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Governments' Social Media Use for External Collaboration: Juggling Time, Task, Team, and Transition, with Technology

ABSTRACT

Purpose

As social media technologies permeate public life, the current forms of collaboration between government and non-government stakeholders are changing. The purpose of this paper is to investigate how social media use reconfigures the organizing practices around such collaboration. A case study of a collaborative e-government project showcases how emergent organizing practices through external social media differ from existing ones along the dimensions of time, task, team, and transition.

Design/methodology/approach

This paper presents a case study of a collaborative e-government project on open data, organized by Shanghai Municipality, local businesses, universities, and NGOs, using an external social media platform, WeChat. Adopting the theoretical lens of temporary organization, the paper identifies the key aspects of change emerged in the organizing practices of this collaboration.

Findings

The findings outline how the use of external social media reconfigures the collaboration between government and non-government stakeholders along the four dimensions of time, task, team, and transition. The new form of collaboration is reconfigured along the lines of: (1) an ad-hoc and non-linear management of time; (2) Discursive task creation, assignment and engagement among stakeholders; (3) a serendipitous engagement of team members based on expertise; and (4) shifting formal and informal organizing practices.

Originality/value

This paper provides insights on the use of external social media for collaboration in e-government research, and develops the concept of temporary organization in a sociomaterial setting. It also provides practical suggestions on how to manage new forms of public projects leveraging on the capacity of external social media.

Keywords

Social Media; E-government; Inter-organizational Collaboration; Temporary Organization

1. INTRODUCTION

Governments around the world increasingly seek to find innovative ways to deliver public services. Leveraging on the recent development of social media, new collaborative initiatives appear that aim at combining government and non-government stakeholders (e.g., citizens, businesses and non-profit organizations) into a coherent service delivery system (Bertot et al., 2016; Scupola and Zanfei, 2016). Such development is often referred to as *collaborative e-government* (Chun et al., 2012). In particular, *external social media* (e.g., Facebook, Twitter, WeChat) that allow not only government employees, but also individuals from other communities, “to create, circulate, share, and exchange information in a variety of formats (Leonardi and Vaast, 2017, p. 150)”, are used to enhance such collaboration efforts (Schlagwein and Hu, 2016).

The use of social media to deliver public services has reportedly brought benefits to various aspects of public governance (Aral et al., 2013; Baskerville, 2011; Baumer et al., 2013; Downey, 2012). However, it has also introduced concerns with respect to the potential damage it can cause to the collaboration process between governments and their external stakeholders (Landsbergen, 2010; Zavattaro and Bryer, 2016), which often features clearly defined goals (e.g., major product or service provides), organizational structure (e.g., particular modes of operation), and organizational boundaries (e.g.,

1 identification of key stakeholders) (Beynon-Davies, 2007). Nonetheless, recent studies on social media
2 suggest that the use of external social media has brought fundamental changes to the organizing
3 arrangement of collaboration. This includes identification of stakeholders from private networks (Hwang
4 et al., 2015; Ollier-Malaterre et al., 2013; van Zoonen et al., 2016), evolving definition of project goals,
5 and alternative use of time (Subramaniam et al., 2013). Consequently, the organizing practices emerged
6 through social media are often a result of ‘making it work’, and produce specific organizing
7 arrangements of governments’ collaboration with external stakeholders, which invites us to reframe our
8 ways of looking at these collaboration.
9

10
11 Such development resonates with the rising discussion on ICT-enabled collaboration in e-government
12 research (Bertot et al., 2012; Chun et al., 2012). However, these studies mostly rest on the assumption
13 that changes take place along the line of established processes, and often only focus on government-to-
14 business (Liu et al., 2012), or government-to-citizen collaboration (Bertot et al., 2012). The actual
15 organizing activities in collaborative projects that involve stakeholders with more heterogeneous
16 backgrounds remain largely undiscussed. Therefore, it is still unclear how social media may reconfigure
17 the organizing arrangements of collaboration between government and non-government stakeholders,
18 particularly in an environment that features heterogeneous types of stakeholders. To understand this, it is
19 therefore important to scrutinize the actual organizing practices appeared through social media in e-
20 government projects, and ask:
21

22
23 *What are the characteristics of inter-organizational collaboration between government and non-*
24 *government organizations enabled by social media?*
25

26 To address this question, we build on a case study of a collaborative project on open data in Shanghai,
27 China, where local municipality, businesses and universities and NGOs collaborate using an external
28 social media platform, WeChat. Seeing collaboration as discursive activities of innovating around
29

1 emergent situations, we adopt an action-oriented conceptualization of collaboration – “temporary
2 organization” proposed by Lundin and Söderholm (1995), to analyze our collected data.
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6 Along these lines, this study unfolds the characteristics of the emergent organizing configurations in
7 external social media-facilitated collaboration between government and non-government stakeholders.
8
9 By doing so, we contribute to the understanding of the use of external social media for collaboration in
10 e-government projects, and set out the first attempt to develop the theory of temporary organization in a
11 sociomaterial setting. Such insights also provide public project managers with suggestions on how to
12 manage new forms of public projects leveraging on the capacity of external social media.
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21 This paper is structured as follows. The next section discusses existing studies on the impact of social
22 media use on inter-organizational collaboration in e-government projects. Section 3 presents the
23 theoretical lens of temporary organization to understand the key dimensions of inter-organizational
24 collaboration. Section 4 presents the research setting along with the procedures of data collection and
25 analysis. Section 5 presents our findings along the four dimensions of temporary organizations: time,
26 task, team, and transition. In section 6, we discuss the findings in light of their implications to research
27 and practice, as well as the avenues for future research. We conclude by summarizing the main findings
28 and its implications.
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40 **2. LITERATURE REVIEW**

