INFORMATION SYSTEMS AND STAKEHOLDER ENGAGEMENT – FIRST RESULTS FROM CONTENT ANALYSIS

Barbara Krumay
WU Wien Vienna University of Business and Economics, barbara.krumay@wu.ac.at

Roman Brandtweiner
WU Wien Vienna University of Business and Economics, roman.brandtweiner@wu.ac.at

Follow this and additional works at: http://aisel.aisnet.org/mcis2014

Recommended Citation
http://aisel.aisnet.org/mcis2014/16

This material is brought to you by the Mediterranean Conference on Information Systems (MCIS) at AIS Electronic Library (AISeL). It has been accepted for inclusion in MCIS 2014 Proceedings by an authorized administrator of AIS Electronic Library (AISeL). For more information, please contact elibrary@aisnet.org.
INFORMATION SYSTEMS AND STAKEHOLDER ENGAGEMENT – FIRST RESULTS FROM CONTENT ANALYSIS

Research in Progress

Krumay, Barbara, WU Vienna University of Economics and Business, Austria, barbara.krumay@wu.ac.at
Brandtweiner, Roman, WU Vienna University of Economics and Business, Austria, roman.brandtweiner@wu.ac.at

Abstract

True and long-lasting stakeholder relationships have been identified as precondition for long-term success of companies. Thus, companies put a lot of effort into communication with stakeholders and stakeholder engagement. Consequently, the possibilities to communicate with stakeholders to involve them in environmental, social and economic projects of companies has been widely discussed. However, the various stakeholders (internal and external, primary and secondary) influence companies in different ways. Information systems support the stakeholder engagement and allow specific communication in accordance with various stakeholders needs’, but to date a clear picture on their application is missing. Our work investigates this gap and serves as a starting point for better understanding on how information systems support stakeholder engagement. We select CSR reports from a reporting database and analyse them in terms of information systems involved in the stakeholder engagement process. Based on this we will develop a “landscape” of information systems support for stakeholder engagement. First results presented in this work-in-progress paper are based on a limited number of reports suggest that information systems mainly support communication with external stakeholders, whereas direct face-to-face communication predominates internal stakeholder engagement. Overall, information technology (such as the Internet) prevails compared to application of specific information systems.

Keywords: Stakeholder engagement, Information Systems, Stakeholder Theory, CSR, Corporate Social Responsibility, Social Reporting.
1 Introduction

Internal and external, primary and secondary stakeholders influence companies in different ways. Relationships with various stakeholders are heavily challenging companies. Nevertheless, success of companies and stakeholder engagement have been proven to be interdependent (Perrini and Tencati, 2006). Hence, communication with stakeholders for their involvement in companies’ seems to be necessary (Beierle and Konisky, 2001). The role of information systems in this process is obvious, but a clear picture is missing. Our research-in-progress paper investigates this gap and serves as a starting point to provide better understanding on how information systems (IS) support stakeholder engagement. To identify how IS support stakeholder engagement we selected CSR reports and analysed them in terms of how they support this process. The goal of the research is to draw a “landscape of IS support” for stakeholder engagement, presenting which and how IS are applied to fulfil the task of stakeholder engagement. We expect this landscape to be very diverse in nature. This paper presents the research design, research question and first results. The paper is structured as follows: Firstly, we present an overview on stakeholder engagement and stakeholder communication. Secondly, the theoretical background and our methodological approach are described. Thirdly, we present first findings extracted from small and medium enterprises (SMEs) in Europe. Finally, we discuss the results and present limitations, open issues and future directions.

