Sub topic 3:** The inhabitants accessibility on social media RO2.3: To understand the their involvement with NAM and government on social media. **Sub-topic 4**: The inhabitant’s use of social media in receiving information from NAM and the governmentRO2.4: To evaluate how the inhabitants have used social media in receiving informatio from NAM and the government**Sub-topic 5:** The inhabitat’s use of social media in sending information to NAM and the governmentRO2.5: To evaluate how the inhabitants have used social media in sending informatin to NAM and the government**Sub-topic 6:** The inhabitant’s use of social media to receive feedback from NAM and the governmentRO2.6: To evaluate how social media hs been useful in receining feedback from NAM and the government | **Sub topic 1:** *SR2.1.* To what extent are the inhabitants of Loppersum visit social media sites to send information to the NAM and/or government? **Sub topic 2:** SR.2.2. To what extent do the inhabitants of Loppersum use social media for conversation, sharing and relationship purposes? **Sub topic 3:** SR.2.3. To what extent do the inhabitants of Loppersum involved with NAM and the government on social media? **Sub topic 4:** SR.2.4. To what extent do the inhabitants of Loppersum use social media sites to recive information from NAM and the government? **Sub topic 5:** SR.2.5. To what extent do the inhabitants of Loppersum use social media sites to gain as questions, give suggestions, make complaints to NAM and the government? **Sub topic 6:** SR.2.6. To what extent do the inhabitants of Loppersum received feedback from NAM and the government on social media?  | * 1. Banning, C. (2009, June 17)
	2. Donovan, J. (2013, December 27)
	3. Botter, B. J. (2014).
	4. Jan H. Kietzmann \*, K. H. (2011)
	5. Triebert, C. (2014, January 20)
	6. Lerbinger, O. (2006)
	7. Radian6. (2013)
	8. http://www.cbs.nl/
	9. NAM. (2014)
 | 1. internet mediated, self-administered questionnaires to the inhabitants of Loppersum 2. Focus group using the Basic Conversation method (ORID)Purpose: To clarify on the affected inhabitants’ concerns over financial, physical as well as psychological consequences of earthquake exposure.Person: six board members of the GBB |
|  ***Primary research question (s)******Sub problem for research:***There seems to be a subsequent effect on the inhabitants’ long-term relationship with NAM and the government with regards to service delivery following the August 2012 earthquake. ***Primary research question3:*** what are the subsequent effects on the inhabitants’ lobg term relationship s with NAM and the government as a result of service delivery following the August 2012 earthquake? ***Specific research objective 3*:** To measure the efectes on long term relationships based on control mutuality, trust, satisfaction, commitment, eschange relationship and also communal relationships | **Expected research outcomes****Sub topic 1:** subsequent effects on control mutuality. RO3.1: To measure the extent too which the element of control mutuality in the long term relationship has been affected. **Sub topic 2:** subsequent effects on trust. RO3.2: To measure the extent too which the element of trust in the long term relationship has been affected. **Sub topic 3:** subsequent effects on satisfacaction. RO3.3: To measure the extent too which the element of satisfaction in the long term relationship has been affected. .  **Sub topic 4:** subsequent effects on satisfacaction. RO3.4: To measure the extent too which the element of commitment in the long term relationship has been affected**Sub topic 5:** subsequent effects on exchange relationship. RO3.5: To measure the extent too which the element of exhange relationsip in the long term relationship has been affected**Sub topic 6:** subsequent effects on satisfacaction. RO3.6: To measure the extent too which the element of communal relationships in the long term relationship has been affected | **Subsidiary research questions****Sub topic 1:** *SR3.1.* How has the element of control mutuality been affected as a result of service delivery following the August 2012 earthquake? **Sub topic 2:** *SR3.2.* How has the element of control mutuality been affected as a result of service delivery following the August 2012 earthquake? **Sub topic 3:** *SR3.3* How has the element of control mutuality been affected as a result of service delivery following the August 2012 earthquake? **Sub topic 4:** *SR3.4* How has the element of commitment has been affected as a result of service delivery following the August 2012 earthquake? **Sub topic 5:** *SR3.5* How has the element of exchange relationship been affected as a result of service delivery following the August 2012 earthquake? **Sub topic 6:** *SR3.6* How has the element of communal relationships has been affected as a result of service delivery following the August 2012 earthquake?  | **Research activities:****secondary*** 1. Jan H. Kietzmann \*, K. H. (2011)
	2. Lerbinger, O. (2006)
	3. twitter.com/NAMbv
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  | **Research activities: primary**1. internet mediated, self-administered questionnaires to the inhabitants of Loppersum 2. Focus group using the Basic Conversation method (ORID)Purpose: To clarify on the affected inhabitants’ concerns over financial, physical as well as psychological consequences of earthquake exposure.Person: six board members of the GBB |

