

# **Social media for government crowdsourcing: An exploratory study of challenges and opportunities**

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## **Abstract**

One of the promising aspects of social media in government is the opportunity to crowdsource contributions to public policy problems. Although it is now more evident that governments are embracing social media as part of their information dissemination and engagement plans, there is less knowledge about the use of social media as information sources. This paper presents the findings of an ongoing study with a large government department in the UK that aims to examine the value of social media in this context. Drawing from a series of interviews, the study identifies two main directions: (1) developing tools and internal workflows that can convert input from social media to useful content and (2) challenges around understanding how groups of interest amongst the public are using social media. The paper develops a plan for future research.

## **1. Introduction: social media for government crowdsourcing**

Crowdsourcing is a broad term that describes activities where a large number of contributions from individuals are used to co-create value (Estelles-Arolas & Gonzalez-Ladron-de-Guevara 2012). Crowdsourcing usually entails a problem-solving component, but there are many different ways in which it can be valuable for decision support in organisations (Chiu et al. 2014). The principles of crowdsourcing have also been widely explored in public management as part of new models of citizen-government relationships (e.g. Linders 2012; Nam 2012). Activities under government crowdsourcing usually invite a large number of contributions in the form of open innovation platforms like challenge.gov in the USA (Mergel & Desouza 2013) or the UK government's Red Tape Challenge, which aggregates feedback on regulations (Lodge & Wegrich 2014).

In addition to inviting the public to make contributions on government websites, another crowdsourcing practice has emerged in the form of monitoring and aggregating content from social media channels. These less institutionalised forms have been described as passive or unmediated crowdsourcing (Charalabidis et al. 2012; Charalabidis et al. 2014) and are part of a general trend towards social media monitoring in government (Bekkers et al. 2013). Over the past few years, many public sector organisations have developed a social media presence with the aim to share information and engage with their respective publics on channels that include online networks (Facebook, LinkedIn), blogging/microblogging tools (WordPress, Twitter) and

content sharing platforms (YouTube, Flickr, Pinterest). Social media interactions in the public sector usually start with one-way information provision and might involve different levels of engagement (Mergel 2013). Current work has elaborated on the benefits of social media in government both at the strategic and operational level (e.g. Picazo-Vela et al. 2012; Criado et al. 2013), but our knowledge of the value of social media as information sources remains less developed.

So far, ad hoc forms of crowdsourcing have emerged from acting upon public input on social media mainly during specific events like emergency communications (Kavanaugh et al. 2012; Panagiotopoulos et al. 2014). A study in the Netherlands government by Bekkers et al. (2013) also suggests that organisations with established surveillance mechanisms like the police are more willing to consider social media as sources of information, in comparison to policy teams in other departments that prefer the monitoring of closed information spaces (e.g. forums). In the UK government, there is some evidence of crowdsourcing exercises taking place to proactively identify conversations of interest, for example, in incidents of food safety and hygiene (Panagiotopoulos et al. 2013).

This paper presents an ongoing study that aims to explore the value of social media for government crowdsourcing. The study looks at how different policy-making teams in the UK Department for Environment, Food & Rural Affairs (DEFRA) conceptualise the role of social media input in their activities. Preliminary findings from seven interviews suggest high interest around social media monitoring as many of DEFRA's traditional stakeholders have developed a digital networking presence. Interview participants identified opportunities to integrate more input from social media as long as this input is insightful and appropriately summarised. Main challenges to this direction evolve around understanding what the different sources of useful content are, which also includes important issues of representation and audience awareness. The paper concludes by discussing plans to further develop the findings.

## **2. Methodology**

To explore the value of social media for government crowdsourcing, the investigation was organised in the form of a case study (Yin 2014). The research was carried out as part of a wider project with DEFRA in which the researchers are involved. The selection of DEFRA as the case organisation for this study represents the typical but also the influential case (Seawright & Gerring 2008), since DEFRA's work draws heavily on engagement with the public and the use of public input in policy decisions.

The main source of data collection for the scope of this study involved seven semi-structured interviews conducted in January and February 2015. The interviews lasted for one hour on average and were taped and transcribed following ethical approval and permission from participants. Selected participants came from different levels of the civil service and policy areas mainly related to communications and regulations about the environment, farming and local growth. Participants were first asked about their role within the organisation. Then, discussions evolved around the following questions:

- Generally, what type of input from external stakeholders does your role require? What kind of information flows support this input (e.g. consultations)?
- What are the different groups within the public that you would like to reach?

- How could information from social media change the ways in which you understand the needs of external stakeholders and the public?
- How do you think input from social media could support the work of your policy team and DEFRA in general?