2 Stakeholder Engagement

Companies are not working just for profit, but are part of society and have to be aware about their responsibilities for the wealth of people. Different cases have shown that the power of stakeholders is huge and involving them in an early stage of a project may be beneficiary for companies and stakeholders (Beierle and Konisky, 2001; Ulmer, 2001). The idea of involving people who are influenced by activities or projects is not new. Authorities – e.g. governments –involved citizens in terms of citizen participation to avoid controversies, especially in the context of environmental projects (Connor, 1988). However, even companies always addressed specific stakeholders and their needs: customers, employees, partners, shareholders and so on (Freeman et al., 2010). In the last century with the advent of environmentalism, stakeholder engagement for companies became more important (Freeman et al., 2010; Konar and Cohen, 2001). Since then, stakeholders have been perceived as being directly or indirectly influential on decision making in companies (Freeman et al., 2010). The formal relationship with internal stakeholders – namely employees on all levels – seems to be logical. However, by expanding the concept beyond the boundaries of the company to external stakeholder, the situation becomes more blurry. This has been reflected by the vivid discussion on “who” or “what” stakeholders are. One definition of stakeholders, which has been widely used, states that “A stakeholder in an organization is (by definition) any group or individual who can affect or is affected by the achievement of the organization’s objectives” (Freeman, 2010, p. 46). It has been stated that this definition even expands the boundaries further by including the environment, which is represented by people having a stake in the protection of the environment (Starik, 1995). Relationships with different stakeholder groups exist on different levels: primary stakeholders are closely tied (such as employees, customers, partners), whereas secondary stakeholders are loosely connected to the company (such as government, media, special interest groups) (Freeman, 2010; Freeman et al., 2010). To engage the “right” stakeholders it is important to identify what legitimates a stakeholder (Freeman et al., 2010). On one hand, legitimacy has been attributed to having a claim in the firm (Phillips, 2003). On the other hand companies’ value chain and groups connected to it has been seen as basis for legitimacy (Dunham, Freeman, and Liedtka, 2006). Another legitimacy can be found in from corporate social responsibility (CSR) approaches. CSR has become an important topic in research and practice in the last 20 years (e.g. Carroll, 1999; Cochran, 2007; Frederick, 1978) and emphasizes to involve stakeholders. Different terms (such as Corporate Social Performance, Business Ethics, Corporate Citizenships) (Van Marrewijk, 2003) exist to describe more or less the same idea: companies have responsibilities beyond legal and economic obligations.
(Carroll, 1991; McWilliams and Siegel, 2001). Since the EU in 2011 defined CSR as “the responsibility of enterprises for their impacts on society” (European Commission, 2011, p. 6), it became obvious that companies are part of the society, having responsibilities for stakeholders affected.

A discussion if stakeholder dialogue (Isenmann, Gómez, and Supke, 2011; Pedersen, 2006), stakeholder involvement (Morsing and Schultz, 2006) or stakeholder engagement (Unerman, 2007) are the same is still going on. Stakeholder dialogue has been defined as “the involvement of stakeholders in the decision-making processes that concern social and environmental issues” (Pedersen, 2006, p. 140) and may be “either participatory and inclusive or hierarchical and exclusive” (Pedersen, 2006, p. 141). The term stakeholder involvement is closely connected to CSR communication management in defining three different communication strategies: stakeholder information strategy (public information, one-way), stakeholder response strategy (two-way asymmetric communication) and stakeholder involvement strategy (two-way symmetric communication) (Morsing and Schultz, 2006). The most widely used term is stakeholder engagement which has been defined as “a range of practices where organisations take a structured approach to consulting with potential stakeholders” (Thomson and Bebbington, 2005, p. 517). Other see stakeholder engagement as “corporate responsibility in action” (Greenwood, 2007) and hence relate it again to corporate social responsibility. Although the underlying thoughts of the three terms – dialogue, involvement and engagement - are slightly different, all three share the same basic idea: true stakeholder engagement requires bi-directional, pro-active and planned interactivity. Nevertheless, some studies questioned the significance of stakeholder engagement in connection with the “business case” (Owen, Swift, and Hunt, 2001). Due to the influence of stakeholders on companies’ decision making, the management of stakeholders is a challenge for companies requiring structured and well-defined management processes (Perrini and Tencati, 2006). This includes identification of stakeholders and their stake, opportunities and challenges, ways to communicate and involve them as well as identification of responsibilities of the company towards the stakeholders (Carroll and Buchholtz, 2014). Discussion is going on if stakeholder management or stakeholder accountability are appropriate to meet the needs of stakeholders and companies (Cooper and Owen, 2007; Rasche and Esser, 2006; Unerman, 2007).