Appendix B

Interview transcripts

The pyramid model

Tables and figures of findings

# **Interview transcript** 1

|  |  |
| --- | --- |
| Interview file nº: 1 | Date: March 17, 2014 |
| Year / Semester / block: 4th year / 2nd semester/ block 2 | Time: 10.00 a.m. |
| **Open ended interview****Main Topic:** With regard to the earthquake situation in Loppersum, what are your views on the situation, the role by stakeholders and social media in the decisions made? -How can social media be used to contribute towards new approaches of improving service delivery of governments and businesses to its stakeholders?  | Duration: 130 minutes |
| **Place:** Loppersum, The Netherlands |
| **Name of interviewer:** Sanau Brenda |
| Name of interviewee: Daniëlla Blanken |
| **Role of interviewee: As** the secretary of an organization (GBB) that is committed to the interests of those who suffer damage caused by earthquakes in the region, her role is to provide insight into the concerns of the affected inhabitants of Loppersum with regards to the current and desired policy changes on earthquakes in the region.  |
| **Sub topics:** Policy changes, concerns of the affected inhabitants, issues, current policy  |
| **Description: summary of transcript and comments (IN ENGLISH)**Concerns* Scattered information
* Poor communication by governments
* There are less earthquakes during the day than at night
* A lot of attention is being paid to only big earthquakes
* There is a lot of damage from the earthquakes and it is frustrating that nobody is investigating the series of small earthquakes
* It is important to investigate the series of small earthquakes because even a series of small earthquakes of a magnitude of 1.5 could very well damage the foundation of a house.
* There have already been hundreds of small earthquakes during the day
* The entire gas field experiences a series of many small earthquakes during the day
* The earthquake is extending with the increasing gas activities
* The reduction of gas in Loppersum could mean an increase in the South
* All the decisions that are being made are based on assumptions, low investigation and thus uncertainty.
* There is one thing for sure; less gas drilling is less earthquakes.
* The main concern and one that is growing widely is safety
* There is no general system for compensation

Problems faced by the affected inhabitants* The kind of damages to the houses is happening more and more.
* Cutting down gas production does not solve the problem
* We do not know what the reduction in this region is going to do for us
* There are more and more buildings waiting to fall down
* The damage has to be repaired of cource
* But in that procedure, there is a lot that is not going right

Businesses (Gas production companies) * The NAM is causing the damage and is also carrying out the checks on damages.
* According to us, this is not right. We want another government institute to assess the damages
* The NAM is hiring individuals to carry out these assessments and some of them are not even engineers (One expert for example was a fireman and now assessing the damages)
* The qualification of those that asses the damages is in question
* These assessors are not NAM employees but are paid by NAM
* We need experts to either from the Government or an independent body that can assess the damages
* Trust is broken
* There is no general system for compensation
* The NAM is not being open in communicating about the compensation process
* The NAM is not being open and honest about what they are doing
* They only answer to journalists and only recommending the affected inhabitants to think about it

Efforts by the Organization in dealing with the situation* Almost 2000 members
* Using open data
* To inform the citizens of Loppersum
* The general public
* The provincie Groningen
* The Provincie Groningen is using some of our information
* Also creating portals to show situations in real time
* Generates information about the earthquakes that occur more at night than in the day

KNMI (Government)* Works with the KNMI
* The KNMI does not investigate the small earthquakes
* They do not also communicate findings of the situation on small earthquakes
* The KNMI says that there is no reason for more earthquakes to take place at night
* The occurrence of more earthquakes during the day is based on assumptions according to the KNMI

