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OBSTACLES AND SOLUTIONS ON THE LADDER OF CITIZEN PARTICIPATION: A SYSTEMATIC REVIEW
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3 **OBSTACLES AND SOLUTIONS ON THE LADDER OF CITIZEN**
4 **PARTICIPATION**
5 **A systematic review**
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10 **Abstract**

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12 This article presents a systematic review of the English-language empirical literature about
13 citizen participation to identify the obstacles to its implementation and the most successful
14 ways to address them. Three sets of variables seem to impact effectiveness: contextual factors,
15 including information asymmetries and public officials' attitude; organisational arrangements,
16 including community representation criteria and process design; and process management
17 issues, including group dynamics and collaboration quality. Two recommendations stem from
18 our analysis: internalise decisions in organisational procedures, and establish ongoing
19 interactions between government bodies and their stakeholders. We conclude that half-hearted
20 engagement is unlikely to lead to successful citizen participation.
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30 Keywords: citizen participation, stakeholder inclusion, interactive decision-making,
31 deliberative engagement, interactive governance.
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Introduction

Over the last fifty years the benefits and drawbacks of citizen participation in decision-making by public sector organizations have attracted a significant amount of attention by researchers, policy-makers and practitioners alike (Kickert *et al.* 1997; Edelenbos 1999; OECD 2001; McLaverty 2002; Klijn 2008). The overall purpose of citizen participation is to enhance the quality and legitimacy of policy decisions, thus overcoming the problems faced by representative democracy, especially when dealing with wicked problems, multi-faceted issues and fragmented policy environments (Fazi and Smith 2006).

As a consequence of the dissatisfaction with traditional mechanisms of political representation, the interest for citizen participation has intensified as a way ‘to deepen the ways in which ordinary people can effectively participate in and influence policies which directly affect their lives’ (Fung and Wright 2001: 7). In many representative systems of government there is consensus that, beyond the occasional opportunity to vote for national, regional and local governments, citizens should be allowed and indeed encouraged to participate in decisions that affect them (Burton 2009: 263). Participation, though, is not a dichotomic variable: it can entail different levels of engagement, ranging from being informed to being consulted or even empowered to suggest solutions or choose among alternatives, with each level ‘corresponding to the extent of citizens’ power in determining the end product’ (Arnstein 1969: 217). Branded under different names over the years (stakeholder inclusion, interactive decision-making, deliberative engagement, civil dialogue, joined-up government, interactive governance, deliberative democracy, etc.), citizen participation has been suggested or even mandated to pursue important goals such as incorporating public values and preferences into decision-making, increasing the quality of decisions, informing the public, fostering trust in institutions, reducing conflict and making cost-effective decisions (Beierle 1999).

A systematic assessment of whether citizen participation does deliver on its promises has received much less attention: this concern in itself is not new (Arnstein 1969; Riedel 1972; Rich and Rosenbaum 1981; Kenney 2000), but most contributions still consider the benefits of participation as a given. More recently, though, questions have surfaced as to under what conditions citizens’ engagement is performing at a level that justifies its costs (Barnes *et al.* 2003; Involve 2005; Michels and De Graaf 2010; Devins *et al.* 2014). Normative assumptions about the value of citizen participation are often taken for granted, and many examples of successes and failures are under-analysed or overestimated, thus blurring its potential and

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3 hiding some of its downfalls. As Burton puts it, ‘for something that is held to be so important
4 and to deliver a myriad of benefits, we know little of the extent to which the benefits of public
5 participation are in fact delivered or of the balance of these benefits with any costs’ (2009:
6 264).
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10 A growing number of empirical studies does try to understand what makes participation
11 successful and what effective engagement truly means, with different levels of depth, breadth
12 and methodological sophistication (Chess 2000; Rowe and Frewer 2005; Rowe *et al.* 2008;
13 Berner *et al.* 2011). The other side of the coin, i.e. what challenges are most commonly faced
14 by citizen participation initiatives, received so far more limited coverage. The involvement of
15 citizens is often time-consuming; it may be pointless if its results are ignored, or even backfire
16 creating mistrust and hostility; it may be heavily influenced by vocal interest groups; it may
17 imply a loss of decision-making control by authorities (Lowndes *et al.* 2006; Sun *et al.* 2009;
18 Gusmano 2013). Even taking a broad approach to the topic of citizen participation, to our
19 knowledge only four literature reviews have been published in this area (Delli Carpini *et al.*
20 2004; Irvin and Stansbury 2004; McGuire 2006; Garau 2012), whereas three more are
21 available outside of the traditional academic circuit (Petts and Leach 2000; Involve 2005;
22 Devins *et al.* 2014): none of them took a systematic approach to the analysis of available
23 evidence.
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27 This study aims to shed light on the variables at work in citizen participation through a
28 systematic review following PRISMA guidelines (Preferred Reporting Items for Systematic
29 Reviews and Meta-Analyses; Liberati *et al.* 2009; Moher *et al.* 2009). The analysis focuses on
30 the case studies described in the English-language scholarly literature to identify the obstacles
31 to effective citizen participation and the most successful ways to address them. This article
32 does not try to systematize the entire empirical literature on this issue, nor does it endeavour
33 to identify a ‘one-size-fits-all’ solution, but to pinpoint the challenges to implementation as
34 well as the drivers of success. The underlying rationale is that ‘case study research has its
35 strength in producing novel theoretical insights stemming from case-specific contextualized
36 findings’, but notwithstanding decades of research ‘little accumulation of the understanding
37 gathered from these primary case studies has been gained’ so far (Hoon 2013: 522).
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41 The relevance of our review is twofold. First, given the importance attributed by many policy-
42 makers to citizen participation, we aim to offer the reader a balanced, evidence-based
43 overview of the conditions under which it does or does not work. Second, a systematic review
44 helps make the extant body of knowledge on key variables and their relationships more
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3 transparent in a reproducible way, thus highlighting what is known and what should be
4 studied in more depth.
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6 The article first describes the methods we used. It then presents an overview of the results that
7 sheds light on the hurdles mentioned most frequently and the levers facilitating successful
8 participation. It concludes with a discussion of key learning points, limitations and avenues
9 for further research.
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13 **Research strategy**

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15 We conducted a systematic literature review of academic articles published between 1985 and
16 2014 and available online in full text. Systematic reviews follow a replicable and transparent
17 protocol for the search and appraisal of literature that aims to minimize bias and require
18 clearly specified research questions, together with inclusion and exclusion criteria for
19 selecting publications, as well as prescriptions for how to assess and synthesise the resulting
20 evidence (Tranfield *et al.* 2003).
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28 Using Arksey and O'Malley's framework (2005), we followed the protocol outlined below in
29 order to carry out a systematic review of the practical examples of citizen participation
30 described in the literature.
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34 *Step 1: research questions*

35 Two research questions guided this review:
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37 RQ1: What have been the main obstacles to successful citizen participation?
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39 RQ2: How have they been dealt with in real engagement processes?
40

41 Keeping in mind what Stewart (2012: 74-75) defines as 'exploratory multi-case governance
42 research', which characteristically explores processes, we developed a framework for
43 understanding how engagement works by analysing several contributions without arguing a
44 particular point, but rather providing additional insights into the hurdles to citizen
45 participation and the circumstances under which it succeeds.
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49 *Step 2: identification of relevant studies*