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43 A continuously growing body of e-government studies has investigated and discussed the implications
44 of government innovation by the use of social media (Criado et al., 2013; Medaglia and Zheng, 2017).
45
46 Social media is strategically used in various initiatives by governments around the world to co-produce
47 public services with external stakeholders (i.e., citizens, non-profit, and private organizations) (e.g.,
48 Criado and Rojas-Martín, 2013; Mainka et al., 2014; Zheng and Zheng, 2014). A common denominator
49 of this research is that social media, particularly external social media, is increasingly used as an
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2 organizing unit for collaboration among government and non-government stakeholders. Here, external
3
4 social media refers to a particular type of social media that runs by providers outside of the organization
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6 (e.g., such as Facebook, Twitter, or WeChat) (Schlagwein and Hu, 2016). Different from *internal social*
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8 *media* that only allow certain organizational members to access (e.g., Yammer or corporate wikis),
9
10 *external social media* are accessible for individuals from other organizations and communities to create,
11
12 circulate, share, and exchange information.
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16 The combination of the use of external social media and governmental reforms potentially brings about
17
18 a new range of opportunities for governments, touching several aspects of public governance (Downey,
19
20 2012). These opportunities include increased transparency and accountability by use of ICT, cost
21
22 savings through citizen crowdsourcing (Brabham, 2008; Doan et al., 2011), increasing smartness of
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24 public action (Gil-Garcia et al., 2016), real time interaction (Mergel, 2013a), as well as citizen
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26 participation and empowerment (Bonsón et al., 2015; Porwol et al., 2016). However, governments' use
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28 of external social media has also caused concerns in regards to security (Bertot et al., 2012), privacy
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30 (Bryer and Zavattaro, 2011), and productivity (Picazo-Vela et al., 2012).
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36 Such concerns mainly occur against the backdrop of the conventional ways of collaboration in e-
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38 government project (e.g., public-private partnership project on IT infrastructure), where government and
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40 non-government organizations (often business organizations) are typically involved in a supply chain
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42 relationship – the government organization obtains goods and public services from non-government
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44 organizations. Collaborations as such are often assumed to take an organizing form of clearly defined
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46 goals (e.g., major product or service provides), organizational structure (e.g., particular modes of
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48 operation), and organizational boundaries (e.g., identification of key stakeholders) (Beynon-Davies,
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50 2007). For example, the key stakeholders of a conventional collaboration are often identified through
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52 official collaborative arrangements (e.g., outsourcing contract or official agreement) (Dawes and Pardo,
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54 2003; Lee and Kwak, 2012). The stakeholders' tasks and responsibilities are tied to their position in the
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1 affiliated organizations (Jaeger and Bertot, 2010; Mergel, 2013b). The involvement of government may
2 also imply that the project management is prescribed by governments' institutional arrangements and
3 features bureaucratic procedures of collaboration (Gil-Garcia, 2012; O'Leary and Vij, 2012). Hence, the
4 assumption here is that external social media, ambidextrously used for both private and professional
5 purposes by individual stakeholders, can pose threats to the coherence of the existing organizing
6 arrangements around collaboration, and jeopardize the outcome of collaboration (Picazo-Vela et al.,
7 2012).

8
9 Nevertheless, recent studies on social media suggest that the use of external social media has more
10 'subversive' impacts on organizational practices (Leonardi and Vaast, 2017). Rather than supporting
11 existing organizing arrangements, the use of external social media can, in fact, generate organizing
12 practices that evolve goals, unsettle existing organizational structure, and blur existing boundaries,
13 challenging the conventional assumptions about how collaboration should be organized. As the use of
14 external social media in organizations diffuses largely from private to professional settings, it becomes
15 increasingly difficult to define where ones' network begins and ends, and to what extent the connections
16 formed feed into the development of professional needs (Henderson and Bowley, 2010; Ollier-Malaterre
17 et al., 2013; van Zoonen et al., 2016). In addition, as knowledge is increasingly shared within and among
18 organizations, employees are found to associate with each other more based on shared expertise, rather
19 than other organizational categories (i.e., affiliation or hierarchy) (Hwang et al., 2015). This transforms
20 the way key stakeholders are identified, and affects the goal of collaboration. As the stakeholders often
21 have disparate goals, new involvement of stakeholders can lead to changes in setting the common goal.
22 Moreover, the constant availability of external social media makes it possible for people to copresent in
23 a virtual setting, and organize across time and space (Subramaniam et al., 2013). Together with the
24 affordance of social media for instantaneous and persistent communication (Treem and Leonardi, 2013),
25 the use of external social media can generate organizing practices that are "simultaneously transient and
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1 enduring and simultaneously virtual and material” (Leonardi and Vaast, 2017, p. 180). Such change in
2 terms of how organizing practices are organized across time and space, has particular implications for
3 inter-organizational collaboration, especially those among organizations with heterogeneous
4 backgrounds. This is mainly due to organizations often taking a different amount of time to respond
5 (Janssen and van der Voort, 2016). By providing an alternative use of time, external social media can
6 potentially change the way in which the collaboration is coordinated. These practices defy the typical
7 understanding of collaboration as a clearly defined process. Rather, individuals using external social
8 media have to constantly deal with emergent situations due to the fast-changing dynamics on external
9 social media, and invent solutions around these situations by capitalizing their resources through their
10 networks. This shift from goal-oriented processes to emergent actions invites new ways to look at inter-
11 organizational collaboration in an e-government context.
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28 The current scholarship on collaborative e-government is amongst the early moving ones in
29 understanding this shift (Chun et al., 2012). Collaborative e-government mainly refers to the ICT-
30 facilitated collaboration environment between government and non-government organizations, where
31 the use of ICT transforms the ways these stakeholders interact among each other (Chun et al., 2012).
32 Seeing external social media as part of the environment, existing studies have looked into the
33 motivation (Chun et al., 2012), outcome (Bertot et al., 2012), success/failure factors (Janssen and
34 Klievink, 2012; Williams and Fedorowicz, 2012) of such transformations. Studies have also embarked
35 on the changing organizing processes of collaborative e-government project (Liu et al., 2012). However,
36 most of these studies take the assumption of collaboration as goal-oriented processes, and often focus on
37 government to business, or government to citizen collaboration. We are still at lost to understand how
38 the use of external social media reconfigures organizing arrangements, particularly in the collaboration
39 between government and stakeholders with heterogeneous backgrounds (i.e., government, businesses
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1 and non-profit organizations). In the next section, we illustrate on the concept “temporary organization”
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3
4 to provide a theoretical lens to shed light on this inquiry.
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7 **3. THEORETICAL LENS: TEMPORARY ORGANIZATIONS**

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10 As we indicated in the literature review, governments’ innovation through external social media results
11
12 in a number of collaborative projects between government and external stakeholders that are open and
13
14 dynamic. The organizing arrangements that occur through external social media can be largely different
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16 from the conventional organizing arrangements of such collaboration (Beynon-Davies, 2007), in regards
17
18 to aspects, such as increasing involvement of stakeholders from private networks, changing definition of
19
20 project goals, and alternative use of time.
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24 In order to account for these attributes of change, we looked into the literature on different organizing
25
26 forms of inter-organizational collaboration, where one form of inter-organizational collaboration,
27
28 *temporary organization*, particularly speaks to these emergent attributes (Bakker et al., 2016; Burke and
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30 Morley, 2016; Jones and Lichtenstein, 2008; Lundin and Söderholm, 1995). The concept of temporary
31
32 organization emerges out of an ongoing trend in inter-organizational projects across business and
33
34 industry settings, such as filming (Stjerne and Svejnova, 2016), architecture (Jones and Lichtenstein,
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36 2008), public infrastructure construction (van Marrewijk et al., 2016), and public administration (Svärd,
37
38 2016). In particular, it refers to a form of inter-organizational collaboration, in which “multiple
39
40 organizations work jointly on a shared activity for a limited period of time...to coordinate complex
41
42 products/services in uncertain and competitive environments (Jones and Lichtenstein, 2008, p. 1).” A
43
44 key distinction between temporary organization and other more commonly studied forms of joint
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46 collaboration (e.g., joint venture and alliances) is the dimension of time. The limited project duration has
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48 a significant influence over the kind of organizing practices (i.e., coordination techniques) that are used
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50 to pace the collaborative activities between multiple organizations. Along this line, scholars have looked
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1 into the framework for understanding the various types of temporary organization, and how these
2 different types of temporary organization facilitate the collaboration in different contexts (Bakker et al.,
3 2016; Burke and Morley, 2016). While each framework features a specific angle that is related to a
4 specific context, the forms of temporary organization in general vary along four basic dimensions: time,
5 team, task and transition (Lundin and Söderholm, 1995). The first dimension is *time*. As indicated above,
6 projects are created for a specific goal within a predefined deadline; thus the project duration is limited.
7 Under such pressure, the coordination activities of projects revolve around the key management of time.
8 The project organizers often use different pacing techniques, that is time-oriented markers (e.g., key
9 milestones; timelines) to organize their activities and reduce the time to complete tasks (Jones and
10 Lichtenstein, 2008). The second dimension is *task*. A project is dependent on one or a limited number of
11 tasks, and all of its resources are retrieved, planned, and managed accordingly. This results in a
12 discursive distribution of responsibilities among the team members that link individual responsibility
13 directly to their capacity in accomplishing project goal-related tasks in daily operations. The third
14 dimension is *team*. Closely linked to the traits of time and task, the existence and development of teams
15 is centered on the tasks that must be accomplished within a limited time. Team members are often
16 brought together for their common interest in (a task of) the project (by force or by coincidence). While
17 the team members commit to the tasks around the project, they also need to legitimize their engagement
18 to their parent organization. The fourth dimension is *transition*. As temporary organizations are created
19 to achieve a specific project goal, there is a transition between the states of “before” and “after” the
20 achievement of the goal. Transition can also concern changing behaviours about how certain work is
21 done, as team members come from a different organization with their own distinctive way. A summary
22 of the dimensions of temporary organization is provided in table 1.