The Government (Provincie Groningen) * They do not communicate valuable information to the affected inhabitants
* Trust is broken because the affected inhabitants do not feel safe
* The safety of the people is not placed in the forefront
* Minister Kamp’s solution is on the wrong side of the solution
* There are two ways to solve the problem (either to deal with the cause or to deal with the consequences)
* One of the consequences is that a lot of the buildings in Loppersum are not earthquake proof
* One of the decisions made was to try and strengthen these houses but it takes time, it is costly and we are also not sure if that is going to help
* Thousands of buildings are already badly damaged
* The affected Gemeentes are attempting to communicate with one another while those that are not affected are acting as though the situation does not exist
* The round table (dialogue tafel) is the governments’ attempt to push the situation
* The purpose of the round table should be explained
* Because if the decision is left to the round table then the residents are willing to talk
* It is the responsibility of the Government to communicate to the rest of the Netherlands al consequences being faced by the affected inhabitants.
* Since the beginning of gas production, the government has always behaved in the same way; wanting money now and not considering the consequences. They cannot afford to stop being popular through gas production and risk losing almost 6 billion euros in gas revenue.
* The Government does not communicate the real issues of the inhabitants of Loppersum
* Agenda setting on the issue showing that reduction of gas extraction in the North will increase taxes on the rest of the citizens causes the general public to think negatively of the issue.
* The Government does not communicate what is actually happening in the Lopeprsum region.
* The Government says things like ‘if gas extraction is reduced, then citizens will not have heating in their houses’ in which case it’s a lie because up to 75% of the gas extracted is immediately exported and the rest is used for household.
* The Government is not communicating honesty. They do not tell the whole truth.

Information* There are two theories that fewer smaller earthquakes indicate a bigger one
* Others say when there is a period of less smaller earthquakes it means that tension is building up for big earthquakes
* The Gemente Groningen and the Dutch government is now getting anxious and trying to communicate because of the social media debate

Current policy* Minster Kamp advised to stop gas production in Loppersum
* Gas production currently cut by a third by 2016
* We want our minister to communicate honestly to the whole country

What is the solution according to you?* To lower production in the total field for approx. 50%
* Monitor for two years to see how the ground is responding to that
* Then focus on the steps towards ensuring the safety of the people.

Social Media* The organization is using social media in the community for our members
* Sometimes it is good to use twitter, and sometimes Twitter is too ‘small’
* The average age of our members are 75 and 70% do not use Twitter and use Facebook on a small scale
* There is not so much activity on the Facebook page
* They needed a closed community for the members to meet
* Social media is important
* Tweets from us (for example a picture of a diagram or a large damaged house) gets a lot of hits
* People prefer to see information than to read that which is sent via a link
* We want to inform people as best as we can
* The more we inform them, the less questions we get because people will understand what is happening

Other action groups* We communicate with them but it is based on certain things
* The GBB tries to use a dialogue approach to reach a consensus to the situation but there are other organization s that make too much noise and listen too little.
* If you are going to take a gas company, then really take a company down.
* What is someone from Amsterdam supposed to think of the image of the affected inhabitants when they see you making a lot of noise?
* Organizations such as our won should have a clear way of working and strategy is key
* We need to create a good image by evoking sympathy from the rest of the Netherlands.
* It is important to engage the whole nation in the situation
* If we want sympathy we have to portray a good image

The situation is one problem but it has divided into many sub-problems depending on the stakeholders and the needs of the inhabitantsSome people react in different ways. Some try to stay informed while others would rather not know.  |
| AFS, 2006 |

## Interview file 2

|  |  |
| --- | --- |
| Interview file nº: 2 | Date: May 5th, 2014 |
| Year / Semester / block: 4th year / 2nd semester/ block 2 | Time: 16:00 – 18:30 hrs |
| **Structured focus group interview**Problem for research:*There is a need for an improvement of service delivery by the NAM and the Dutch government due to (1) a lack of knowledge on the current concerns of the affected inhabitants of Loppersum, (2) low effectiveness of both social media behavior of the affected inhabitants and the delivery of services by the national government and NAM to the affected inhabitants via social media, as well as (3) the subsequent effects on the long-term relationships between the Dutch government and NAM with its key constituents of Loppersum, following the August 2012 earthquake.*  | Duration: 150 minutes |
| **Place:** Loppersum, The Netherlands |
| **Name of interviewer:** Sanau Brenda |
| Name of interviewee: BM1, BM2, BM3, BM4 representative of four out of board members of the GBB.  |
| **Role of interviewee:** They are the board members of GBB; an organization that is committed to the interests of those who suffer damage caused by earthquakes in the region, her role is to provide insight into the concerns of the affected inhabitants of Loppersum with regards to the use of social media and service delivery of the government and NAM.  |
| **Sub topics:** Concerns of the affected inhabitants of Loppersum, (2) their social media behavior which in turn impacts the service delivery of the government and NAM, and also (3) the long terms effects on the affected inhabitants’ long-term relationship with the government and NAM following the August 2012 earthquake.  |
| **Description: summary of transcript and comments (IN ENGLISH)****Main R.Q 1: There is a need for an in-depth analysis of the current concerns of the affected inhabitants of Loppersum following the August 2012 earthquake.** 1.1 Financial concerns to your propertyOn a scale of 1-5, how badly has your property been damaged by the earthquakes? * + 1. Not at all (1)
	+ 2. Very little (1)
	+ 3. Little
	+ 4. Badly (1)
	+ 5. Very badly (1)