50 Since shared definitions of citizen participation have not yet been agreed upon (Fazi and
51 Smith 2006: 22), for the purposes of this review we considered all the arrangements falling
52 under the broad umbrella of interactive governance as defined by Torfing *et al.* (2014), i.e.
53 'the complex process through which a plurality of actors with diverging interests interact in
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3 order to formulate, promote and achieve common objectives by means of mobilizing,
4 exchanging and deploying a range of ideas, rules and resources' (Torfing *et al.* 2014: 14).
5 Hence, we used as keywords for the database search:
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8 'citizen participation' OR 'stakeholder inclusion' OR 'interactive decision making' OR
9 'deliberative engagement' OR 'civil dialogue' OR 'joined-up government' OR 'deliberative
10 democracy' OR "interactive governance"
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16 'challenge' OR 'obstacle' OR 'best practice' OR 'good practice' OR 'technique' OR
17 'initiative' OR 'intervention' OR 'policy' OR 'policies' OR 'process' OR 'regulation' OR
18 'scheme' OR 'strategy' OR 'strategies'.
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21 A pilot search was constructed to identify articles where any of the above combinations
22 appeared in the title, abstract or full text discussing citizen participation. The abstracts of
23 twenty articles were analysed to verify whether the keywords we selected allowed to retrieve
24 contributions in line with our purposes.
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28 The protocol we used followed as much as possible the PRISMA guidelines, originally
29 developed for reporting reviews evaluating randomised clinical trials (Liberati *et al.* 2009;
30 Moher *et al.* 2009). Social science research is not fully compatible with all the steps for the
31 PRISMA checklist, because of the nature of the phenomena observed and the importance of
32 interpretive approaches; nevertheless, the systematic nature of this approach contributes to the
33 advancement of our insights, since it 'ensures transparent and complete reporting' (Voorberg
34 *et al.* 2015: 5) and it has been repeatedly endorsed (Panic *et al.* 2013). We applied the
35 PRISMA checklist as follows:
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- 42 • identification of all English-language scholarly publications from 1985 to 2014
43 available in full text in 2016 in the meta-search engines EBSCO-HOST (Business
44 Source Complete; EconLit with Full Text; Regional Business News) and ISI Web of
45 Science (Science Citation Index Expanded; Social Sciences Citation Index; Arts and
46 Humanities Citation Index; Conference Proceedings Citation Index - Science;
47 Conference Proceedings Citation Index - Social Science and Humanities), using the
48 keywords mentioned above as selection criteria; as ISI Web of Science starts from
49 1985, no records published before that year have been included;
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51 • inclusion of additional articles published in the 1985-2014 time frame identified by
52 experts;
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- screening and removal of duplicates and irrelevant records, particularly those without references to citizen participation;
- selection of eligible records that could help answer our research questions, i.e. empirical studies that highlighted obstacles and solutions;
- qualitative synthesis of relevant studies, first identifying the obstacles mentioned most frequently, then summarising the solutions cited as most suitable to help overcome those obstacles or reduce their impact.

Only the identification of records and the removal of duplicates could be carried out through a computerized process; the following steps involved screening 1,185 abstracts and then reading 230 full-text articles. The final step of a standard PRISMA approach, i.e. quantitative synthesis, could not be carried out, as the information provided in the articles was not suitable for such an assessment; nor was it crucial for this article, since the selected studies were mostly qualitative in their design and techniques.

FIGURE 1 ABOUT HERE

As illustrated in Figure 1, the approach outlined above produced a listing of 230 records. We then excluded purely conceptual contributions and selected only those that referred to actual participatory processes in the abstract. Based on this criterion, 122 articles were considered relevant and analysed in full. Out of them, seventy-two were excluded as they cited but did not discuss actual examples of participation or did not deal with obstacles and solutions, but focused only on challenges without offering a possible way forward. Eventually fifty articles were used for qualitative analysis.

Step 3: data charting

Data were then charted using an *ad hoc* extraction protocol that included the following categories:

- article baseline information: author/s; title; journal; year; keywords; subject; methodology; research question or empirical objective; country/ies;
- relevant evidence: obstacles associated with citizen participation; solutions (techniques, processes, examples); relevant quotes.

We recorded the solutions featured in the literature, but we did not evaluate them in terms of efficiency or effectiveness, as in many cases the amount and quality of detail and the

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3 methodological rigour of articles were insufficient to engage in a critical assessment of the
4 relationship among the goals, the obstacles, the solutions and the outcomes of engagement
5 efforts. In other terms, we considered as 'successful' any example of citizen participation
6 where the authors reported an improved degree of engagement.
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10 The form was piloted on the first ten articles and reviewed for appropriateness and
11 comprehensiveness. Once the research team validated the approach, data were extracted from
12 the remaining articles.
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14 15 *Step 4: collating, summarising and reporting the results*

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17 We then carried out a systematic review of the evidence presented in the selected literature.
18 The analytical framework paired obstacles and solutions in order to make relevant patterns
19 emerge (Cruzes and Dybå, 2011). The authors discussed emerging patterns and recurrent
20 themes that could contribute to successful citizen participation. The obstacles and
21 corresponding solutions stemming from our analysis were clustered around three sets of
22 variables: contextual factors, organisational arrangements and process management. Similar
23 labels were first suggested for the measurement of the performance of interactive decision-
24 making by Edelenbos and Klijn (2005). Finally, we summarized the findings, outlining for
25 each set of variables the obstacles and the corresponding solutions suggested in the empirical
26 literature so as to facilitate the appreciation of commonalities.
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37 **Results of the systematic review**

38 *Contextual factors*

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40 By contextual factors we mean pre-existing conditions within which citizen participation is
41 expected to take place. In the articles selected for our review these variables include in
42 particular information deficit and asymmetries among participants as well as the attitude of
43 public officials.
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48 *Information deficit and asymmetries*

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50 Public participation theories tend to assume, in a neoclassical fashion, perfect knowledge and
51 information sharing by all stakeholders. Yet, our review shows that this is not the case, with
52 important implications for the functioning and the outcomes of engagement efforts. In
53 particular, citizens often have little understanding of the goals and constraints of other
54 stakeholders. Citizen participation suffers from the same information deficits and asymmetries
55 common in principal-agent interactions. In the case of citizen engagement by government, the
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3 latter acting as the agent lacks knowledge about its citizens' preferences. In the participatory
4 budgeting processes in South Korea and the US, for example, local governments were unable
5 to reflect the priorities of the citizens and 'appeared remote from local concerns' (Kim and
6 Schachter 2013: 460). On the other hand, most citizens lack knowledge of government
7 processes and mechanisms for monitoring and holding it accountable. Administrators in
8 Kentucky, Pennsylvania and Utah, for instance, perceived citizens participating in review
9 panels for state child protection agencies as lacking the technical expertise required to deal
10 with major public concerns (Buckwalter 2014). Stakeholders engage with new challenges
11 from their backgrounds and traditions of understanding: they begin to make sense of an issue
12 from a partial perspective and potentially different value judgements while they build their
13 'stakeholding', as in the case of citizen participation in managing water and river catchment
14 areas in Australia and the United Kingdom (Collins and Ison 2009). On top of this, the more
15 the issue at stake is complex or technical, the more meaningful participation becomes
16 problematic for less knowledgeable stakeholders, such as ordinary citizens. For example,
17 environmental issues are usually defined as more heavily grounded in science, wherein expert
18 knowledge is considered as more compelling than the opinions, demands or needs of citizens
19 (Sun *et al.* 2009).
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32 The main consequences of information deficits and asymmetries for engagement processes
33 are poor focus and unrealistic expectations. On the one hand, asymmetric information limits
34 the goals of many citizen participation efforts to the agenda of the organizers, rather than
35 embracing also the interests and ideas of other stakeholders. The whole concept of citizen
36 involvement often 'centres on the needs and goals of the party doing the involving, not the
37 citizen', as it was the case with the citizen forum in Kansas City (Leighninger 2007: 12). On
38 the other hand, participants may have unrealistic expectations about the influence they could
39 have: many policy challenges, such as environmental protection, are increasingly global in
40 scope, and citizens at the local level may not be in a position to understand just how their
41 actions can help address the issues of concern (Sun *et al.* 2009). Faced by complexity,
42 ignorance and asymmetry, even many advocates of citizen participation may fail to see how
43 their work can be effective.
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52 The articles we reviewed outline potential solutions to mitigate information deficit and
53 asymmetries. For example, the analysis of the Regional Citizens' Advisory Councils set up in
54 Alaska after the Exxon Valdez disaster in 1989 found that long-term interactions allow
55 participants to engage in an extended process of mutual learning through ongoing dialogue,
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3 thereby promoting informed participation even in the technically complex issues of
4 environmental management (Busenberg 2007). They also point out that involvement benefits
5 from investing resources in research projects on the issues under discussion, because this
6 helps inform and improve public participation. The example of the Dutch municipality of Bilt,
7 however, shows that the whole process can be undermined if participants do not consider the
8 experts performing the study and their findings as reliable: citizens simply believed that the
9 evidence presented by the consultants during public meetings about urban planning was
10 biased and asked for the research process to be fully shared and accessible (Edelenbos 1999).
11 Similarly, the debate over zinc emissions in surface water and aquatic sediments in the
12 Netherlands underlined the effectiveness of explicit attempts to increase interaction and create
13 joint research activities among participants as a way to increase the acceptance of the findings
14 (Van Bueren et al. 2003). If participants are not, or cannot be, involved in the execution of the
15 research work, its advancement status and results should be fed back frequently to them in
16 order to ensure their trust, and thus their involvement (Edelenbos 1999).