[Table 1. Dimensions of Temporary Organization]

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2 These four dimensions are developed by a series of empirical studies that often focus on one or some of
3
4 these four dimensions (Bakker, 2010). Along the dimension of *time*, empirical studies have addressed
5
6 the effect of time pressure on process, functioning, behaviour, and performance in temporary
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8 organizations – e.g., how variance of project duration affects the kind of coordination techniques that are
9
10 used to manage uncertainty (e.g., Jones and Lichtenstein, 2008). Along the dimension of *task*, empirical
11
12 studies have looked into the types of tasks temporary organizations perform (e.g., Bechky, 2006) and the
13
14 effective execution of tasks (e.g., Saunders and Ahuja, 2006). Along the dimension of *team*, empirical
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16 studies have focused on how a team is formed (e.g., Ebers and Maurer, 2016; Perretti and Negro, 2006),
17
18 as well as how team members resolve issues of vulnerability, uncertainty, and risk (e.g., Xu et al., 2007).
19
20 Studies that focus on the dimension of *transition* discuss how temporary organizations can be sustained
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22 within the environment of the firm; for example, how a temporary organization is sustained in an
23
24 enduring form (e.g., Cacciatori, 2008). In the broader context of society, empirical studies look at how
25
26 different social, structural, and institutional forces influence the coordination of temporary organization
27
28 and its transition (Sorenson and Waguespack, 2006; Stjerne and Svejnova, 2016; Swärd, 2016).
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35 Among these studies, there are some resemblances between the identified forms of temporary
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37 organization and the emergent attributes of the organizing arrangements in a collaborative e-government
38
39 project, particularly on how some of the boundaries around time, task, team and transition are introduced
40
41 and shape the project (e.g., Jones and Lichtenstein, 2008; Stjerne and Svejnova, 2016). Nevertheless, as
42
43 Information System scholars, such as Orlikowski (2007), have argued, sociomateriality constitutes the
44
45 shaping of everyday organizing. Therefore, in following this line of enquiry, we should not lose sight of
46
47 how the use of objects, in particular ICT, is shaping these organizing arrangements and are used to
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49 manage the collaborative activities between multiple organizations. Recently, studies such as Sergi
50
51 (2013)'s work start to emerge, showing how objects (i.e., documents) contribute to the actuality of inter-
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53 organizational collaboration projects. Nonetheless, very few studies have taken such inquiry empirically
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1
2 to examine the role of ICT, such as external social media, in shaping the forms of temporary
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4 organization and the organizing practices associated with them. Thus, in this study, while drawing on the
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6 theoretical lens of temporary organization to shed light on the emergent organizing form of inter-
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8 organizational collaboration in a new context of collaborative e-government, we also aim to develop the
9
10 organizational collaboration in a new context of collaborative e-government, we also aim to develop the
11
12 concept through our empirical study by elaborating on the role of external social media in shaping the
13
14 organizing arrangements that give rise to the temporary organization form.
15

16 17 **4. RESEARCH METHOD**

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19 In this section, we outline the research design, and share the methods for data collection and analysis for
20
21 investigating the emergent characteristics (i.e., time, task, team, and transition) of the organizing
22
23 practices that emerged through the use of external social media in the collaboration between government
24
25 and non-government organizations. We start out by describing the research setting of our study.
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27

28 29 **4.1 Research Setting**

30
31 To address the research question, we chose a collaborative project on open data in China – the Shanghai
32
33 Open Data Apps (SODA) contest as our case. SODA is a municipal level contest organized in Shanghai
34
35 to invite citizens, businesses, and communities to participate in the co-production of public services
36
37 using government data. The contest was officially launched in August 2015, and has achieved a result of
38
39 ten compelling new public service prototypes and several hundreds of elaborated ideas to improve the
40
41 local public services in Shanghai. The result of the contest was particularly well received among the
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43 local governments and businesses. It is now developed into a brand project of the municipality, which
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45 takes place annually.
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50 Comparing to the scale of the turnout, the organizing team behind the project appears to be much
51
52 ‘smaller’ in terms of headcounts. The project was originally initiated by nine active open government
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54 data promoters in Shanghai, following the central government’s advocates for open data in 2015 (Gao,
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1
2 2015). These nine organizers are of very different organizational backgrounds, including the municipal
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4 government (i.e., SMCEI¹), universities (i.e., OMNI Lab² and DMG³), a state-owned enterprise (i.e.,
5
6 CIDI Shanghai⁴), a small IT company (i.e., Enerlong), an IT start-up (i.e., Kesci), and an NGO (i.e.,
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8 Open Data China). They are also associated with different positions in their own organizations, with
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10 CEOs, Chief of Offices, Head of Labs, but also secretary and students.
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14 These nine organizers take charge of all the project management tasks during project planning,
15
16 execution, control and follow-up. These range from repetitive tasks, such as correcting press release
17
18 manuscripts, to more unique tasks, such as envisioning the future state of the project. The preparation
19
20 lasted for three months, during which the nine organizers had two face-to-face meetings for general
21
22 discussion and updates. Most of the other coordination activities took place and were acted upon in an
23
24 exclusive chat group on an external social media platform, WeChat.
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28
29 We deem the collaborative project SODA as an excellent setting to study the use of external social
30
31 media in collaborative government projects. Firstly, the interest in local collaborative e-government
32
33 projects is growing. There is an active search for innovative solutions to public issues from local
34
35 governments, citizens, NGOs, and businesses. Secondly, the prevalence of WeChat use in both private
36
37 and professional settings. By May 2017, there were 768 million daily active users (private and
38
39 professional) on WeChat (China Internet Network Information Center, 2016). This prevalence of
40
41 WeChat represents a digital ecosystem in swift expansion that public actors need to respond to when
42
43 envisioning new modes of collaboration with external stakeholders (Chen et al., 2016). Thirdly, the
44
45 boundaries between the public and the private sector in China are in a state of rapid change and
46
47 continuous negotiation. China is a case of hybrid transition between a command economy and a
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54 ¹ SMCEI stands for Shanghai Municipal Commission for Economy and Informatization.