In addition, different levels of stakeholder engagement have been identified starting with lower level (informing and explaining), middle level (gestures of participation) and higher level (“active or responsive attempts to involve stakeholders in company decision making”) (Carroll and Buchholtz, 2014). On these levels specific relationships (internal or external) and varying degree of nearness (primary or secondary) are influencing the way of required action (Clarkson, 1995). On the low level, one-way channels are used more often, whereas middle and higher level adopt bi-directional ways of communication (Carroll and Buchholtz, 2014). The formal relationship of internal stakeholders allows personal, face-to-face communication including “open door” policies, suggestion processes and incentives, or establishment of an ombudsman (Clarkson, 1995). Communication with external, primary stakeholders includes social or ethical reporting, consultations or typical instruments applied in focus group situations (Isenmann, Gómez, and Supke, 2011; Owen, Swift, and Hunt, 2001; Thomson and Bebbington, 2005). However, direct, pro-active, bidirectional communication has been evidenced to be key to successful stakeholder involvement (Carroll and Buchholtz, 2014).

Identifying the stakeholders’ needs is a big challenge for stakeholder management. This includes identification of which information they require, how they prefer to communicate and how they are able to influence the decisions (Parent and Deephouse, 2007; Ulmer, 2001). Since companies nowadays use information systems to support processes and achieve their strategic goals, information systems (IS) also play and important role in the processes of stakeholder management (Unerman and Bennett, 2004). IS are applied to store, analyse and generate information for stakeholders, provide and disclose it and directly communicate with them. Based on this, interactive, group-specific and targeted communication with stakeholders, based on existing data has become possible. Different channels and media are involved in the communication. Especially instruments such as “internet bulletin boards, questionnaire surveys mailed to stakeholders, phone surveys, and community based and/or open meeting” are
appropriate for bi-directional communication (Thomson and Bebbington, 2005, p. 517). Although these interactive instruments are highly recommended, a focus on IS support via “traditional” social, ethical or CSR reporting based on accounting systems (Cooper and Owen, 2007; Thomson and Bebbington, 2005) can be observed. Reports are one-way communication or just information (Crane and Livesey, 2003) often realized by disclosure via the Internet, either on the corporate website or by submitting reports to online platforms (Owen, Swift, and Hunt, 2001; Unerman, 2007). One popular platform for disclosing responsible activities is GRI (Global Reporting Initiative), which offers guidelines, indices and a reporting database, holding in March 2014 more than 16 000 reports (about 14 000 of them based on GRI guidelines) from almost 6 000 organizations all over the world including all industries and of different company size (Initiative, 2011).

For our work, we use the term stakeholder engagement, defining it as structured communication with all potential stakeholders to consider their needs with the goal to fulfil responsibilities towards them and society. We argue that IS are powerful instruments to increase quality, transparency and reliability of stakeholder engagement. Based on the in-depth literature review we developed our research questions by asking: how are IS applied in companies to support stakeholder engagement? Which way of communication is predominant (one-way, bi-directional)? Which Information Systems are mainly supporting stakeholder engagement? Thus, we are able to provide insights and recommendations for IS support of stakeholder engagement.

3 Theoretical Background and Methodological Approach

Stakeholder theory evolved over a long period of time and mainly answers changing conditions in the world of doing business (Freeman et al., 2010). It addresses the question how management could handle stakeholder requests and needs. Stakeholder theory in its early stage is connected to strategic management and defines processes for stakeholder management (Freeman, 2010). Since stakeholder theory and citizen participation are closely related, researchers from the e-government field also by address the issue (Flak and Rose, 2005; Rowley, 2011; Scholl, 2001). Two main research branches can be identified: stakeholder identification (Bryson, 2004; Mitchell, Agle, and Wood, 1997; Parent and Deephouse, 2007) and stakeholder management (Freeman, 2010; Perrini and Tencati, 2006). Identification of stakeholders is of particular importance due to resource allocation needs (Jawahar and McLaughlin, 2001) and specific ways of communication required per stakeholder group. Legitimacy has been identified as the main way to stakeholder identification (Mitchell, Agle, and Wood, 1997). When stakeholders have been identified, their management in a proactive way has to be established (Wartick and Cochran, 1985).