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18 Therefore, planning for sustainable interactions and investing in shared research efforts may
19 help mitigate information asymmetries and the lack of technical knowledge. Both of these
20 solutions, though, require time and can, therefore, only be implemented effectively when
21 participation efforts are expected to last for a long time.

22 *Attitude of public officials*

23 Public officials often see citizen participation as a palliative for the challenges posed by
24 exclusionary or unpopular policies, or a constraint imposed by external pressures (Stout
25 2010). This attitude tends to trigger the unwillingness to let go of power and control (Moe
26 1990), together with a 'tick the box', ritualistic approach that shows little appreciation for
27 public involvement (Sanderson 1999). This deprives participation of its capacity of
28 influencing the issues at stake, while decision-making is effectively carried out somewhere
29 else. Officials place little trust in the skills, intelligence and experience of ordinary people,
30 and show limited capacity and willingness of valuing 'diffused knowledge' (Campbell 2010).
31 In participatory budgeting in New Jersey, for instance, mayors undervalued public
32 engagement, while officials discounted the interest of citizens in participatory budgeting and
33 overestimated its costs (Zhang and Liao 2011). Their focus is rarely on bottom-up community
34 empowerment, but rather on building partnerships from above, for instance through
35 authorities 'funding programmes to emphasise local competition and the construction of local
36 collaborations to bid for funds' (Raco 2000: 574). This 'creates' engaged citizens, who in turn
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3 are expected to promote self-reliance, local initiative and reduced dependence on the welfare
4 state.
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7 The growing workload for officials in handling participatory processes may mean that they
8 view citizen involvement even less positively (Kim and Schachter 2013), and all the more so
9 in times of budgetary cuts. There is often a preference for outsourcing stakeholder
10 engagement to external consultants, in order to give legitimacy to a decision, but without
11 embedding these processes properly in decision-making, thus jeopardising the sustainability
12 of the outcomes and of engagement itself.
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17 The real-world examples from the articles we reviewed show how much officials' support
18 matters (Donnelly and Majka 1998). Bureaucratic structures, such as red tape and hierarchical
19 authority, are a major barrier to effective citizen participation (Yang and Pandey 2011):
20 'regulatory systems', such as the preference for command and control rather than incentives
21 mechanisms, 'are put in place not as a substitute for the democratic deficit of local
22 governance organisations, but in order that the policies and practices of such institutions
23 match the preferences of government' (Kearns 1995: 164). Participation is hampered by top-
24 down structures that impose rather than share and create distance between citizens and
25 administrators (Buckwalter 2014). On the contrary, transformational leadership, where leaders
26 take a visionary position and inspire people to follow (Raco 2000), or facilitative leadership,
27 i.e. 'working with other to achieve collective and consensual results' (Bussu and Bartels 2014:
28 2257), are associated with better outcomes. In particular, attempts at building the capacity to
29 address complex issues fail if, at the same time, responsibility and 'response-ability' are not
30 encouraged. In Australia and the United Kingdom, for instance, water management units saw
31 institutional arrangements hampering the effectiveness of participation because local
32 governments did not, nor were required to, share their knowledge with participants to the
33 water management fora (Collins and Ison 2009).
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46 Hence, the institutionalisation of interactive governance mandating the use of participatory
47 processes favours a positive attitude from officials towards these approaches. Moreover, with
48 experience, both sides can learn how to best approach each other. On the one hand, citizens'
49 capacity to engage officials increases. In the US the more people were able to understand the
50 language, culture and politics of child protection agencies, the better they were positioned to
51 engage in dialogue and shape their decisions (Buckwalter 2014). On the other, research on
52 collaboration, and in particular on community leadership and mediation roles, proved quite
53 useful in the United Kingdom in offering valuable knowledge to public managers in
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3 deliberative fora on the impact of policy making and institutional change within public
4 services (Barnes *et al.* 2003). As the citizens' forum in Kansas City experienced, finding and
5 keeping capable officials or facilitators for managing inclusion processes is key (Leighninger
6 2007), since they can ensure that such processes build trust (Schulz 2013).
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10 11 12 ***Organisational arrangements***

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14 Adopting citizen participation is an organisational decision whose 'implementation reflects an
15 organisational adaptation process with organisational consequences' (Yang and Pandey 2011:
16 881). Our review suggests that the arrangements contributing most to successful engagement
17 are community representation criteria and process design.
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20 21 ***Community representation criteria***

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23 As paradoxical as it may sound, participation is one of the most contested issues when
24 discussing participatory processes. If we put it in the context of dialogue, however, objections
25 and scrutiny seem more reasonable. Whether people are allowed to sit at the table or not is a
26 major issue in shaping the outcome of the dialogue itself; the number of people involved
27 shapes both process and results; what the outputs of the dialogue will be used for ('Why am I
28 sitting here?') influences participants' satisfaction, and thus their decision as to whether to
29 engage in the dialogue (Edelenbos and Klijn 2005; Koppenjan 2008). Each attempt at
30 engagement starts with participants' selection, so it is important to reflect first on the
31 preconditions that bring participants to the table by understanding their motivation
32 (Tijūnaitienė *et al.* 2009). Many authors have singled out the rules and modes of participation
33 as the main factor influencing the decision to participate (Edelenbos and Klijn 2005; Ryfe
34 2005). A number of contributions in our review touched upon specific aspects of
35 representation, which involve questions of democracy, legitimacy and management.
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45 The main problems concerning community representation that emerged from the fifty articles
46 concern participants' selection, which is never neutral. Selection can be seen as a continuum
47 ranging from total absence of any screening mechanism to an involvement based exclusively
48 on co-optation. On the one hand, 'the legitimacy of participatory decisions arises from
49 inviting to the table all those affected by a given issue, in order to reach fairer decisions that
50 take into account all interests' (Bussu and Bartels 2014: 2257). Yet, granting everybody the
51 right to participate is not necessarily the best solution, once we consider the differences in
52 knowledge, skills and vested interests across different segments of society: it might seem the
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3 most democratic approach, but *de facto* it triggers a series of negative consequences, such as
4 participation of the ‘usual suspects’, prevalence of hidden agendas, limited representativeness
5 and low motivation (Sun *et al.* 2009; Tijūnaitienė *et al.* 2009; Michels and de Graaf 2010).
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8 Spelling out selection criteria avoids self-selection biases (e.g., related to snowballing, i.e.
9 selecting friends of friends) and often paves the way for successful dialogue (Ryfe 2005).
10 Yang and Pandey (2011) highlight multiple involvement mechanisms and the selection of the
11 most informed and representative participants as criteria associated with better outcomes in
12 the 2007 US National Administrative Study Project. Leach (2006) suggests a hybrid approach
13 that is representative and at the same time ensures diversity. Following their analysis of
14 interactive governance in the Netherlands, Van Tatenhove *et al.* (2010) point out that
15 representation criteria depend on the goals participation is meant to pursue:
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- 22 • finding innovative ideas for policy-making requires a selection of participants with a
23 broad range of ideas, i.e. based on diversity;
- 24 • addressing deadlock situations calls on selecting participants with a specific interest in
25 solving the issue at hand;
- 26 • gaining public support implies a selection based on a combination of diversity and
27 representativeness.
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33 However, bringing people to the table is essential, but not quite enough. Diverse sets of
34 stakeholders are more likely to get – and stay – involved if they find a supportive environment
35 that allows them to influence the process from the beginning, by contributing to setting goals
36 and agendas (Campbell 2010), and experience a variety of fulfilling civic roles, such as
37 socialising, advising, advocating and deliberating (Leighninger 2007: 23).
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42 Available evidence points also at the need for clarity and effective communication of all
43 aspect of the engagement effort. The review of eight participatory arrangements in the
44 Netherlands suggests that rules and mechanisms for stakeholders’ influence should be clearly
45 communicated beforehand to facilitate selection (Van Tatenhove *et al.* 2010). In reviewing
46 engagement practices in the UK and US health sectors, Abelson *et al.* (2003) and Gusmano
47 (2013) point out that fairness in selection is achieved also through setting clear rules.
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52 *Process design*

53 Process design is critical for the success of citizen participation, especially in relation to the
54 choice and implementation of tools of dialogue and the dynamics of involvement: confused
55 definitions of engagement mechanisms and little understanding of the advantages and
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3 disadvantages of different methods may jeopardise the outcome of participation initiatives
4 (Yang and Pandey 2011). Our analysis is not so much interested in assessing specific
5 techniques, but rather in finding those principles and mechanisms which facilitate engagement
6 and make participation easier and more effective (Rowe and Frewer 2000). In their study of
7 two Dutch citizens' juries, for example, Huitema *et al.* (2007) conclude that they are quite
8 strongly influenced by a pluralist logic in their set up, where individuals are allowed to pursue
9 their own interests; yet organizers expect to arrive at some sort of deliberation, which is rarely
10 achieved, resulting in disappointment for sponsors and participants alike.