55 ² OMNILab stands for the Open Meta Nexus Innovation Lab (OMNILab) at Shanghai Jiaotong University.

56 ³ DMG stands for the Lab for Digital and Mobile Governance (DMG) at Fudan University.

57 ⁴ CIDI Shanghai stands for the China Industrial Design Institute Shanghai.
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1 relatively newly established market economy. While bureaucratic modes of governance persist, new
2 governance practices are also devised to respond to the challenges posed by the environment (Gao et al.,
3 2013; Zhang et al., 2016).
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8 9 **4.2 Data Collection**

10 Considering that this study focuses on capturing the actual organizing practices emerged in the daily
11 work scenarios, it requires us to provide a detailed account of the real-life contexts where practices take
12 place. We therefore chose to base our data collection on a single case study (Walsham, 2006) of the
13 SODA project, as it provides more in-depth account of the emergent dynamics in inter-organizational
14 collaboration within its real-life context. The data analyzed belongs to a study of SODA, where we
15 follow the informants from April 2015 to September 2015.. We collected our data using a combination
16 of qualitative methods (i.e., participant observation, semi-structured interviews, and document analysis).
17
18 The data sources for this paper consist of fourteen semi-structured interviews with the nine stakeholders,
19 participant observation of meetings and daily organizing practices through WeChat, as well as
20 documents that are linked to SODA's official promotion. These sources are listed in Table 2.
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35 *[Table 2. Overview of the Data Sources]*
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40 These three methods complement each other by providing different types of data. Participant
41 observation (Locke, 2011) provides us with an opportunity to uncover the organizing practices that are
42 contextualized in different work scenarios. In this regard, we conducted both online observations on
43 WeChat and offline observations of the meet-ups between the stakeholders. Online observations
44 included unobtrusive observation of several chat groups on WeChat used by the organizing team for
45 coordination. This gives a sense of the actual working dynamics on WeChat between the stakeholders in
46 the SODA project. Offline observations included participation in the wrap-up meeting, where all the
47 stakeholders presented and reviewed the organizing processes; the internal meetings that took place
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1 among the university stakeholders; and the final event of SODA, where the author engaged in informal
2 conversations with different stakeholders (see Table 1). The observations of the organizing practices in
3 SODA were documented in the form of field notes. In addition, we also used document analysis to
4 verify some of the statements that are posed by the informants and to shed light on the (in)coherence
5 between the public address and the private reflections, which provided us with cues for our interview
6 questions at a later stage of data collection.
7
8

9 We also conducted semi-structured interviews with the nine organizers of SODA to probe into the
10 informants' motivations and reflections on their experiences. They were chosen as the key informants,
11 because they recognized themselves as the core organizing team of SODA, and because their
12 engagement with the project and with each other started from the beginning of the project. The
13 interviews followed two primary inquires: 1) how do the stakeholders organize around the collaboration
14 using WeChat, and 2) what are the differences between their organizing practices in SODA and their
15 previous collaboration experiences with government. The specific interview questions are tailored to
16 each informant's background and experiences. All interviews were carried out in Chinese. The duration
17 of the interviews varies from 40 minutes to 3 hours, due to the circumstances of the interview. They
18 were documented and transcribed with the informants' consent and then translated into English. The
19 protocols used for the interviews are available from the authors upon request. An interview guide sample
20 is included in the appendix (See Appendix A).
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45 **4.3 Data Analysis**

46 The data analysis is conducted in three broad steps with distinct objectives. In the first step, we applied
47 "within-case analysis" (Eisenhardt, 1989) to our data. Here we used an open coding procedure to
48 familiarize with the data, and capture the differences between emergent organizing practices through
49 WeChat and the perceived ways of collaboration with government. Coding categories included generic
50 codes related to project management, such as parallel work, meeting, private/professional networking,
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2 dispersive assignment of tasks, recruitment of new members, conflicts. The outcome of the first coding
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4 step was a mapping of emergent organizing practices in the SODA project, as well as a mapping of
5
6 perceived ideas of conventional collaboration with government. In the second step, we looked for more
7
8 structured patterns of these two mappings. This step started out as an iterative process, where we first
9
10 used the codes generated from the first step of the analysis as clues to identify a pool of relevant theories
11
12 and concepts. We then turned to the literature in order to provide dimensions around which we could
13
14 cluster codes from our first phase of analysis. Eventually we chose the concept of temporary
15
16 organization (Lundin and Söderholm, 1995) as our sensitizing device (Klein and Myers 1999) to
17
18 systematically categorize the two mappings that were identified in the first step, by relating them to the
19
20 sub-dimensions of temporary organization. For example, the first-level code “parallel work” was coded
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22 as “project pacing”, “private/professional networking” as “individual to team”, “dispersive assignment
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24 of tasks” as “stakeholder responsibilities”, and “conflicts” as “shifting ways of organizing”. In the third
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26 step, we compared the conventional ideas of collaboration with government and the emergent organizing
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28 practices through external social media, to understand how the use of external social media reconfigures
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30 the inter-organizational collaboration between government and non-government organizations.
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37 **5. FINDINGS**

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39 During the interviews, our informants exhibited an overwhelmingly positive attitude towards their
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41 collaboration experience during the first year of SODA. They expressed that the coordination on
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43 WeChat was “smooth”, “convenient” and very different from their previous collaboration experiences
44
45 with government agencies. It has become clear that time pressure is a central issue in the organizing
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47 experiences for the stakeholders, and has various implications along the inter-connected dimensions of
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49 task creation, assignment and engagement, team formation, and transition of the project. In the following,
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51 we detail on the organizing practices that emerged through WeChat and showcase how the use of
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1 WeChat reconfigured the conventional ways of collaboration between government and non-government
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7 **5.1 Time: Alternative Mode of Temporality**