We applied content analysis to identify which IS are used to support stakeholder dialog. Content analysis is used to analyse different material based on and devoted to communication (video, newspapers, news, written text) (Mayring, 2000). Characteristics of the method are a-priori design, reliability and validity (Neuendorf, 2002). Authors agree upon several steps required for decent application of the method, including identifying content based on theory, conceptualizing and operationalizing variables, developing coding schemes iteratively based on reliability tests, decent sampling, and finally coding followed by testing final reliability and description of the data (Neuendorf, 2002). We followed this approach and hence conceptualized and operationalized variables connected to the theories. In addition, we further developed the codes while coding, applying a grounded theory approach. In the appendix we present an excerpt of the coding scheme, presenting the two highest levels of the scheme (Appendix A.).

4 Sample Decisions and First Results

Our project is based on reports published via the GRI platform due to its popularity. Another reason for the sample is that the GRI reporting principles and standard disclosure in the current version (G4) oblige companies to report their stakeholder engagement, including
• G4-24: “Provide a list of stakeholder groups engaged by the organization” (GRI Global Reporting Initiative, 2013, p. 29)

• G4-25: “Report the basis for identification and selection of stakeholders with whom to engage” (GRI Global Reporting Initiative, 2013, p. 30)

• G4-26: “Report the organization’s approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process.” (GRI Global Reporting Initiative, 2013, p. 30)

• G4-27: “Report key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting. Report the stakeholder groups that raised each of the key topics and concerns.” (GRI Global Reporting Initiative, 2013, p. 30)

The general standard disclosures are obligatory; hence every report should disclose activities in this area. The guidelines clearly ask for not to limit it “to engagement that was conducted for the purposes of preparing the report” (GRI Global Reporting Initiative, 2013, p. 29). Although GRI reports would offer the possibility to limit the content analysis to the specifically mentioned parts devoted to stakeholder engagement, we analysed the complete report to be able to see the whole picture. Concerning reliability of the measurement instrument we will calculate intercoder and intracoder reliability. Intercoder reliability measures the agreement of coders, compared in pairs, where coders are coding the same object (in this case: report) and the variation is calculated. Intracoder reliability measures the variation shown by one coder over time: The coder codes the same object twice, variations are calculated. We will calculate the reliability based on the Holst method (Holsti, 1969), which has found wide acceptance in research (Neuendorf, 2002).

The focus of our research at this stage is on private Small- and Medium Enterprises (SMEs) in Europe. We selected SMEs as the starting point based on the idea that SMEs share some characteristics concerning their communication approaches across all industries and countries (Castka et al., 2004; Smallbone, Leig, and North, 1995). In addition, the application of IS in SMEs is diverse and we expect to find a huge variety of different IS (Pollard and Hayne, 1998; Southern and Tilley, 2000). We created a downloadable database excerpt provided on the GRI website as the basis for the analysis (GRI Global Reporting Initiative, 2014). From this excerpt we selected reports submitted in 2013 based on the current (G4) or former (G3 resp. G3.1) version of GRI reporting guidelines since reporting activities on stakeholder engagement in these versions is obligatory. This results in 152 reports in different languages. In terms of organization type, about 104 are private companies, which are in the focus of our research. Out of these private companies only 77 submitted reports in the selected versions, a minority of four companies apply GRI guidelines version G4, the rest uses G3 (45) or G3.1 (28). Concerning sectors, the sample is diverse, but Food and Beverages (eight companies), Financial Services and Commercial services (seven companies each), Waste Management (six companies) and Tourism/Leisure (five companies) are slightly dominant in the sample; fifteen companies are categorized as being part of “other” sector. At this very early stage of the research project we focus on reports provided in English and languages the coders speak fluently to avoid translation errors. Currently we have investigated five of the reports (three in English, two in other languages), stemming from the Financial Services (2), Food and Beverages, Waste Management and Tourism/Leisure industry. However, we plan to analyse the whole sample by the end of 2014.