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13 As Agranoff (2006) points out, the best solution is to envisage arrangements that guarantee
14 some immediate impact within a long-term strategy, because the short-term benefits help
15 reassuring and enthusing participants and increase their trust in the process, while the long-
16 term approach makes it possible to develop effective citizen involvement.

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19 According to Ryfe (2005: 63), four requirements are particularly important when designing
20 participatory processes:

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- establishing rules of equality, civility and inclusivity that may help institutionalise participation as a routine process;
 - including stories as a medium for framing discussions;
 - clarifying stakes, as engagement works best when individuals are invested in the outcome;
 - leaving some space for learning and improvisation, as in real contexts new skills and issues tend to emerge from a complex but guided activity.

Our review suggests that the use of multiple engagement techniques (e.g. public hearings, meetings, world cafes, Internet-based surveys) reinforces the outcomes and ensures they are not biased by the technique selected (Simrell King *et al.* 1998; Lowndes *et al.* 2006; French and Bayley 2011). Both the framework for participation initiatives in the US by Rowe and Frewer (2000) and a study of US local governments with more than 50,000 inhabitants (Yang and Pandey 2011) call for using multiple involvement mechanisms to achieve better results.

Pozzebon and Mailhot (2012) highlight the importance to envisage both 'internal' and 'external' engagement mechanisms, i.e. both rules for collaborative processes (e.g., how to discuss and reach consensus) and ways to keep in touch with a broader set of stakeholders, including media, citizens and government agencies (e.g., surveys with the broader population, contacts with other groups). The importance of external engagement or 'inter-organisational

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3 collaboration' (Pozzebon and Mailhot 2012: 311) is emphasised also by Busenberg, who
4 refers to the 'collaborative capacity' (2007: 240) that should be institutionalised in the design
5 of participation processes. For example, Pozzebon and Mailhot (2012: 311) refer to
6 collaboration from businesses, which allows access to financial resources, and support from
7 faith-based organizations, which facilitate contact with low-income citizens. At the same
8 time, Busenberg (2007: 240) argues that councils need the support of organisations active in
9 their policy domains, as they often lack the authority and resources to secure the
10 implementation of the results stemming from participatory processes.

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17 Cheyne and Comrie (2002) and Thomson and Perry (2006) emphasise that a closer attention
18 to context variables, including in particular the 'politics of locality' (Kearns 1995: 157), helps
19 choose the most appropriate process design so as to avoid 'exporting' pre-defined solutions
20 (Juarez and Brown 2008); in other words, the decision to employ any technique, or
21 combination of techniques, must be accompanied by an appraisal of the context where
22 participation is going to take place and the underlying system of power relations that permeate
23 roles and practices within a community (McGuire 2006). A context-sensitive approach
24 implies that 'designing' becomes both a systemic and adaptive praxis, in which participation
25 is necessary but not sufficient for adaptation to occur: social learning must also be considered
26 (Collins and Ison 2009), i.e. initial attempts at starting participation require tweaking and
27 refinement as administrators learn better ways to engage citizens. In this respect,
28 organisational learning, i.e. 'the ability of institutions to improve their decision-making', is as
29 important as social learning (Kim and Schachter 2013: 457).

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39 To improve organisational learning, engagement processes must combine 'exploration', i.e.
40 the search for new ideas and solutions from citizens, and 'exploitation', i.e. the refinement of
41 existing ideas and solutions (Kim and Schachter 2013). Citizens' juries in the Netherlands, for
42 instance, benefited from using both an exploration strategy with a pluralist logic, to generate
43 new ideas, and deliberative approaches, to take decisions on specific items, but only once the
44 process was designed so that the pluralist approach enriched and eventually gave way to
45 deliberation (Huitema *et al.* 2007). As far as exploration is concerned, several articles
46 (Leighninger 2007; Collins and Ison 2009) suggest the importance of designing a process
47 which also takes into account participants' goals and agendas, moving from a service-focused
48 approach to a citizen-oriented strategy (Kearns 1995), as 'it is important to capitalize on the
49 interests and commitments of community member' (Skotnitsky and Ferguson 2005: 48).

Process management issues

The final set of variables that influenced the effectiveness of citizen participation according to our review concerns process management, and in particular group dynamics and issues related to the quality of collaboration.

Group dynamics

Elites within participatory groups may influence the effectiveness of stakeholder engagement, since such gatherings tend to be dominated by well-organised minority groups or vocal individuals who may have extreme views. For example, in Taiwan government experts dominate the Public Participatory Geographic Information System, leaving little space to citizens' concerns (Sun *et al.* 2009); similarly, in Dutch citizens' juries some jurors spoke more than others and had more influence on the final outcome (Huiteima *et al.* 2007). The threat is that group dynamics can become dominant, giving only ritualistic attention to participatory practice in the face, for example, of radical positions, economic pressures or political directives. This was the case in Tempe, Arizona, where decisions on important issues such as city development and urban planning were at stake (Stout 2010). Despite its collaborative spirit, participation is not 'without conflicts and power issues' (Agranoff 2006: 61). Moreover, as emphasized in the promotion of active citizenry in the US, participatory initiatives like Yes we can! risk exacerbating local inequities if they do not 'pay particular attention to who is advantaged (and potentially disadvantaged)' (Foster-Fishman 2013: 506). Otherwise, as in Nossa Sao Paulo, Brazil, leaders and elites within participatory groups working on sustainability issues may bias collaborative workings, while 'the 'equals' part of the equation is crucial in a country where poor and uneducated people often have minimal occasions or spaces to participate in political debates' (Pozzebon and Mailhot 2012: 308). While 'a certain degree of inequity is likely to occur in a jury, as there will always be leaders and followers in a group' (Huiteima *et al.* 2007: 306), it is important to take active steps to avoid that elites dominate, or even capture, participatory processes (Callanan 2005).

One more time, the evidence from the cases we examined suggests that the use of multiple participation techniques limits the bias associated to the dynamics generated by a specific method. Multiple techniques helped prevent group dynamics from influencing the overall outcome of citizen involvement in participatory budgeting in Los Angeles in the US as well as Bukgu in South Korea (Kim and Schachter 2013), whereas facilitators in Taiwan contained vocal participants' dominance by treating seriously and timely all inputs and maintaining the interest of all participants (Sun *et al.* 2009). Similarly, at the 'forages' (meetings at which local

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3 residents 'hammer out' decisions) in Hoogeveen in the Netherlands, 'professional connectors'
4 helped provide 'constant individual personal attention' to all participants, so as to ensure their
5 contribution to the debate (Guertz and van de Wijdeven 2010: 541). In Ireland the influence
6 of vocal individuals and experts within local committees was limited through the
7 implementations of equal participation rules and mechanisms for all (Callalan 2005), whereas
8 in the US conflicts and power issues within networks were restrained by keeping hierarchies
9 to a minimum through collaborative management, i.e. 'facilitating and operating in multi
10 organizational arrangements to solve problems that cannot be solved, or solved easily, by
11 single organizations' (Agranoff 2006: 56). In the case of marginalised groups, examples from
12 California showed how capable facilitators can play an important role in ensuring that weaker
13 participants are actively engaged and not overwhelmed by other discussants (Juarez and
14 Brown 2008). According to Ryfe (2005: 63), guiding the process is particularly important for
15 successful engagement, as leadership helps keep the process on track and avoid diversions.
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25 *Collaboration quality*