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9 The interviews with the stakeholders of SODA show that time appears to be one of their primary
10 concerns in the coordination efforts, and there seems to be two contrasting views. On the one hand, all
11 the stakeholders from government, university, and industry expressed a sense of “lacking time” during
12 the coordination. Expressions such as “hectic” or “short of time” frequently came across in the
13 interviews. The experience of “lacking time” was mainly linked to the pressing deadline of the project,
14 which was set by the stakeholders to limit the preparation time within three months. On the other hand,
15 the stakeholders also express that time is flexible here in comparison to the ‘traditional’ collaboration
16 project with government. The Information Chief of SHCEI [G01] provides an example in her account of
17 time in organizing SODA
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31 We are all very busy, and we have to attend to other work, or go on business trips. With WeChat,
32 we no longer need to have meetings all the time. So WeChat is good in the sense that if we were
33 not present when things were discussed, we can always come back and comment on what other
34 people said. It happened a lot... We don't have to pick and decide on a time any more. Time is
35 really flexible on WeChat. [G01]
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43 Similarly, the co-founder of KESCI [NG02] has expressed his surprise on how agile some of the
44 government stakeholders have become during the preparation of SODA:
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48 I am really surprised by our working style at SODA, especially how some of the main
49 government stakeholders worked together with us. I mean, it has become more entrepreneur-like.
50 We constantly discussed and worked on WeChat, whenever people have time. We almost just
51 kept it going 24/7. This is different from the “from nine in the morning to five in the afternoon”
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1 government working time where they are not reachable out of these time slots. Or when you
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4 have to wait for the call to go meet them in the government.
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7 The use of WeChat seems to release some of the time pressure from stakeholders by providing a
8
9 different way of project pacing from the government. Instead of using regular meetings as the marker for
10
11 project progression, external social media enables virtual co-presence of team members to be constantly
12
13 online across time and space, which are described by some informants as [G01], “just chat on the
14
15 Internet”. Being able to organize the discussion in a virtual space also means that the stakeholders can
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17 respond to the discussions more instantaneously and persistently, therefore becomes more efficient in
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19 terms of their use of time.
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24 Seen from the quotes, WeChat appears to enable an alternative mode of temporality in organizing
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26 collaboration compared to the perceived mode of collaboration in government, which is characterized by
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28 cyclical meetings, standard procedures, and overall an implicit expectation of time as ‘eternal’ (Lundin
29
30 and Söderholm, 1995, p. 439). Under the pressure of project deadlines, the stakeholders experience time
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32 as a scarce resource. However, the stakeholders are able to leverage on external social media as a project
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34 pacing technology to relieve their organizing practices from the spatial and temporal constraints. Rather
35
36 than working with serial timelines and formal milestones, the stakeholders use external social media to
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38 organize working time based on ad-hoc, task-related emerging schedules. With the external social media
39
40 platform of WeChat, the organizers have the possibility of constantly being present at a virtual space and
41
42 engaging in a continuous stream of discussion and action. In a project setting where time is limited, the
43
44 use of WeChat enables a new set of organizing practices that are free from temporal and spatial
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46 constraints, and to some extent, free the stakeholders from the pressure of project deadlines.
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5.2 Task: Informal Task Distribution

As indicated in the research setting, the overall goal of SODA was agreed by the stakeholders following the central government's advocate for open data in China in 2015. Though without an official agreement, this still resembles how a project goal is set in conventional collaborative e-government in China. In countries such as China, the municipal e-government design has to follow a centralized e-government strategy, which means the organizational and procedural standards are reinforced in a top-down manner in government-issued regulations, or by government-endorsed advocates (Chen et al., 2009). This also indicates that in inter-organizational projects, the roles and responsibilities of each stakeholder need to be spelled out in policies.

Nonetheless, during the observation, it seems that WeChat has triggered a set of changing organizing practices around the assignment of responsibilities among stakeholders. Enabled by the persistent communication on WeChat, new tasks emerge in the on-going conversation between stakeholders, and are adopted contingently based on people's availability, expertise, even willingness, rather than fixed assignment. The Vice CEO of CIDI [NG01] has illustrated in details how tasks emerge through WeChat:

If people have questions or ideas, they can just throw them in the group. And then the others will come, discuss how to approach this, and claim the tasks themselves once the tasks are clear. People who claimed the tasks will complete the tasks offline, and then throw the end product back into the group. If others are OK with the end product, then it is done. Otherwise, we will just fix it altogether. [NG01]

What we see here is that tasks emerged through the on-going communication on WeChat and their assignment are highly discursive. While WeChat allows for on-going negotiation of task responsibilities through joint decision-making, taking such responsibility also depends on individual engagement in the group. During our observation, we have noticed that emergent task making relies on a shared belief

1 among the stakeholders. In the interviews, one of the recurring expressions the informants used to
2 describe the bonds between the stakeholders is *qinghuai*, which can be translated as ‘felt interest’. Many
3
4 of the organizers remarked that the assignment of tasks could, at times, be quite imbalanced and intense.
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6 What motivates them to complete these tasks is the *qinghuai* – their felt and shared interest in open data.
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8 The co-founder of Kesci [NG02] has particularly appraised that tasks are adopted in the WeChat group
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10 despite of individual’s position in the organizational hierarchy;
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16 Well, we are all positioned quite differently in relation to each other. Some are from higher
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18 positions in the government and companies, or professors, and some are still students, or
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20 somewhere lower in their own organization. But when it comes to taking tasks, we are just all in
21
22 this together. People are really dedicated to this project.
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26 The way [NG02] described how tasks are adopted in the WeChat group is very different from how tasks
27
28 are assigned in the government, where individuals’ tasks and responsibilities are typically fixed to their
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30 organizational position (Jaeger and Bertot, 2010; Mergel, 2013b). The use of WeChat, in combination
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32 with a dedicated team who shared a common interest, has enabled changes in how tasks emerge, adopted
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34 and engaged in such collaborative project. However, it does not mean that stakeholders would organize
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36 in an identical fashion. In fact, stakeholders also use external social media to avoid unwanted
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38 engagement with the collaboration.
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43 For example, the secretary of CIDI Shanghai [NG04] mentioned in the interview that even though she
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45 was also included in the WeChat group, she did not participate in the conversation as much as the other
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47 members of the group who were all in leadership positions. She only responded when directly
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49 mentioned with an “@” sign in the group, which meant that she had been assigned to a very specific task.
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51 Otherwise, she felt she only needed to be informed about the progress of the project preparation, and
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53 that she would not necessarily share as much *qinghuai* as the others. This example shows that while the
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1 use of WeChat enables new task creation, assignment and execution practices to emerge, it can still
2 accommodate less engaged ways, or more conventional ways of task assignment and execution. WeChat
3 makes it possible for stakeholders to juggle between the emergent organizing practices and the
4 conventional processes around collaboration.
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10 11 **5.3 Team: Allowing New Stakeholders to Participate**