Further to the input from the interviews, the research team had access to a wide range of documentary evidence and opportunities to follow up with participants or their colleagues on topics of interest. Data analysis was carried out thematically based on the methodology described by Braun and Clarke (2006). This approach to data analysis is suitable for exploratory research as it allows the flexible identification of main themes from interview data. The next section provides an overview of the main themes.

### **3. Main study findings**

DEFRA is one of the largest government departments in the UK with remit in policy and regulation related to environmental protection, food production and standards, agriculture, fisheries and rural communities. DEFRA's objectives and priorities include amongst others the improvement of technical infrastructure in rural areas, increasing exports and competitiveness in the food chain, simplifying farming regulation and improving water quality (DEFRA 2015). The department employs over 10,000 staff working across 36 agencies and public bodies in England with devolved administrations in Wales, Scotland and Northern Ireland. There is also extensive cooperation with European Union authorities for environmental policies as well as the Common Agricultural Policy. The department has organised its presence on Facebook, LinkedIn, Google+, Storify and Flickr as well as 12 Twitter accounts, which support diverse policy areas and communication needs (e.g. advice lines for farmers); the main Twitter account @DefraGovUK has over 70K followers. Findings from the interviews are organised around the three main themes below.

#### *Forms of social media input*

One of the most important themes that emerged from the interviews are the forms in which input from social media analysis can be useful. The organisation had experience in looking at trends in the context of national campaigns, conversations or emergencies. Some of the department's agencies have also adopted specialised social media monitoring software that produces ad hoc or more detailed periodic reports with features like sentiment analysis, identification of key influencers and other metrics. In addition, interviewees had developed their own assessments of online sources; for example, there was consensus that comments on news article websites contained more polarised opinions and that blog posts or tweets tended to be more relevant.

Interviewees also widely agreed that for social media input to be used as evidence in policy, it had to be relevant, appropriately summarised and updated. An important example of this was #AgriChatUK, a national Twitter conversation that takes places weekly to discuss topics around farming. At least on two occasions, summaries from discussions were used as input to the appropriate policy teams even as an official response to a consultation.

### *Coordination and workflows around social media input*

A closely related theme to the added value of social media content is the establishment of internal workflows that can facilitate information sharing within and across policy teams. Workflows around updating social media accounts and engaging with the public were useful for ad hoc feedback (e.g. response to queries) but could not facilitate a more stable flow of input. Interviewees identified an interesting direction with the increasing use of internal information sharing networks like Yammer. Although internal networks were not replacing email communications in most parts, their value for establishing more frequent and flexible information flows was becoming evident.

### *Understanding the social media audience*

Interviewees raised a series of issues around networks and audience awareness. Although everyone had a good understanding of important stakeholders and traditional influencers, the social media audience was proving more challenging. Two main themes were identified in this context. First, there was interest to systematically explore how specific groups of professionals have a presence on social media and how conversations between them take place. The answer to this question could be more apparent for social networking groups (e.g. on LinkedIn) but less obvious on channels that support open information flows and conversations like Twitter. For example, the popular discussions on #AgriChatUK suggested that many farmers and agricultural businesses have a presence on Twitter; however, mapping those networks and absorbing useful content outside specific conversations was challenging.

Second, interview participants agreed that sampling and representation issues on social media needed considerations. Ad hoc feedback suggested that social media users include a large variety of domain experts as well as less users who are not experts but have a primary stake in policy topics. Monitoring social media content around keywords only captures the perspective of those users who decide to make such a contribution with a timeframe (a 'self-inclusion' perspective). Therefore, social media content could be seen more as complementary to consultations than 'hard' evidence that could determine decisions. Despite this limitation, interviewees remained generally positive that, compared to closed systems approaches to crowdsourcing, social media data incorporated more opportunities to source opinions from 'real' people.

## **4. Conclusion**

The paper briefly introduced the findings of an ongoing study about the role of social media for government crowdsourcing. Interview participants discussed how input from social media fits or is expected to fit their policy and regulatory activities. Two main directions have been identified: (1) developing tools and internal workflows that can integrate social media input in appropriate forms and (2) addressing challenges around audience awareness or understanding how groups of interest amongst the public are engaging with social media.

Plans for ongoing research include an additional number of interviews to elaborate and further develop the findings. There is further plan to organise a workshop with participants for the purpose of mapping the technical and organisational requirements of social media monitoring tools. Core features to be explored relate to methodologies for better understanding the

composition and representativeness of social media users (e.g. network visualisation), getting useful insight from engagement metrics and identifying ways in which content can be more directly valuable as input to policy consultations.

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