26 Establishing a dialogue among heterogeneous players is not always easy, let alone reaching
27 consensus, especially when there are value conflicts. Partnerships remain elusive unless
28 partners can also articulate, debate and resolve their disagreement.
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32 There are also normative and instrumental concerns. If involvement efforts are not carefully
33 managed, citizen participation may delay decisions, increase conflict, disappoint participants
34 and lead to distrust; this may occur even after issues have been framed and decisions made
35 (Yang and Pandey 2011). Little or no impact could have important consequences for current
36 and future engagement efforts, as well as for the policies under discussion. For example, in
37 the Netherlands citizens were critical about the outcomes of public involvement in urban
38 planning because of the dominant role of civil servants in defining the outcome (Michels and
39 de Graaf 2010). Similarly, people in Montreal, Canada, were sceptical about the usefulness of
40 the advisory committee in Plateau-Mont-Royal's borough, as it lacked proper management
41 and civil servants did not attend its meetings (Landry and Angeles 2011). In Belgium,
42 participants and organizers of environmental and health management committees seemed to
43 have diverging aims: the former aimed at influencing specific parts of local government plans
44 and were interested in learning and conflict resolution, whereas the latter were primarily
45 willing to enrich policies with new information or insights (Van Damme and Brans 2012).
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55 The articles we analysed suggest, once more, allowing collaborative efforts to stretch over
56 longer periods of time to ensure that impact is obtained (Cooper *et al.* 2006; Busenberg 2007).
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3 Agranoff's study of collaborative networks (2006) underlined the need for transparency about
4 the purpose served by citizen engagement initiatives, whereas Davies (2006) argues that
5 joined-up government efforts in the United Kingdom failed because they sustained abstract
6 goals rather than addressing citizens' priorities and agendas. Buckwalter (2014) noted how an
7 important factor shaping collaboration was whether the participating public maintained
8 realistic expectations about the process and its potential outcome. In various real-world
9 examples performance depended, among other things, on participatory processes being
10 supported by all citizens and not run for the benefit of a few big interests (Fung 2006; Sheikh
11 and Rao 2007).

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18 Moreover, a survey assessing 'high-quality' citizen engagement in the US showed that simple
19 practices such as clarification of language and standardisation of terminology may enhance
20 participation effectiveness (Halvorsen 2003). In general, the smaller the distance between
21 citizens and officials, the more likely that participants can move into a level of action that
22 catalyses decision-making, so that they achieve a deeper sense of empowerment. The citizens'
23 forum in Kansas City learnt that 'complete collaboration' is recommendable (Leighninger
24 2007), i.e. the focus should not only be on cooperation among leaders, such as mayors and
25 CEOs, but rather on collaboration occurring at many levels of the organisations involved,
26 particularly between an organisation and ordinary citizens, avoiding hierarchical
27 arrangements (Irvin and Stansbury 2004). Participants welcomed the attendance of state child
28 protection agency administrators during the citizen review panels in Kentucky, Pennsylvania
29 and Utah as enhancing the groups' success: the high degree of interconnectedness enabled the
30 panels to have greater sense of empowerment and, hence, influence (Buckwalter 2014).

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40 Similarly, community development initiatives in Jamaica benefited from broader
41 involvement, including the private sector and local authorities (Ward 2010). Yet, 'once other
42 more established and more powerful organisations are centrally involved, community
43 initiative and ownership may well be stifled. This represents a serious challenge', which calls
44 for the institutionalisation of citizen participation (Ward 2010: 185). Different authors
45 actually claim that 'the best way to assure the sustainability of a participatory framework [...]
46 is through its institutionalization' (Landry and Angeles 2011: 121). With reference to natural
47 resource management issues in the Australian agricultural sector, Boxelaar et al. (2006)
48 suggest that combining a positivist and a constructivist approach facilitates engagement:
49 participation can occur within the parameters set by the organizers, so as to ensure that they
50 keep owning and driving the process, and yet it should reflect the emergent nature of change
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3 and the contextual embeddedness of all participants. In this way ‘a space for genuine
4 collaboration’ is created, ‘where other stakeholders can perform their identities in a way that
5 does not assimilate them into or marginalize them from government practices and priorities’
6 (Boxelaar et al. 2006: 121).
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10 Lastly, the use of multiple techniques with the same group of stakeholders enhances the
11 effectiveness of collaborative efforts. In El Monte, California, results collected through
12 different techniques ‘reinforced one another as opposed to duplicating efforts’ (Juarez and
13 Brown 2008: 200). During budget hearings in Kyrgyzstan, combining participatory tools
14 facilitated a higher level of interaction among citizens as service evaluators and officials as
15 service providers (Kasymova and Schachter 2014).
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23 Discussion

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25 The evidence base featured in the articles selected for our systematic review includes twenty-
26 nine single case studies, nineteen single-country, multiple case studies and two multi-country,
27 comparative case studies. These articles shed light on the problems, barriers and threats to the
28 implementation of real-world citizen participation (RQ1), while identifying the techniques
29 and processes that have lessened such hurdles (RQ2). The findings identified three sets of
30 potential obstacles:
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- 35 • contextual factors, such as information deficit and asymmetries as well as the attitude
36 of public officials;
- 37 • organisational arrangements, in particular community representation criteria and
38 process design;
- 39 • process management issues, including group dynamics and collaboration quality.
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45 Our analysis singled out a series of practical recommendations to be taken into account in
46 order to facilitate successful citizen participation, including in particular:
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- 49 a. Allowing for long-term interaction;
- 50 b. Involving participants in research;
- 51 c. Favouring diversity and representativeness in participants’ selection;
- 52 d. Institutionalising participation;
- 53 e. Using multiple participatory methods;
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- f. Clarifying rules and mechanisms;
- g. Agreeing on expected outcomes;
- h. Involving knowledgeable facilitators;
- i. Avoiding hierarchical arrangements and red tape;
- j. Planning for short-term gains within a long-term strategy;
- k. Building supporting networks and collaborative capacity with key institutions;
- l. Mixing learning strategies that combine new ideas and refinement;
- m. Developing a context-sensitive design;
- n. Giving voice to participants' goals and agendas.

Table 1 summarizes the obstacles and solutions featured in each of the fifty articles included in our review, thus providing an answer to RQ1 (“What have been the main obstacles to successful citizen participation?”).

TABLE 1 ABOUT HERE

To get a better sense of the interplay between obstacles and solutions, we counted how many articles featured each solution, and with reference to what obstacle to citizen participation. Table 2 summarises our findings in this respect, so as to answer RQ2 (“How have obstacles been dealt with in real engagement processes?”).

TABLE 2 ABOUT HERE

The solutions with the highest absolute frequency of citation are highlighted in bold. This assessment is intrinsically qualitative, as we had to group under broader categories solutions often referred to by different authors with different names, and has no pretention of being representative beyond the scope of this article. Nevertheless, solutions suggested by different authors across a sample of articles spanning thirty years, five continents and different policy areas can claim to help make citizen participation more effective. Based on the evidence featured in our review, the solutions cited most often were ‘giving voice to participants’ goals

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3 and agendas', 'avoiding hierarchical arrangements and red tape', 'allowing for long-term
4 interaction', 'developing a context-sensitive design', 'agreeing on expected outcomes' and
5 'building supporting networks and collaborative capacity with key institutions'.
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9 These results underline that the most important factors to improve engagement are relations
10 and structure. On the one hand, as suggested by Kearns (1995), the evidence above shows
11 how strategies to improve participation should be citizen-oriented rather than service-oriented,
12 understand the causes and significance of place-uniqueness and strengthen communities and
13 citizens' sense of belonging. Secondly, the presence of a structured approach to decision-
14 making is essential to facilitate inclusion, thus improving the chances of a more systematic
15 impact. It is important to institutionalise participation (Rowe and Frewer 2000; Callanan
16 2005), establish long-term collaborations (Agranoff 2006) and enhance local capacity of
17 influencing policy-making (Irvin and Stansbury 2004).
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21 Institutionalising participation carries some risks, though, since 'defining through formal *ex*
22 *ante* rules what has to be done and how it has to be done bestows upon the administrator
23 power and influence' (Fedele *et al.* 2016: 320): this might harm participation and lead
24 collaborative processes away from citizens' 'goals and agendas', while deeper engagement is
25 triggered by authentic – rather than token – dialogue sustained over time (Simrell King *et al.*
26 1998; Sanderson 1999). Thus, for citizen participation to be effective it is paramount to find
27 the right balance between relations and structure, i.e. between adaptive and systemic praxes
28 (Collins and Ison 2009), between exploration and exploitation (Kim and Schachter 2013), and
29 in general between a constructivist and a positivist approach (Boxelaar *et al.* 2006).
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42 **Conclusion and future research**