12 The conventional collaborative e-government project in China often rests on government-business
13 partnership. The municipal governments would engage local private-sector partners based on their
14 specialized technological resources. They would also engage local research institutes and universities
15 based on their shared interests in solving public needs and building possibilities for innovation. These
16 potential partners are also often well-known organizations (Chen et al., 2009).
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25 In our case, while the nine stakeholders may have identified each other based on their matching needs
26 and resources, we also start to see a new way of engaging partners/stakeholders that is enabled by
27 external social media. During our observation, the ad-hoc tasks created on WeChat result in stakeholders
28 capitalizing the available resources in their private networks in order to complete these tasks. The
29 boundary of project team in this sense becomes very malleable. With the prevalence of other external
30 social media platforms, such as Weibo (an approximate equivalent platform of Twitter), we have seen
31 possibilities to involve experts who were not part of any individual's private or professional network
32 into the team.
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45 For example, the director of Opendatachina.com [NG03], who is now regarded as one of the experts in
46 open data in Shanghai, told us how he 'stumbled upon' the opportunity to become a team member of
47 SODA. After obtaining his PhD in the U.K. in 2014, he developed an interest in open data in China and
48 started out by following several open data-related hashtags on Weibo, where he found some posts on
49 open data by the Head of the Lab for Digital and Mobile Governance at Fudan University [NG08]. After
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1
2 contacting [NG08], he was invited to different e-government collaboration groups on WeChat and
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4 gradually built a reputation of his expertise amongst the future team members of SODA.
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7 What is interesting here is that, as the founder of an online community, [NG03] did not have an
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9 affiliation with any known organization. The informal recruitment of [NG03] into the project team that
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11 happened through Weibo and WeChat contrasts to the conventional recruitment procedure in
12
13 collaborative e-government project in China, where team members are often recruited through identified
14
15 stakeholders in an existing contract or agreement. Moreover, other stakeholders (i.e., [G01], [NG01],
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17 and [NG08]) emphasized that they value more [NG03]'s expertise on open data than where he is
18
19 affiliated with. [NG03]'s shared interests on open data that are made visible on Weibo and WeChat are
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21 the main reasons why they have involved him into the project team. Such a dynamic shows that, as
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23 stakeholders learn about other individuals' expertise through external social media, they tend to base the
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25 partnership on people's similarity of expertise rather than on well-known organization affiliations.
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29 In addition, external social media also seemed to produce a reference for the team to legitimize their
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31 existence. In our case, legitimacy of the team has become an interesting issue among the stakeholders.
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33 Even though the engaged stakeholders are mostly from higher management of municipal government
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35 and state-owned business, SODA is different from a conventional public-private partnership project by
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37 nature, as it did not start with an official partnership agreement. It is therefore difficult for the
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39 stakeholders to legitimize their project and the work they do for the project. In this sense, the chat group
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41 is sometimes used as a reference for the stakeholders to provide evidence for the existence of the project.
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48 **5.4 Transition: Shifting Between Formal and Informal**

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50 While the stakeholders have praised WeChat for enabling agility in juggling tasks, time, and team
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52 development, there are also growing tensions that concern the informality in the emerged organizing
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54 practices. These tensions become especially explicit when the project is coming to an end.
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2 During a follow-up meeting, we have observed offline after the contest finished, one of the heated
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4 discussion was about how to raise sponsorship for next years' SODA. While most of the stakeholders
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6 celebrated the idea of 'crowdsourcing' through WeChat, namely to capitalize on their personal networks
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8 to scout for potential fundraisers, some other stakeholders (i.e., [NG08]) raised the concern that
9
10 crowdsourcing can be "too much of a commercial behaviour" for people who are affiliated with a
11
12 university or government. This especially has to do with the fact that WeChat is often used for both
13
14 private and professional purposes; hence becoming a grey zone where the boundary between private and
15
16 professional activities becomes unclear. The dispute has led to further discussion on whether or not
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18 SODA should transition from a 'temporary' organization that was, at the time of research, still a
19
20 collaborative project between nine organizations, to a permanent organization that run on its own. Some
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22 suggest a 'milder' approach to increase the formality of fundraising online by announcing the
23
24 fundraising call on the official website or on an official social media account. These discussions often
25
26 ended with a temporary solution with some stakeholders making a compromise with the others.
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28 However, the tensions persist and re-emerge when they are triggered by certain situations.
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35 These examples showed that while external social media provides opportunities for stakeholders to
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37 juggle between new organizing practices and established processes around collaboration, it also
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39 reinforces the tensions between them, particularly around the boundary between formal and informal
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41 practices. Once the tensions are triggered, they can lead to the collapse of the whole project, but they
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43 also bear the opportunity to transform the project into a new different form of organization.
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47 Table 3 summarizes the key findings on the characteristics of inter-organizational collaboration enabled
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49 by the use of external social media.
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[Table 3. Summary of Findings]

6. DISCUSSION

6.1 A Research Agenda

In this study, we have analyzed the inter-organizational collaboration between government and non-government organizations facilitated by external social media. Based on our findings of how external social media enable change in collaborative projects along the dimensions of time, task, team, and transition, we propose a five-point research agenda on how governments' use of external social media can benefit from re-addressing these fundamental dimensions of collaboration.

First, our findings show that in the context of inter-organizational collaboration, external social media platforms can enable a sense of 'flexible time' in the presence of pressing project deadlines. What we have observed is that people's perception of time is largely connected to the change brought by external social media to the standardized organizing arrangement of collaboration in their 'home' organization – the government. Previous studies have pointed out that increased efficiency is an outcome brought by external social media to inter-organizational collaboration between government and non-government organizations (Aral et al., 2013; Baskerville, 2011; Baumer et al., 2013). However, few studies have reflected on what exact changes have been brought to the organizing arrangements that lead to this increased efficiency. Our studies show that, compared to the conventional way of collaboration in the government, external social media enables more efficient collaboration by providing a virtual space for stakeholders to communicate across physical distances, and allowing for these communications to persist over time. In the context of inter-organizational collaboration, future studies should unfold the nuances in stakeholders' perception and management of time, and explore the changes enabled by external social media to the organizing processes of collaboration in governments.

1
2 Second, in existing e-government studies, stakeholders' tasks and responsibilities in inter-organizational
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4 collaboration are often taken for granted and tied to the individual's position in the organizational
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6 structure of government, such as Government Social Media Manager or Chief Information Officer
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8 (Jaeger and Bertot, 2010; Mergel, 2013b), or official partnership agreements (Chen et al., 2009).
9
10 Consequently, the distribution and execution of tasks are looked at in terms of organizational structure
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12 rather than actual interactions between individuals. However, our findings show that task creation,
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14 assignment, and engagement in inter-organizational collaboration are a negotiation between the function
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16 and power of one's organizational position and the individual commitment and expertise. With the
17
18 needed expertise, stakeholders can move across hierarchy and organizational boundaries and take
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20 responsibilities that do not necessarily correspond to one's position in their 'home' organization. Our
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22 findings show that individual's responsibilities should be understood based on stakeholders' actual
23
24 actions rather than on their organizational affiliations, or the nature of their affiliated organizations. The
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26 latter especially has important implications for governance, as for example: governments and businesses
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28 may not take on their traditional divide of labour in delivering public services in such collaboration.
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30 Future studies should look into how the boundary between sectors can be changed through the use of
31
32 external social media in collaborative e-government project.
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40 Third, the on-going negotiation of tasks and responsibilities opens up opportunities for a team formation
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42 that is constantly developing based on needed expertise, rather than on the pre-defined organizational
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44 arrangements. Our findings show that in inter-organizational collaboration, external social media can
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46 enable bottom-up team formation. The inclusion/exclusion criteria for team formation do not only rely
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48 on organizational affiliation or formal agreement between organizations (Henderson and Bowley, 2010),
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50 but increasingly on similarity of expertise and shared interest between individuals. This is markedly
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52 different from the recruitment tradition in governments, which often requires standardized recruitment
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54 procedures or identification through official organizational arrangements (e.g., a special task force) if in
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1 the context of inter-organizational collaboration (Dawes and Pardo, 2003). These stakeholders are found
2 through organizations that are involved in existing collaborative arrangements (Dawes and Pardo, 2003;
3 Lee and Kwak, 2012). For example, in a public-private partnership project, the organizing team would
4 typically only consist of stakeholders from industry and government. In a digitally enabled inter-
5 organizational collaboration project, future studies should question the existing understanding of what it
6 means to be a team. Attention is especially needed to the emerging group of project stakeholders on
7 external social media, namely the citizens and non-government organizations.
8