B.M1 no damage at all to my property but there is significant property damage to the village. I live in a village with 24 houses and I am one of the few who have no damage at all. I am quite lucky. This translates to a lot of anxiety about the situation. The government and NAM should stop drilling gas and start listening to the concerns of the people. BM2: Anger, concern, it makes me feel powerless and also there is a lot of uncertaintyBM3: no one knows what will come in terms of the value of our houses which has been significantly reduced by the earthquakes. Are you aware of any efforts by the Government and NAM to try and address these damages? * + Yes (1,1,1,1)
	+ No

Do you feel satisfied with these efforts by the government and NAM to try and address these damages? * + Yes
	+ No (1,1,1,1)
	1. What are the physical concerns caused by earthquakes in terms of safety issues?
* On a scale of 1-5, how safe do you feel in your own home?
	+ 1. I do not feel safe at all (1,1)
	+ 2. I feel just a little bit safe (only a small percentage) (1)
	+ 3. I am not sure
	+ 4. I feel quite safe (slightly a bigger percentage)
	+ 5. I feel extremely safe (1)

B.M1: I feel extremely safe in my own home because I do not have any damages to my property so far. But if you ask me how safe I feel when my two daughters are playing two or three houses down the street then I do not feel safe. My life is very much affected by the earthquake exposure and that is why I am a member of the board and I spend 15 hours a week dedicated to this organization. On a scale of 1 to 10, the earthquake situation has affected my life at 9 because every day there are issues arising from earthquake exposure. The government and NAM should do some serious work to try and ensure the safety of the citizens living the earthquake prone regions. * Based on your previous answer, how does your state of safety make you feel? (3 answers allowed)
	+ Anxious (1,1,1)
	+ Angry (1)
	+ Uncertain (1,1,1)
	+ Sad
	+ Frustrated (1,1,1)
* Do you know of any efforts by the government and NAM to try and address these safety issues?
	+ Yes (1,1,1,1)
	+ No
* Are you satisfied with these efforts by the government and NAM to try and address these safety issues?
	+ Yes
	+ No (1,1,1,1)
	1. Psychological concerns as a result of earthquake exposure
* Do you feel psychologically affected by earthquake situation?
	+ Yes (1,1,1,1)
	+ No
* To what extent do you feel psychologically affected by the earthquake situation?
	+ Very little (1)
	+ Little (1)
	+ I am not sure
	+ A lot (1)
	+ Very much (1)

B.M 1: I am affected by the earthquake situation a lot because I am not able to guarantee the safety of my children. When they are playing somewhere and the house could collapse then this makes me mad. I feel anxious and angry because it is not just about the damage to my property but also my safety and that of my children * Do you know of any efforts by the government and NAM to try and address these psychological concerns?
	+ Yes
	+ No (1,1,1,1)
* Are you satisfied with these efforts by the government and NAM to try and address these psychological issues?
	+ Yes
	+ No (1,1,1,1)

I would like the government to try and act in a way that we can see that they respect their citizens. Offering information has been done and has proven to be redundant and thus not effective. This is not the way to treat citizens, they should do the right thing and act upon the situation to address these psychological issues. Key word: The government and NAM should show that they care. **Main R.Q. 2: There seems to be an inadequate level of social media behavior by the Loppersum inhabitants regarding their concerns on the consequences of the August 2012 earthquake**Preliminary research indicates that the highest population of 30% consisting of people aged between 40-45 is only 32% active on social media networks while the lowest 9% population [age 15-25] are almost 84% active. The government and the NAM are trying to implement the use of social media and therefore: 2.1 Activeness on Social media* Do you have a Facebook account?
	+ Yes (1,1,1)
	+ No (1)
* How often do you visit Facebook?
	+ Several times a day (1)
	+ Once a day (everyday) (1)
	+ Once every other day (but not every day) (1)
	+ Rarely (zelden)
	+ Never
* Do you have a Twitter account?
	+ Yes (1,1,1,1)
	+ No
* How often do you visit Twitter?
	+ Several times a day (1,1)
	+ Once a day (everyday)
	+ Once every other day (but not every day)
	+ Rarely (zelden) (1)
	+ Never