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44 Through a review of the empirical cases reported in the English-language scholarly literature,
45 this article identified some important obstacles as well as solutions relevant for successful
46 citizen participation. The list of obstacles and solutions is not meant to be exhaustive: whereas
47 it can be argued that the most methodologically sound contributions would find their way in
48 English-language journals and conferences, the sample emerging from our selection is clearly
49 skewed towards English-speaking countries and countries that have been active for a long
50 time in English-speaking academic networks.
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56 The overall learning point is that short-term and half-hearted interactions are unlikely to lead
57 to successful outcomes. A twofold overall message stems out from the patterns we identified
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3 in the literature. On the one hand, citizen participation allows for the enrichment of solutions,
4 broadens the alternatives, fosters accountability and transparency, and facilitates a tailor-made
5 ‘localisation’ of the decisions taken; on the other, there is still little evidence that it can
6 improve the efficiency and effectiveness of decision-making.
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10 An initial appraisal of the results calls for a more structured approach to research on
11 interactive governance. Is it possible to combine efficiency and enrichment in decision-
12 making? There is no unconditional answer to this question: the fact that citizen participation is
13 intrinsically multidisciplinary suggests approaching this area of research with more clarity in
14 both epistemology and methodology. As a starter, a shared terminology would help shed light
15 on the results and conclusions of individual studies. Without consensus on terminology it
16 cannot be presumed that readers will extract the same meanings from a text, as they could be
17 influenced by their assumptions, priorities and beliefs (MacLure 2005).
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21 The willingness to follow a systematic approach in our analysis of scholarly contributions on
22 citizen participation, differently from available literature reviews, and the decision to follow
23 PRISMA guidelines imply that our search focused on the first thirty years of research
24 available in the meta-search engines EBSCO-HOST and ISI Web of Science, with the latter
25 starting from 1985. This choice is not meant to underscore the relevance of prior contributions
26 matching our requirements: as an example, a full special issue of the *Journal of Applied*
27 *Behavioral Science* was devoted in 1981 to empirical contributions documenting ‘some of the
28 unanticipated outcomes of citizen participation’ and presenting ‘alternative, more effective,
29 forms of citizen participation’ (Rich and Rosenbaum 1981: 442). For the same reason books
30 and book chapters could not be included in our search, with the exception of the conference
31 proceedings featured in ISI Web of Science.
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35 An avenue of future research is the refinement of the set of obstacles and solutions we
36 identified with reference to specific policy areas. Over half the selected articles dealt with
37 crosscutting issues such as community planning, budgeting and holding local government
38 accountable, but the rest focused on a variety of sectoral challenges, including environmental
39 protection, health and social care, urban planning and landscape architecture, sustainability
40 and quality of life, and economic development. As our analysis pointed out, contextual factors
41 do matter, and information deficits and asymmetries in particular play a different role across
42 the spectrum of governmental responsibilities: as a consequence, process design must be
43 context-sensitive for citizen participation to be effective, and systematic literature reviews
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3 focusing on specific policy areas could yield finer-grained insights on what works and what
4 does not.
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7 Future efforts should also look at assessing the transferability of the solutions suggested in the
8 literature across different contexts, taking also into consideration the impact of national and
9 local cultural patterns as well as different administrative traditions (Painter and Peters 2010).
10 With twenty-one cases from the US, nine from the United Kingdom and seven from the
11 British Commonwealth, over two thirds of the citizen participation initiatives included in our
12 review are embedded in the Anglo-Saxon administrative tradition. This case selection bias
13 does not necessarily weaken the explanatory power of our findings, but it does suggest that
14 more balanced empirical research is needed to develop more robust theoretical insights, both
15 to explain the track record of citizen participation and to provide predictive and prescriptive
16 lessons for the future (Collinson and Rugman 2010).
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24 This article did not endeavour to evaluate the validity and reliability of the solutions featured
25 in the literature, as few contributions could be labelled as methodologically rigorous case
26 studies (Gibbert et al. 2008; Gibbert and Ruigrok 2010). This is an issue deserving more
27 attention by the scholarly community dealing with interactive governance. When studying
28 citizen participation, quantitative tools are rarely used to collect data and interpret results:
29 ‘engagement processes are rarely evaluated, and when they are, the quality of evidence is
30 generally poor. The absence of standard effectiveness criteria, and instruments to measure
31 performance against these, hinders evaluation, comparison, generalisation and the
32 accumulation of knowledge’ (Rowe *et al.* 2008: 419). Systematic reviews are as sound as the
33 articles they analyse, thus an increase in rigour and standardisation, both in data collection
34 and the evaluation criteria of participatory processes (e.g. in terms of adequacy and contextual
35 fit of organisational arrangements and their evaluation in terms of expected results) would be
36 beneficial. However, as mentioned by Burton (2009: 281) ‘there remain substantial practical
37 problems in devising and applying practical measures of the key variables’: one can assess
38 results in terms of the number of stakeholders attending a participatory event, whether
39 consensus has been reached or whether stakeholders are satisfied (Coglianese 2002; Ianniello
40 et al. 2012), but ‘variables relating to the quality of decisions made or the legitimacy of
41 decision-making structures are inherently more difficult to measure’ (Burton 2009: 281).
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55 Nevertheless, an increase in rigour and standardisation of data collection and evaluation
56 criteria of citizen participation would facilitate more systematic comparisons (Eisenhardt
57 1991; Hoon 2013). In other words, it would ultimately make it possible to draw sounder
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conclusions and more robust generalisations from which further practical lessons could be learnt. Should rigorous qualitative and quantitative assessments of the empirical evidence become available, future systematic reviews may lead to reconsider the findings of this work and re-examine the solutions most suitable to make citizen participation more successful.

References

* Included in systematic review

*Abelson, J., P.-G. Forest, J. Eyles, P. Smith, E. Martin, and F. P. Gauvin. 2003. "Deliberations about Deliberative Methods: Issues in the Design and Evaluation of Public Participation Processes." *Social Science & Medicine* 57 (2): 239–251.

*Agranoff, R. 2006. "Inside Collaborative Networks: Ten Lessons for Public Managers." *Public Administration Review* 66 (Issue Supplement s1): 56–65.

Arksey, H., and L. O'Malley. 2005. "Scoping Studies: Towards a Methodological Framework." *International Journal of Social Research Methodology* 8 (1): 19–32.

Arnstein, S. R. 1969. "A Ladder of Citizen Participation." *Journal of the American Planning Association* 35 (4): 216–224.

*Barnes, M., J. Newman, A. Knops, and H. Sullivan. 2003. "Constituting 'the Public' in Public Participation." *Public Administration* 81 (2): 379–399.

Beierle, T. C. 1999. "Using Social Goals to Evaluate Public Participation in Environmental Decisions." *Review of Policy Research* 16 (3-4): 75–103.

Berner, M., J. Amos, and R. Morse. 2011. "What Constitutes Effective Citizen Participation in Local Government? Views from City Stakeholders." *Public Administration Quarterly* 35 (1): 128–163.

*Boxelaar, L., M. Paine, and R. Beilin. 2006. "Community Engagement and Public Administration: of Silos, Overlays and Technologies of Government." *Australian Journal of Public Administration* 65 (1): 113–126.

*Buckwalter, N. D. 2014. "The Potential for Public Empowerment through Government-organized Participation." *Public Administration Review* 74 (5): 573–584.