9 Fourth, as the stakeholders originally come from different organizational backgrounds, there are inherent
10 tensions on goals and managerial norms in an inter-organizational collaboration. Our findings show that
11 the open and fluid nature of external social media enables transitions by sparking these tensions. Once
12 the tensions are triggered, they can lead the project to collapse, or they can become institutionalized into
13 a ‘permanent’ organization by an agreement among stakeholders. It is therefore sensible to infer that the
14 institutionalization of an inter-organizational project can potentially lead to institutional changes in the
15 ‘home’ organizations of some stakeholders. This is particularly relevant for government, which often
16 features strict bureaucratic procedures of collaboration. Previous studies have looked into institutions as
17 an external factor that facilitates or constraints the outcome of inter-organizational collaboration (Gil-
18 Garcia, 2012; O’Leary and Vij, 2012). However, there is a need to further understand how the
19 institutional arrangements of government can be changed using external social media in inter-
20 organizational collaboration.
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22 Fifth, by using the theoretical lens of temporary organizations (Lundin and Söderholm, 1995), we
23 showcase how e-government research can benefit from focusing on specific characteristics of inter-
24 organizational collaboration. Our findings also reveal that external social media can potentially defy
25 some of the conventional assumptions in temporary organization, such as how time can be managed.
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27 Based on this, this study also proposes that another “T” (Technology) should be added to the four
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1 dimensions of temporary organization. Future studies can feed into the refinement of this theoretical
2 framework by focusing on how external social media can enable different forms of temporary
3 organization along the four dimensions in different contexts. It could also be interesting to compare the
4 organizing practices of collaboration enabled by external social media at different phases of the project.
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11 The research agenda for future studies can found in Table 4.
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14 *[Table 4. Research Agenda for Future Studies]*
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18 **6.2 Implications for Theory and Research**

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20 Based on our discussion in our contribution for research, the findings of this study have significant
21 implications for research in the following two areas. First, this study supplements existing research by
22 unfolding the black box of the organizing practices around collaborative e-government project. In
23 particular, this study showcases the emerging organizing form of collaboration that is enabled by social
24 media along four fundamental dimensions. The identified organizing form of the collaboration can be
25 used as a descriptive tool to organize and analyze the coordination activities involved in e-government
26 projects.
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37 Second, this study also has implications for the development of the theoretical lens of temporary
38 organization, by shedding light on the role of ICT in enabling different forms of temporary organization.
39 Through this case study, we have showed that a sociomaterial understanding of ICT use in organization
40 can defy the previous assumptions in the temporary organization, where boundary-opening activities are
41 seen detrimental to the actuality of a collaborative project. Instead, our study shows that boundary-
42 opening activities can also be beneficial for the actuality of the project, particularly in regards to the
43 management of time and tasks during project work. In addition, by adding the fifth dimension of
44 technology, the lens of temporary organization can be used as a more effective conceptual tool to
45 account for sociomaterial phenomena.
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6.3 Implications for Practice

This study also has significant implications for public managers. Our findings provide input for handling managerial challenges of social media use in government. Given the bottom-up, non-linear, and non-hierarchical nature of the use of external social media, we recommend government project managers to re-think their one-dimensional view of external social media as a purely recreational, inappropriate, and ultimately inefficient medium of collaboration (Baumer et al., 2013; Schlagwein and Hu, 2016). Government innovation requires tremendous amount of commitment and resources. Public project managers should be encouraged to experiment with the use of external social media in order to leverage on the potential resources from various sources.

In an open collaborative environment, the boundary between private and professional, formal and informal, seems to be a rising issue, particularly for public organizations. The potential tensions from the use of external social media highlighted by our study thus calls for an explicit discussion in the practitioner community on how to devise shared guidelines and appropriate training for project managers involved in collaborative initiatives as such. Moreover, government may also need to embark on a rethinking of public governance regime to account such shifting boundaries.

6.4 Limitations and Future Research

There are a few limitations to this study, where we believe future studies can embark on. First, this study chose to primarily focus on the characteristics of the inter-organizational collaboration practices analyzed in the cases that are linked to the use of external social media. Future studies can look into the influence of other contextual factors – political, institutional, legal, or economic – and investigate how these factors interplay with social media use and together implicate in the context of collaborative e-government.

Second, our analysis starts to show that the way in which external social media change organizations is more complex than it seems. Some of the organization changes are enabled through a combination of

1 social media use and other characteristics of project settings (i.e., shared interest in the project). Given
2 the focus of this study, we did not look into other project management aspects in the analysis. Future
3 studies can develop this line of research by operationalizing inter-organizational collaboration with
4 regards to other aspects of project management, such as shared agreement on project charter, ownership
5 of project tasks, knowledge sharing, and resource sharing.
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14 Third, due to the subjectiveness of participant observations, we recognize possible subjective biases in
15 the collection and analysis of our data. Such biases are reflected in the uneven distribution of interview
16 time among different stakeholders across industry, government, and university. This, however, can also
17 be understood as a manifestation of the different engagement of the various stakeholders in the
18 collaborative project. In the future, we would like to pursue the implications of stakeholders' use of
19 external social media with regard to their engagement with the collaborative project.
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29 Lastly, we acknowledge the limited generalizability of the current findings, given the uniqueness of the
30 project and of the Chinese context. However, we did not aim at providing generalizable findings
31 applicable to other empirical settings, but rather at generating theoretical concepts and principles that
32 could be applied in similar contexts (Lee and Baskerville, 2003). Future research can test our findings in
33 other settings and broaden generalizability.
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40 **7. CONCLUSION**

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42 The impacts of governments' use of external social media is spread over a wide range of areas; it is not
43 only limited to service and information provision, but also inter-organizational collaboration practices.
44 In particular, external social media, characterized by a blurred private/professional boundary, can
45 potentially introduce changes and tensions to the well-established routines of collaboration in the public
46 sector.
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2 In this study, we have analyzed the characteristics of external social media-facilitated inter-
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4 organizational collaboration by looking at the use of WeChat in a collaborative project between
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6 government, university, and businesses in China. Findings show a number of transformations enabled by
7
8 external social media along the dimensions of time, task, team, and transition. Specifically, we observed
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10 the emergence of new organizing practices around collaboration that are characterized by the following:
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12 an ad-hoc and non-linear management of time; a sense of shared commitment to the accomplishment of
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14 tasks; a serendipitous recruitment of team members based on expertise rather than on organizational
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16 affiliation; and a transition from formal to informal collaboration. Our findings feed into the on-going
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18 research on collaborative e-government, and on the impact of external social media on organizational
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20 practices in the public sector.
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Tables

Table 1. Dimensions of Temporary Organization

Dimensions of temporary organization	Sub-Dimensions
Time	Project duration
	Project pacing
Task	Project goal
	Team member responsibilities
Team	Individual to team
	Team to team environment
Transition	Post goal Achievement
	Shifting ways of organizing