All five reports address stakeholders and stakeholder engagement, but on different levels. Three of the reports clearly address the importance of stakeholders and identify a single point of contact or name the responsible employee in the company. One report does not differentiate between internal and external stakeholders, whereas the others clearly differentiate their approach. Only one of the reports directly addresses secondary stakeholders (governments) whereas three others address “all stakeholders”.

Eighth Mediterranean Conference on Information Systems, Verona 2014
Concerning the role of information systems, none of the reports directly states the involvement of a specific information systems, but implicitly IS such as ERP systems, Mail, Blogs, Internet, Website, Email are mentioned. In two cases a clear distinction between communication with internal and external stakeholders can be identified. Internal stakeholders are addressed mainly directly, face-to-face without identifying information systems as being involved. Table 1 is an excerpt showing the result of these two cases in terms of engagement with internal and external stakeholders.

<table>
<thead>
<tr>
<th>Code</th>
<th>Internal</th>
<th>External</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 3</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3.1 StakeholderDialog121</td>
<td>Direct communication between employer and employee*</td>
<td>Individual talks with investors</td>
</tr>
</tbody>
</table>
| 3.2 StakeholderDialog12many | Inhouse Magazine*  
Suggestion box                 | Disclosing CSR reports  
Further development of the CSR presentation on the Webpage*  
Suggestion form |
| 3.3 StakeholderDialogmany2many | Workshops                                                             | Industrial participation council                                         |
| Level 4               |                                                                          |                                                                          |
| 4.1 DirectionC2S      | Inhouse Magazine*                                                      | Disclosing CSR reports  
Further development of the CSR presentation on the Webpage*            |
| 4.2 DirectionS2C      | Suggestion box                                                          | Suggestion form                                                          |
| 4.3 DirectionBidirectional | Direct communication between employer and employee*  
Workshops                             | Individual talks with investors  
Industrial participation council                                           |
| Level 5               |                                                                          |                                                                          |
| 5.1 StakeholderDialogPrinted | Inhouse Magazine*                                                  | Disclosing CSR reports                                                  |
| 5.2 StakeholderDialogOnline |                                                                              | Disclosing CSR reports  
Further development of the CSR presentation on the Webpage*            |
| 5.3 StakeholderDialogDirect | Direct communication between employer and employee*  
Workshops                             | Individual talks with investors  
Industrial participation council                                           |
| 5.4 StakeholderDialogSemi-Direct |                                                                              | Suggestion form                                                          |
| Level 6               |                                                                          |                                                                          |
| 6.1 Information System directly mentioned |                                                                              | Further development of the CSR presentation on the Webpage*            |
| 6.2 Information System implicitly mentioned |                                                                              | Disclosing CSR reports  
Suggestion form                                                          |
| 6.3 Information System not used | Direct communication between employer and employee*  
Inhouse Magazine*  
Workshops  
Suggestion box                             | Individual talks with investors  
Industrial participation council                                           |

**Table 1. Differences between internal and external stakeholders in two cases (excerpt)**

Since we are at a very early stage of the research, we cannot calculate reliability of the instrument appropriately, but will apply this quality measure in a later, more developed stage of our research project.