B.M1: I find Facebook and Twitter useful. 2.2 Use of Social media* Do you find social media useful in having conversations with people who have the same perspective as you?
	+ Yes (1,1,1,1)
	+ No
	+ Not sure
	+ Probably
	+ I do not know
* Is it important for you to be able to have conversations on Social media with people of the same point of view as you? (For example with people who are suffering consequences of earthquakes like you)
	+ Yes (1,1,1)
	+ No (1)

B.M1: I just look at what people say but I do not participate in the discussions. We would like to expand the GBB group on Facebook because when people share their views on the situation then its better, For example these meetings that we have are useful in having discussions that we would otherwise have on Facebook only that here we get to meet in real life. * Do you use social media to share your views on the current situation in Loppersum?
	+ Yes, always (1)
	+ Yes, sometimes (1)
	+ No, I never (1,1)
* How important is it for you for a social media platform to facilitate the sharing of ideas?(for example how we can use the ‘share’ button on Facebook)
	+ Very important
	+ Important (1,1,1,1)
	+ Not so important

2.3 Accessibility on Social media sites* Are you involved with the government or NAM on Social media (Facebook/witter)?
	+ Yes (1,1)
	+ No (1,1)

B.M1: I only read news letters. * Are you aware that NAM is on Twitter?
	+ Yes (1,1,1)
	+ No (1)

BM1: They should have set up a twitter account earlier. * Following the August 2012 earthquake, have you used social media to access any information from NAM or the government?
	+ Yes I have, the information was useful (1,1)
	+ Yes I have, but the information was NOT useful
	+ No I have not. (1,1)
* How often do you try to seek information about the earthquake situation from the government or NAM through Social media?
	+ Several times a day (1,1)
	+ Once a day (every day)
	+ Once every other day (but not every day)
	+ Rarely (zelden)
	+ Never (1,1)

**Question 3: There seems to be low effectiveness by the national government and NAM in their delivery of services through social media following the August 2012 earthquake.** 3.1: The extent to which there has been adequate provision of information by the government and the NAM to the inhabitants of Loppersum. * Generally, how much information has been provided by the government and NAM on a scale of 1-5? (This involves information about safety issues, damages and psychological concerns provided through all tools such as newspapers and NOT only on social media)
	+ 1. Very little to none
	+ 2. Little and not useful (1,1,1,1)
	+ 3. Little and useful
	+ 4. A lot and not useful
	+ 5. A lot and useful
* Generally, how much information has been provided by the government and NAM (this involves information about safety issues, damages and psychological concerns provided ONLY on Social media)
	+ Very little to none
	+ Little and not useful (1,1,1,1)
	+ Little and useful
	+ A lot and not useful
	+ A lot and useful
	+ I do not know

B.M1: The government and NAM do not offer open information and therefore we do not feel informed. 3.2 The extent to which the affected inhabitants have been able to use social media to ask questions to the government and NAM and its effectiveness. * Have you used social media [Facebook and Twitter] to ask questions to the government or NAM?
	+ Yes I have, it was useful
	+ Yes I have, but it was not useful (1,1,1)
	+ No I have not, but I think social media could be useful to ask questions.
	+ No I have not and I think social media could NOT be useful to ask questions. (1)

B.M1: Social media does not allow for people to ask broad questions because of character restrictions and this issue of earthquakes is a complex one that involves broad issues and cocnerns. * Have you used social media [Facebook/Twitter] to issue complaints to NAM or the government with regards to your damages, safety concerns/ psychological concerns?
	+ Yes I have, and it was useful
	+ Yes I have, and it was NOT useful (1,1)
	+ No I have not but I think social media could be useful in issuing complaints (1,1)
	+ No I have not, and I think social media could NOT be useful in issuing complaints