Burton, P. 2009. "Conceptual, Theoretical and Practical Issues in Measuring the Benefits of Public Participation." *Evaluation* 15 (3): 263–284.

*Busenberg, G. J. 2007. "Citizen Participation and Collaborative Environmental Management in the Marine Oil Trade of Coastal Alaska." *Coastal Management* 35 (2-3): 239–253.

*Bussu, S., and K. P. R. Bartels. 2014. "Facilitative Leadership and the Challenge of Renewing Local Democracy in Italy." *International Journal of Urban and Regional Research* 38 (6): 2256–2273.

*Callanan, M. 2005. "Institutionalizing Participation and Governance? New Participative Structures in Local Government in Ireland." *Public Administration* 83 (4): 909–929.

*Campbell, D. 2010. "Democratic Norms to Deliberative Forms: Managing Tools and Tradeoffs in Community-based Civic Engagement." *Public Administration & Management* 15 (1): 305–341.

1
2
3 Chess, C. 2000. "Evaluating Environmental Public Participation: Methodological Questions." *Journal of Environmental Planning and Management* 43 (6): 769–784.

4
5
6 *Cheyne, C., and M. Comrie. 2002. "Enhanced Legitimacy for Local Authority Decision Making: Challenges, Setbacks and Innovation." *Policy & Politics* 30 (4): 469–482.

7
8
9
10
11 Coglianesi, C. 2002. *Is Satisfaction Success? Evaluating Public Participation in Regulatory Policymaking*. Cambridge, MA: KSG Working Paper No. RWP02-038, available at <https://research.hks.harvard.edu/publications/getFile.aspx?Id=53> (accessed 26 August 2017).

12
13
14
15 *Collins, K., and R. Ison. 2009. "Jumping Off Arnstein's Ladder: Social Learning as a New Policy Paradigm for Climate Change Adaptation." *Environmental Policy and Governance* 19 (6): 358–373.

16
17
18
19 Collinson, S., and A. M. Rugman. 2010. "Case Selection Bias in Management Research: The Implications for International Business Studies." *European Journal of International Management* 4 (5): 441–463.

20
21
22 *Cooper, T. L., T. A. Bryer, and J. W. Meek. 2006. "Citizen-centered Collaborative Public Management." *Public Administration Review* 66 (Issue Supplement s1): 76–88.

23
24
25 Cruzes, D. S., and Dybå, T. (2011). "Research Synthesis in Software Engineering: A Tertiary Study." *Information and Software Technology* 53 (5): 440–455.

26
27 *Davies, J. S. 2009. "The Limits of Joined-up Government: Towards a Political Analysis." *Public Administration* 87 (1): 80–96.

28
29
30
31 Delli Carpini, M. X., F. L. Cook, and L. R. Jacobs. 2004. "Public Deliberations, Discursive Participation and Citizen Engagement: A Review of the Empirical Literature." *Annual Review of Political Science* 7 (1): 315–344.

32
33
34
35 Devins, D., B. Mitchell, and P. Willis. 2014. "Literature Review." *Small and Medium Enterprise: Deliberative Engagement*, Leeds: Leeds Beckett University, available at: <http://smedenet.eu/library/read?articleid=14> (accessed 28 December 2016).

36
37 *Donnelly, P. G., and T. J. Majka. 1998. "Residents' Efforts at Neighborhood Stabilization: Facing the Challenges of Inner City Neighborhoods." *Sociological Forum* 13 (2): 189–213.

38
39
40 *Edelenbos, J. 1999. "Design and Management of Participatory Public Policy Making." *Public Management: An International Journal of Research and Theory* 1 (4): 569–576.

41
42
43
44 *Edelenbos, J., and E.-H. Klijn. 2005. "Managing Stakeholder Involvement in Decision Making: A Comparative Analysis of Six Interactive Processes in the Netherlands." *Journal of Public Administration Research and Theory* 16 (3): 417–466.

45
46 Eisenhardt, K. M. 1991. "Better Stories and Better Constructs: The Case for Rigor and Comparative Logic." *Academy of Management Review* 16 (3): 620–627.

47
48
49
50
51 Fazi, E., and J. Smith. 2006. *Civil Dialogue: Making It Work Better*. Brussels: Civil Society Contact Group, available at: <http://act4europe.horus.be/module/FileLib/Civil%20dialogue,%20making%20it%20work%20better.pdf> (accessed 28 December 2016).

52
53
54
55 Fedele, P., L. Brusati, and M. Ianniello. 2016. "Organizational Underpinnings of Interactive Decision Making: An Empirical Inquiry." *International Journal of Public Sector Management* 29 (4): 310–326.

56
57
58
59
60 *Foster-Fishman, P. G., C. Collins, and S. J. Pierce. 2013. "An Investigation of the Dynamic Processes Promoting Citizen Participation." *American Journal of Community Psychology* 51:

1
2
3 492–509.

4 *French, S., and S. Bayley. 2011. “Public Participation: Comparing Approaches.” *Journal of*
5 *Risk Research* 14 (2): 241–257.

6
7 *Fung, A. 2006. “Varieties of Participation in Complex Governance.” *Public Administration*
8 *Review* 66 (Issue Supplement s1): 66–75.

9
10 Fung, A., and E. O. Wright. 2001. “Deepening Democracy: Innovations in Empowered
11 Participatory Governance.” *Politics & Society* 29 (1): 5–41.

12
13 Garau, C. 2012. “Citizen Participation in Public Planning: A Literature Review.”
14 *International Journal of Sciences* 1 (12): 21–44.

15
16 Gibbert, M., W. Ruigrok, and B. Wicki. 2008. “What Passes as a Rigorous Case Study?”
17 *Strategic Management Journal* 29 (13): 1465–1474.

18
19 Gibbert, M., and W. Ruigrok. 2010. “The ‘What’ and ‘How’ of Case Study Rigor: Three
20 Strategies Based on Published Work.” *Organizational Research Methods* 13 (4): 710–737.

21
22 *Guertz, C., and T. van de Wijdeven. 2010. “Making Citizen Participation Work: The
23 Challenging Search for New Forms of Local Democracy in the Netherlands.” *Local*
24 *Government Studies* 36 (4): 531–549.

25
26 *Gusmano, M. K. 2013. “FDA Decisions and Public Deliberation: Challenges and
27 Opportunities.” *Public Administration Review* 73 (S1): S115–S126.

28
29 *Halvorsen, K. E. 2003. “Assessing the Effects of Public Participation.” *Public*
30 *Administration Review* 63 (5): 535–543.

31
32 Hoon, C. 2013. “Meta-Synthesis of Qualitative Case Studies: An Approach to Theory
33 Building.” *Organizational Research Methods* 16 (4): 522–556.

34
35 *Huitema, D., M. van de Kerkhof, and U. Pesch. 2007. “The Nature of the Beast: are
36 Citizens’ Juries Deliberative or Pluralist?” *Policy Sciences* 40 (4), pp. 287–311.

37
38 Ianniello, M., P. Fedele, and L. Brusati. 2012. “Stakeholders’ Inclusion: Measuring the
39 Performance of Interactive Decision Making.” In *Reforming the Public Sector: How to Make*
40 *the Difference*, edited by G. Tria and G. Valotti, 260–284. Washington, DC: Brookings
41 Institution Press.

42
43 Involve. 2005. *The True Costs of Public Participation*. London: Involve, available at:
44 <http://www.involve.org.uk/wp-content/uploads/2011/03/True-Costs-Full-Report2.pdf>
45 (accessed 29 December 2016).

46
47 *Irvin, R. A., and J. Stansbury. 2004. “Citizen Participation in Decision Making: Is It Worth
48 the Effort?” *Public Administration Review* 64 (1): 55–65.

49
50 *Juarez, J. A., and K. D. Brown. 2008. “Extracting or Empowering? A Critique of
51 Participatory Methods for Marginalized Populations.” *Landscape Journal* 27 (2): 190–204.

52
53 *Kasymova, J. T., and H. L. Schachter. 2014. “Bringing Participatory Tools to a Different
54 Level.” *Public Performance & Management Review* 37 (3): 441–464.

55
56 *Kearns, A. 1995. “Active Citizenship and Local Governance: Political and Geographical
57 Dimensions.” *Political Geography* 14 (2): 155–175.