1 Expression marked with * are translated from other languages
5 Discussion

This paper aims at providing a starting point for better understanding how IS support stakeholder engagement. At this early stage of our project we found that IS support on different levels of stakeholder engagement (low, middle, high) seems to be different, but differences in communication with primary and secondary stakeholders have not been found. Firstly, the few reports analysed so far show a tendency concerning IS support when comparing communication with internal and external stakeholders:

- Communication with internal stakeholders is mainly direct (face-to-face), informal and printed, hence does not require lot of IS support interactivity
- Communication with external stakeholders is direct and indirect on different media and relies on IS for supporting the process
- One way (company to stakeholder) as well as bi-directional communication and back-channels (stakeholder to company) are established
- A clear differentiation between primary and secondary stakeholders has not been found, the main difference so far can be assumed between internal and external stakeholders
- Group-specific communication has been addressed in connection with investors and employees

Secondly, the tendency to differentiate between internal and external stakeholders may have some effects. We argue that more in-depths studies investigating internal communication possibilities for reporting responsible activities are necessary. Moreover, direct contact with employees is the preferred communication method in SMEs and formalized communication channels are not required in practice. Furthermore, we gained the impression that information technology as such (such as the Internet) is supporting stakeholder engagement, but the notion of specific information systems (for example ERP systems) are rarely found in SMEs. We interpret that this is a consequence of low awareness of companies concerning the power of IS to support stakeholder engagement. In addition, IS are not experienced as being beneficial or – even more important – companies do not rely on IS for stakeholder management. All three possibilities are worth investigation and may have effects on companies, leading to better understanding why the power of IS has not found attention in companies so far. For companies it would be necessary to develop better understanding on how IS are helpful to support quality, transparency and reliability of stakeholder management without exploding costs.

Thirdly, the non-differentiation between primary and secondary stakeholders may lead to new definitions in the field of stakeholder theory and may support further research in these areas. However, we again want to point out that due to the early stage it is not possible to discuss true implications for research and practice.

6 Conclusions, Limitations and Future Directions

As presented, stakeholder engagement is applied to void controversies and can be seen as one of the key factors for the success of companies when planning projects influencing stakeholders. Long-term relationships with important stakeholders may influence the success of companies. Hence, communication and involvement are important and information technology as well as information systems are helpful tools to support these efforts. Our research-in-progress paper investigates this gap and can be seen as a starting point for better understanding how stakeholder engagement is supported by information systems. Due to the early stage and the small sample investigated, the results may only serve as basis for roughly developed trends. Furthermore, the results may be influenced by the sample itself, because direct communication with internal stakeholders is more likely to happen in SMEs. Next steps include analysis of the whole sample, develop insights from the analysis to be able to draw the “landscape of IS support” for stakeholder engagement.
7 Appendix A

Coding sheet (Excerpt)