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Table 2. Overview of Data Sources

	Informant	Organizational Affiliation	Position	Informant code	Interview N
Interviews	Government 1	Shanghai Municipal Commission of Economy and Informatization (SMCEI)	Information Chief	G01	2
	Non-government 1	China Industrial Design Institute (CIDI) Shanghai	Vice-CEO	NG01	2
	Non-government 2	Kesci	Co-founder	NG02	1
	Non-government 3	Opendatachina.com	Director	NG03	4
	Non-government 4	China Industrial Design Institute (CIDI) Shanghai	Secretary	NG04	1
	Non-government 5	Enerlong	CEO	NG05	1
	Non-government 6	021 Incubator	CEO	NG06	1
	Non-government 7	Shanghai Jiaotong University	Lab member	NG07	1
	Non-government 8	Fudan University	Professor	NG08	1
	Non-government 9	Fudan University	Lab member	NG09	1
Observations		Content	Participants		
	Initial meeting	Review 1 st SODA Initial plan for 2 nd SODA	SMCEI, CIDI Shanghai, OMNI Lab, DMG Fudan, Kesci, Enerlong		
	Other meetings	Regular DMB Lab meeting Task assignment and report	DMG lab member		
	SODA Road Show	SODA final	All stakeholders, contest participants, public audience		
	Informal communication	During daily work Via WeChat	All stakeholders		

Table 3. Summary of Findings

Dimensions of temporary organization	Sub-Dimensions	Practices without External Social Media	Emerging Practices with External Social Media
Time	Project duration	Fixed duration of project based on official agreement	Fixed duration of project based on agreement among stakeholders
	Project pacing	Linear management of time through regular coordination activities	Ad-hoc, non-linear management of time through virtual co-presence of team members
Task	Project goal	Following top-down, centralized e-government strategy	Following top-down, centralized e-government strategy
	Team member responsibilities	Spelling out responsibilities for each team member (stakeholder) in policies and regulations	Discursive task creation, assignment and engagement among team members (stakeholders)
Team	Individual to team	Top-down engagement from government to business based on matching demands and resources; Top down engagement with research institutes/universities based on shared interests; The identified team members are often affiliated with well-known organizations	Serendipitous recruitment of stakeholders based on expertise; The team members are not necessarily affiliated with known organizations
	Team to team environment	Legitimization of the team through official agreement	Legitimization of the team through shared reference to social media
Transition	Post goal Achievement	Termination or another iteration of the project	Termination or another iteration of the project
	Shifting ways of organizing	None	Shifting formal and informal organizing practices

Table. 4 Research Agenda for Future Studies

	Research Agenda
Time	How does team members' perceptions of time change through external social media in a collaborative e-government context? Which types of organizing practices of collaboration are enabled by the use of external social media that result in a certain perception of time?
Task	How can the boundary between sectors (i.e., public and private) be changed through the use of external social media in collaborative e-government project?
Team	What means to be a team in the era of social media, in particular, regarding the participation of citizens and non-government organizations through social media?
Transition	How can the institutional arrangements of government be changed using external social media in inter-organizational collaboration?
Technology	How social media can enable different forms of temporary organization along the four dimensions in different contexts? What are the organizing practices of collaboration enabled by social media at different phases of the project?
Other Factors	How do political, institutional, legal, economic, project setting factors interplay with social media use and together implicate in the context of collaborative e-government?

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7 **Appendix A. Interview Guide**
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9	Basic Information
10	Name
11	Organizational Affiliation
12	Organizational Position
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15	Stakeholders and their relationships
16	- Which organizations have participated in the organization of SODA and sponsorship? Who are the key organizers?
17	- Which organizations do they belong to? And what are their positions in their own organizations?
18	- Can you tell me how did the organizers meet? And how long did it take when the stakeholders started to form an organizing group?
19	- Which organization/stakeholder would you consider as the main organizer of the contest? Why do you divide them as such?
20	- What is the goal(s) of SODA this year? How did you identify the goal among the organizers? Did the relationships between stakeholders influence the definition of the goal?
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26	Responsibility/tasks
27	- Which responsibilities these organizations have mainly taken in the preparation of SODA (Cue: Operating the project, coordinating communication, providing advices)?
28	- Are any of the responsibilities assigned to certain types of organizations (Cue: government, business, or university)? Are there any overlaps in terms of their responsibilities? Why?
29	- What are the responsibilities of each organizer?
30	- Do you think these organizers have done something that exceeded their responsibilities? Can you raise an example?
31	- How do you see your role in SODA? (Cue: For example, are you a leader, decision-maker, operator, consultant, or all of the above?) What do you think your main responsibilities are about?
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38	Collaboration and Organizing Platform
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7	- How do the stakeholders communicate and coordinate during the preparation of SODA (Cue: Which forms of communication are there? Are these communications online or offline)?
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9	- What is the proportion of online and offline communication? Is there any difference in terms of content between online and offline communication?
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11	- How do you communicate in your affiliated organization? Is there any differences between the way how collaboration
12	
13	- Which online platform(s) have you used this year to organize the preparation?
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15	General description about platform
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17	- How would you describe this platform to people who don't know about the platform?
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19	- What types of communication do you think this platform is apt for?
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21	- What are the differences between this platform and other Social Media platforms?
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23	- What are the pros and cons about using this platform for coordinating collaboration?
24	
25	- Are there any platforms or ways of communication you would consider to replace WeChat? What are they? Why?
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27	Reason to choose a specific platform
28	
29	- Why do the stakeholders choose to use this platform than other platforms to communicate about the tasks?
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31	- What kind of tasks do you think this platform is good for? Can you raise a concrete example to describe this? Why do you think so?
32	
33	Actual use of the platform
34	
35	- In organizing SODA, do you think it is effective to use the platform for communication? What criteria did you use to assess that? Can you raise a concrete example?
36	
37	- Which type of tasks did you actually complete on this platform? Are there any changes in terms of its usage, during the development of the contest?
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39	- Which features do you usually use on this platform? In what circumstances do you use them?
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41	- Could you maybe raise an example when this platform performed a task as expected?
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7	- Could you maybe raise an example of when this platform did not perform an expected task?
8	- Did the way in which people talk on this platform change when new members join? If so, could you maybe raise an example?
9	Why do think that happened?
10	- Do you think the use of this platform has brought changes to the organization of SODA (Cue: the relationship among
11	stakeholders, or the distribution of resources)? What are these changes? Why do think these changes have happened?
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14	Authority, decision-making
15	- Who or which organization do you think is leading the project?
16	- Who or which organization do you think makes decisions in the group? Why is that?
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19	Macro Context
20	- During the preparation of SODA, do you recognize any specific rules, or polies, institutions that have led to a certain way of
21	collaboration between government and non-government stakeholders? Could you please raise an example about that?
22	- Do you recognize any resemblances or differences between the organizing pattern of SODA, and the organizing pattern in
23	certain sectors (cue: for example, government, businesses or universities)? What are they? Why do you think that has
24	happened?
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28	Follow up
29	Is there anything you would like to add?
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