3.3. The extent to which the affected inhabitants have received feedback from NAM and government following the August 2012 earthquake and its effectiveness. * Have you received any feedback from the government or NAM to the questions or complaints about damages, safety issues, concerns or just information on Social media [Facebook/Twitter]?
	+ Yes I have, and the information was useful
	+ Yes I have, and the information was NOT useful
	+ No I have not but I think social media could be useful in giving feedback (1,1,1)
	+ No I have not, and I think social media could NOT be useful in giving feedback (1)
* Have you used Social media [Facebook/ Twitter] to make suggestions to NAM or the government with regards to your concerns for damages, safety and psychological issues caused by the earthquakes?
	+ Yes I have, and it has been useful
	+ Yes I have, but it has NOT been useful
	+ No I have not but I think social media would be useful in making suggestions (1,1,1,1)
	+ No I have not, and I think social media would NOT be useful in making suggestions.
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| AFS, 2006 |
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| --- | --- | --- | --- | --- | --- | --- |
| Control Mutuality | Strongly agree | Agree | Not sure  | Disagree | Strongly disagree | Not Applicable  |
| The government is attentive to what people like me have to say.The NAM is attentive to what people like me have to say |  | 11 |  |  | 1,1,11,1,1 |  |
| This government believes the opinions of people like me are legitimate. This NAM believes the opinions of people like me are legitimate. |  |  |  | 11 | 1,1,11,1,1 |  |
| In dealing with people like me, the government has a tendency to throw its weight around. (try to show that they are in power)In dealing with people like me, the NAM has a tendency to throw its weight around. (Try to show that they are in power) |  | 1,1,1,11,1,1,1 |  |  |  |  |
| The government really listens to what people like me have to say.The NAM really listens to what people like me have to say. |  |  |  | 11 | 1,1,11,1,1 |  |
| The government gives people like me enough say in the decision-making process.The NAM gives people like me enough say in the decision-making process. |  |  |  | 11 | 1,1,11,1,1 |  |

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Trust | Strongly agree | Agree | Not sure  | Disagree | Strongly disagree | Not Applicable  |
| The government treats people like me fairly and justly.The NAM treats people like me fairly and justly. |  |  |  | 11 | 1,1,11,1,1 |  |
| Whenever the government makes an important decision, I know it will be concerned about people like me.Whenever NAM makes an important decision, I know it will be concerned about people like me. |  |  |  |  11 | 1,1,11,1,1 |  |
| The government can be relied on to keep its promises The NAM can be relied on to keep its promises |  |  |  | 11 | 1,1,11,1,1 |  |
| I believe that the government takes the opinions of people like me intoaccount when making decisionsI believe that THE NAM takes the opinions of people like me into account when making decisions |  |  |  | 11 | 1,1,11,1,1 |  |
| The government has the ability to accomplish what it says it will do.The NAM has the ability to accomplish what it says it will do. |  | 1,1,11,1,1 |  | 11 |  |  |

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| --- | --- | --- | --- | --- | --- | --- |
| Satisfaction | Strongly agree | Agree | Not sure  | Disagree | Strongly disagree | Not Applicable  |
| I am happy with NAM. I am happy with the government. |  |  |  |  | 1,1,1,11,1,1,1 |  |
|  Both the NAM and people like me benefit from the relationship.Both the government and people like me benefit from the relationship. |  |  |  | 11 | 1,1,11,1,1 |  |
| Most people like me are happy in their interactions with this governmentMost people like me are happy in their interactions with this NAM. |  |  |  | 1,1,1,11,1,1,1 |  |  |
|  Generally speaking, I am pleased with the relationship the government has established with people like meGenerally speaking, I am pleased with the relationship THE NAM has established with people like me. |  |  |  | 11 | 1,1,11,1,1 |  |
| Most people enjoy dealing with the government. Most people enjoy dealing with NAM |  | 11 |  |  | 1,1,11,1,1 |  |

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| --- | --- | --- | --- | --- | --- | --- |
| Commitment  | Strongly agree | Agree | Not sure  | Disagree | Strongly disagree | Not Applicable  |
| I feel that the government is trying to maintain a long-term commitment to people like meI feel that NAM is trying to maintain a long-term commitment to people like me. |  |  | 11 |  | 1,1,11,1,1 |  |
| I can see that the government wants to maintain a relationship with people like me.I can see that NAM wants to maintain a relationship with people like me. |  | 11 |  |  | 1,1,11,1,1 |  |
| There is a long-lasting bond between the government and people like me There is a long-lasting bond between this NAM and people like me |  |  |  | 11 | 1,1,11,1,1 |  |
| Compared to other organizations, I value my relationship with the government more.Compared to other organizations, I value my relationship with THE NAM more. |  | 11 |  | 1,1,11,1,1 |  |  |
| I would rather work together with government than not.I would rather work together with NAM than not. |  | 1,1,1,11,1,1,1 |  |  |  |  |