<table>
<thead>
<tr>
<th>Level and Code</th>
<th>Content</th>
</tr>
</thead>
<tbody>
<tr>
<td>Level 0</td>
<td>How is stakeholder dialog / involvement / engagement mentioned in the report?</td>
</tr>
<tr>
<td>0.1 StakeholderDialog</td>
<td>Is there a stakeholder dialog / involvement / engagement mentioned in the report?</td>
</tr>
<tr>
<td>0.2 StakeholderPointOfContact</td>
<td>Who is responsible for the stakeholders</td>
</tr>
<tr>
<td>0.3 StakeholderDialogImportance</td>
<td>How is the importance of the stakeholder dialog / involvement / engagement described in the report?</td>
</tr>
<tr>
<td>0.4 StakeholderDialogPureDisclosure</td>
<td>Disclosing information via reports (not GRI),</td>
</tr>
<tr>
<td>0.5 StakeholderContentResponsibility</td>
<td>Which responsibilities have been identified for the Dialog with the stakeholders</td>
</tr>
<tr>
<td>0.6 StakeholderGroup</td>
<td>Which group of stakeholders has been identified</td>
</tr>
<tr>
<td>Level 1</td>
<td>Relationship with stakeholders</td>
</tr>
<tr>
<td>1.1 StakeholderDialogInternal</td>
<td>Is the dialog / engagement / involvement targeting towards internal or external stakeholders</td>
</tr>
<tr>
<td>1.2 StakeholderDialogExternal</td>
<td>Dialog / Involvement / Engagement with primary (Communities, customers, employees, suppliers, financiers) or secondary stakeholders (competitors, consumer advocate groups, special interest groups, media, government)</td>
</tr>
<tr>
<td>Level 2</td>
<td>Stakeholder nearness</td>
</tr>
<tr>
<td>2.1 StakeholderPrimary</td>
<td>Is the dialog one-to-one or one-to-many or many-to-many</td>
</tr>
<tr>
<td>2.2 StakeholderSecondary</td>
<td>Direction of possible communication</td>
</tr>
<tr>
<td>Level 3</td>
<td>Number of stakeholders involved</td>
</tr>
<tr>
<td>3.1 StakeholderDialog121</td>
<td>Is the dialog from the stakeholder to the company (S2C), from the company to the stakeholder (C2S) or in both directions</td>
</tr>
<tr>
<td>3.2 StakeholderDialog12many</td>
<td>Which channel is used for the dialog / involvement / engagement</td>
</tr>
<tr>
<td>3.3 StakeholderDialogmany2many</td>
<td>Information systems are seen as being part of the stakeholder dialog / involvement / engagement, either mentioned directly (such as ERP-system) or implicitly (for example via Internet) or usage is excluded (e.g. direct communication in terms of speeches, conferences …)</td>
</tr>
<tr>
<td>Level 4</td>
<td>Information System directly mentioned</td>
</tr>
<tr>
<td>4.1 DirectionC2S</td>
<td>Information systems are seen as being part of the stakeholder dialog / involvement / engagement, either mentioned directly (such as ERP-system) or implicitly (for example via Internet) or usage is excluded (e.g. direct communication in terms of speeches, conferences …)</td>
</tr>
<tr>
<td>4.2 DirectionS2C</td>
<td>Information systems are seen as being part of the stakeholder dialog / involvement / engagement, either mentioned directly (such as ERP-system) or implicitly (for example via Internet) or usage is excluded (e.g. direct communication in terms of speeches, conferences …)</td>
</tr>
<tr>
<td>4.3 DirectionBidirectional</td>
<td>Role of IS for stakeholder engagement</td>
</tr>
<tr>
<td>Level 5</td>
<td>Importance of IS for communication is directly mentioned</td>
</tr>
<tr>
<td>5.1 StakeholderDialogPrinted/</td>
<td>The importance information systems for the stakeholder dialog / involvement / engagement is addressed directly (e.g. could not have been done without …), implicitly (e.g. develop from the database) or ignored.</td>
</tr>
<tr>
<td>5.2 StakeholderDialogOnline</td>
<td>The importance information systems for the stakeholder dialog / involvement / engagement is addressed directly (e.g. could not have been done without …), implicitly (e.g. develop from the database) or ignored.</td>
</tr>
<tr>
<td>5.3 StakeholderDialogDirect</td>
<td>The importance information systems for the stakeholder dialog / involvement / engagement is addressed directly (e.g. could not have been done without …), implicitly (e.g. develop from the database) or ignored.</td>
</tr>
<tr>
<td>5.4 StakeholderDialogSemi-Direct</td>
<td>The importance information systems for the stakeholder dialog / involvement / engagement is addressed directly (e.g. could not have been done without …), implicitly (e.g. develop from the database) or ignored.</td>
</tr>
<tr>
<td>Level 6</td>
<td>Role of IS for stakeholder engagement</td>
</tr>
<tr>
<td>6.1 Information System directly mentioned</td>
<td>The importance information systems for the stakeholder dialog / involvement / engagement is addressed directly (e.g. could not have been done without …), implicitly (e.g. develop from the database) or ignored.</td>
</tr>
<tr>
<td>6.2 Information System implicitly mentioned</td>
<td>The importance information systems for the stakeholder dialog / involvement / engagement is addressed directly (e.g. could not have been done without …), implicitly (e.g. develop from the database) or ignored.</td>
</tr>
<tr>
<td>6.3 Information System not used</td>
<td>The importance information systems for the stakeholder dialog / involvement / engagement is addressed directly (e.g. could not have been done without …), implicitly (e.g. develop from the database) or ignored.</td>
</tr>
</tbody>
</table>

Table 2. Codes developed from literature, level 1 and 2 (excerpt).
References