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| --- | --- | --- | --- | --- | --- | --- |
| Exchange relationships  | Strongly agree | Agree | Not sure  | Disagree | Strongly disagree | Not Applicable  |
| Whenever the government gives or offers something to people like me, it generally expects something in return.Whenever the NAM gives or offers something to people like me, it generally expects something in return. | 1,1,1,11,1,1,1 |  |  |  |  |  |
| Even though people like me have had a relationship with the government for a long time, it still expects something in return whenever it offers us a favor Even though people like me have had a relationship with NAM for a long time, it still expects something in return whenever it offers us a favor | 1,1,1,11,1,1,1 |  |  |  |  |  |
| The government will compromise with people like me when it knows that it will gain something.NAM will compromise with people like me when it knows that it will gain something. |  | 1,1,11,1,1 | 11 |  |  |  |
| The government takes care of people who are likely to reward the organization.NAM takes care of people who are likely to reward the organization. | 1,1,11,1,1 | 11 |  |  |  |  |

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| --- | --- | --- | --- | --- | --- | --- |
| Communal relationships  | Strongly agree | Agree | Not sure  | Disagree | Strongly disagree | Not Applicable  |
| The government does not especially enjoy giving others aid. *(Reversed)* NAM does not especially enjoy giving others aid. *(Reversed)* | 1,1,11,1,1 |  |  | 11 |  |  |
| The government is very concerned about the welfare of people like meNAM is very concerned about the welfare of people like me |  |  |  | 11 | 1,1,11,1,1 |  |
| I feel that the government takes advantage of people who are vulnerable.*(Reversed)*I feel that NAM takes advantage of people who are vulnerable. *(Reversed)* | 1,1,1,11,1,1,1 |  |  |  |  |  |
| I think that the government succeeds by stepping on other people.(for example *by treating them with little concern)*I think that NAM succeeds by stepping on other people.*(for example by treating them with little concern)* |  |  | 1,1,1,11,1,1,1 |  |  |  |
| The government helps people like me without expecting anything in return.NAM helps people like me without expecting anything in return | 1,1,11,1,1 |  |  | 11 |  |  |
| BM1: Even though the government has the ability to do what it says it will do, there are other forces that could stop them from halting gas extraction activities. I do not necessarily enjoy dealing with the government and NAM through communicating about the concerns of the affected inhabitants but it is something that we have to do; we have to communicate with the NAM and the government so as to try and find solutions to these problems. I feel that the government and NAM would like to develop a relationship with us but the efforts put towards building these relationships is not convincing. For example, the dialogue table is not proving to be beneficial to the inhabitants. The question here is whether the government and NAM want to maintain a relationship with us. There is a relationship already because we have to communicate with each other about the consequences and ways to try and solve the problem. Generally, the government is willing to listen to us when we are not critical on the situation. With this I mean that I feel as though the government is willing to listen to us if we approach the situation with leniency and not being critical about the consequences and what we would like to be done to combat the problems. In this case, the government and NAM expect something in return from us if they are to offer any aid or assistance to us. I am not sure if the government could compromise our safety to benefit themselves but then again, money comes above all and therefore I am not sure whether they would compromise our safety for financial benefits. The government only enjoys helping itself and does not take into consideration the welfare of other people. BM2: The government and NAM should lower gas production by at least 40% and see how the ground adjusts to that and then more reduction to gas extraction can take place. I am very much involved in this problem that it is hard for me to determine where my personal problem stops and where the job comes in. There are safety measures out there by private companies to try and make the houses stronger and safer but now the NAM is trying to slow the process. They are delaying the process which could be useful for saving some of the houses and in time we can see if these safety programs work or not. To try and solve the psychological concerns, the government and NAM should be honest in the way they communicate with the people. Honesty could increase the level of trust that the people have in the government and NAM. The members of the GBB do not use social media as often as they should. Twitter is very useful because it provides short messages, it is easy to share and also it has a limit of characters that can be used therefore it is good to be used for informing people. The NAM only responds to tweets between 9-5 and not at night only in the case of an emergency and you almost cannot have a normal conversation with NAM on twitter. The government and NAM use social media just to inform and not to engage the publics. It would be good for the government to use social media to inform the general public about the facts of the consequences of gas extraction in the Groningen gas fields. For the opinion of the whole population of the general public, the government should use social media to inform the general public on the facts about the region. The government only use social media for propaganda and the information that is offered is not honest for example the figures that were reported to be issued as compensation. The average age of the inhabitants here is above 50 and they are less willing to use social media. If the average age of the people here was younger then maybe there would be more information on social media bout the effects of the earthquakes. I moderate what the people post on the facebook group of the GBB. If the government was to come up with a social media site that was to facilitate the giving of information, issuing concerns/complaints or asking questions and also a section that allows the peole to gain feedback, the fact that the media site is government owned would not be trusted by the people. The people really do not trust the government. BM3: I feel very affected by the earthquakes because my house is badly damaged. The property of my house has gone down greatly. The government and NAM should explore safety programs that can be used to make some of the houses safer. These programs are being delayed by the NAM and they do not want to pay for these safety issues because most of the houses cannot be saved. To address psychological concerns, the government should guarantee the affected inhabitants of the compensation of financial losses and this will create a sense of mental rest and thus perhaps reduce the level of psychological concerns. Social media sites are very useful to stay up to date, especially Twitter. My interest is in the documents behind the information shared online. Mostly I go to social media in search of information and sometimes I react. The NAM recently opened a twitter account and in no time, there were over 1000 followers and this shows that people are interested in what they have to say. NAM and the government use social media only to inform the public and not to engage the people. The government makes sure to issue information in relevant documents on their websites but they do not use channels to direct people on where to find the information. The information from the government is there but then there are not proper channels to locate these documents. BM4: I am very much affected by the earthquakes psychologically because at my age, I am thinking of leaving to anther house and now I am imprisoned in my own house I cannot go. The value of the house has gone very low and I am very much affected psychologically because now my life is on a halt. People are suffering and they cannot talk to their neighbors. I am angered by the stupid behavior of the gas companies, the government and that of the inhabitants. We are imprisoned. We are stuck and we cannot make future plans. This is a frustrating feeling. The financial risk is one of the main reasons that is making this region less attractive to new investors and also for us to be able to sell our houses to move to other house as we have already reached the pension age. The NAM have a tendency to offer ‘glossy’ information which is not relevant and this increases the distrust from the inhabitants.  |

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# Macnamara’s Pyramid model



Retrieved from: Digitalk (2010). *Pyramid Model of PR Research.* Retrieved May 26th, 2014, from <http://padmanegara.com/2010/11/03/pyramid-model-of-pr-research/>)

# Questionnaire tables and figures

1. The extent to which the NAM and the government have provided information, given feedback or made it possible for the citizens to ask questions/make complaints. [↑](#footnote-ref-1)
2. Groningen Bodem Beweging [↑](#footnote-ref-2)
3. Schokkend Groningen and Groningers in Opstaand **Invalid source specified.** [↑](#footnote-ref-3)
4. With a magnitude of 3.5 on the Richter scale. [↑](#footnote-ref-4)
5. The core aim of the program is to expand the scope of territorial cooperation and focus on high quality projects in innovation, the environment, accessibility, and sustainable and competitive communities among these, the Netherlands. (About the Programme 2007-2013, 2013).   [↑](#footnote-ref-5)
6. 5 municipalities; Norway, Sweden, Denmark, Netherlands, Belgium; 2 Universities in NL & Be and 1 company; Porism UK. [↑](#footnote-ref-6)
7. The extent to which the NAM and the government have provided information, given feedback or made it possible for the citizens to ask questions/make complaints. [↑](#footnote-ref-7)
8. Identity, conversation, sharing, presence, relationships, reputation, and Groups (Kietzmann , Hermkens , & McCarthy, 2011) [↑](#footnote-ref-8)
9. How social media has facilitated their conversations with NAM and the government with regards to their concerns and whether these stakeholders have participated in or manipulated the conversation. The relationship aspect looks into whether the inhabitants are keen on building existing relationships or whether they want to expand their conversation on social media with the stakeholders to reach the public. [↑](#footnote-ref-9)
10. Indicates the opinion of the inhabitants as to whether they believe that the organizations are fair and just [integrity], if the organizations will do what they say they will do [dependability] and also if they believe that the organization is able to do what it says it will do [competence]. [↑](#footnote-ref-10)
11. The extent to which the NAM and the government have provided information, given feedback or made it possible for the citizens to ask questions/make complaints. [↑](#footnote-ref-11)
12. See page xxx [↑](#footnote-ref-12)
13. See page xx [↑](#footnote-ref-13)
14. Insrt texxxxxxxxxxxxxxxxxxxxxxxt [↑](#footnote-ref-14)