58
59 Kenney, D. S. 2000. *Arguing About Consensus: Examining the Case Against Western*
60 *Watershed Initiatives and Other Collaborative Groups Active in Natural Resources*
Management. Boulder, CO: Natural Resources Law Center, University of Colorado School of

1
2
3 Law.

4 Kickert, W. J., E.-H. Klijn, and J.F. Koppenjan. 1997. *Managing Complex Networks. Strategies for the Public Sector*. Thousand Oaks, CA: Sage.

7 *Kim, S., and H. L. Schachter. 2013. "Citizen Participation in the Budget Process and Local Government Accountability." *Public Performance and Management Review* 36 (3): 456–471.

10 Klijn, E.-H. 2008. "Governance and Governance Networks in Europe." *Public Management Review* 10 (4): 505–525.

12 Koppenjan, J. F. 2008. "Creating a Playing Field for Assessing the Effectiveness of Network Collaboration by Performance Measures." *Public Management Review* 10 (6): 699–714.

15 *Landry, J. and L. Angeles. 2011. "Institutionalizing Participation in Municipal Policy Development: Preliminary Lessons from a Start-Up Process in Plateau-Mont-Royal." *Canadian Journal of Urban Research* 20 (1): 105–131.

18 *Leach, W. D. 2006. "Collaborative Public Management and Democracy: Evidence from Western Watershed Partnerships." *Public Administration Review* 66 (Issue Supplement s1): 100–110.

21 *Leighninger, M. 2007. "Is Everything up to Date in Kansas City? Why 'Citizen Involvement' May Soon Be Obsolete." *National Civic Review* 96 (2): 12–27.

24 Liberati, A., D. Altman, J. Tetzlaff, C. Mulrow, P. C. Gøtzsche, J. Loannidis, and D. Moher. 2009. "The PRISMA Statement for Reporting Systematic Reviews and Meta-Analyses of Studies that Evaluate Health Care Interventions: Explanation and Elaboration." *Annals of Internal Medicine* 151 (4): W-65–W-94.

27 *Lowndes, V., P. Lawrence, and S. Gerry. 2006. "Diagnosing and Remediating the Failings of Official Participation Schemes: The CLEAR Framework." *Social Policy and Society* 5 (2): 281–891.

30 MacLure, M. 2005. "Clarity Bordering on Stupidity: Where's the Quality in Systematic Review?" *Journal of Education Policy* 20 (4): 393–416.

33 *McGuire, M. 2006. "Collaborative Public Management: Assessing What We Know and How We Know It." *Public Administration Review* 66 (Issue Supplement s1): 33–43.

36 McLaverty, P. (ed.) 2002. *Public Participation and Innovations in Community Governance*. Aldershot: Ashgate.

39 *Michels, A., and L. De Graaf. 2010. "Examining Citizen Participation: Local Participatory Policy Making and Democracy." *Local Government Studies* 36 (4): 477–491.

42 Moe, T. M. 1990. "The Politics of Structural Choice: Toward a Theory of Public Bureaucracy". In *Organization Theory: From Chester Barnard to the Present and Beyond*, edited by O. E. Williamson, 116–153. Oxford: Oxford University Press.

45 Moher, D., A. Liberati, J. Tetzlaff, and D.G. Altman. 2009. "Preferred Reporting Items for Systematic Reviews and Meta-Analyses: The PRISMA Statement." *Annals of Internal Medicine* 151 (4): 264–269.

48 OECD. 2001. *Citizens as Partners*. Paris: OECD.

51 Painter, M., and B.G. Peters. 2010. "Administrative Traditions in Comparative Perspective: Families, Groups and Hybrids." In *Tradition and Public Administration*, edited by M. Painter and B.G. Peters, 19–30. Basingstoke: Palgrave Macmillan.

1
2
3 Panic, N., E. Leoncini, G. de Belvis, W. Ricciardi, S. Boccia. 2013 “Evaluation of the
4 Endorsement of the Preferred Reporting Items for Systematic Reviews and Meta-Analysis
5 (PRISMA) Statement on the Quality of Published Systematic Review and Meta-Analyses.”
6 *PLoS ONE* 8 (12): e83138.

7
8 Petts, J., and B. Leach. 2000. *Evaluating Methods for Public Participation: A Literature*
9 *Review*. Bristol: Environmental Agency, available at:
10 [https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/290295/stre135](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/290295/stre135-e-e.pdf)
11 [-e-e.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/290295/stre135-e-e.pdf) (accessed 29 December 2016).

12
13 *Pozzebon, M., and C. Mailhot. (2012). “Citizens Engaged to Improve the Sustainability and
14 Quality of Life of Their Cities: The Case of Nossa Sao Paulo.” *Journal of Change*
15 *Management* 12 (): 301–321.

16
17 *Raco, M. 2000. “Assessing Community Participation in Local Economic Development:
18 Lessons for the New Urban Policy.” *Political Geography* 19 (5): 573–599.

19
20 Rich, R. C., and W. A. Rosenbaum. 1981. “Introduction.” *Journal of Applied Behavioral*
21 *Science* 17 (4): 439–445.

22
23 Riedel, J. A. 1972. “Citizen Participation: Myths and Realities.” *Public Administration*
24 *Review* 32 (3): 210–220.

25
26 Rowe, G., and L. J. Frewer. 2000. “Public Participation Methods: A Framework for
27 Evaluation.” *Science, Technology and Human Values* 25 (1): 3–29.

28
29 Rowe, G. and L. J. Frewer. 2005. “A Typology of Public Engagement Mechanisms.” *Science,*
30 *Technology and Human Values* 30 (2): 251–290.

31
32 Rowe, G., T. E. Horlick-Jones, J. Walls, W. Poortinga, and N. F. Pidgeon. 2008. “Analysis of
33 a Normative Framework for Evaluating Public Engagement Exercises: Reliability, Validity
34 and Limitations.” *Public Understanding of Science* 17 (4): 419–441.

35
36 Ryfe, D. M. 2005. “Does Deliberative Democracy Work?” *Annual Review of Political*
37 *Science* 8 (1): 49–71.

38
39 *Sanderson, I. 1999. “Participation and Democratic Renewal: from ‘Instrumental’ to
40 ‘Communicative Rationality’?” *Policy & Politics* 27 (3): 325–341.

41
42 Schulz, S. M. 2013. “Commentary: In Search of the Secret Public Participation Recipe.”
43 *Public Administration Review* 73 (1): 34–35.

44
45 *Sheikh, K., and S. Rao. 2007. “Participatory City Planning in Chhattisgarh: a Civil Society
46 Initiative.” *Environment & Urbanization* 19 (2): 563–581.

47
48 *Simrell King, C., K. M. Feltey, and B. O’Neill Susel. 1998. “The Question of Participation:
49 Toward Authentic Public Participation in Public Administration.” *Public Administration*
50 *Review* 58 (4): 317–326.

51
52 *Skotnitsky, L., and E. Ferguson. 2005. “Building Community Capacity with Non-Profit
53 Boards in the Inner City.” *Canadian Journal of Urban Research* 14 (1): 32–53.

54
55 Stewart, J. 2012. “Multiple-case Study Methods in Governance-related Research.” *Public*
56 *Management Review* 14 (1): 67–82.

57
58 *Stout, M. 2010. “Climbing the Ladder of Participation: Establishing Local Policies for
59 Participatory Practice.” *Public Administration & Management* 15 (1): 46–97.

60
*Sun, M. T.-W., Y.-T. Tsai, M.-C. Shih, and J. Y.-W. Lin 2009. “Public Participation and the
Concept of Space in Environmental Governance: An Application of PPGIS.” *Public*

1
2
3 *Administration and Development* 29 (3): 250–261.

4 *Thomson, A. M., and J. L. Perry. 2006. “Collaboration Processes: Inside the Black Box.”
5 *Public Administration Review* 66 (Issue Supplement s1): 20–32.

6
7 *Tijūnaitienē, R., B. Neverauskas, and S. Balčiūnas. 2009. “Motivation Expression of Citizen
8 Participation in Organisations of Citizen Society.” *Inzinerine Ekonomika - Engineering*
9 *Economics* 61 (1): 65–74.

10
11 Torfing, J., B. G. Peters, J. Pierre, and E. Sørensen. 2012. *Interactive Governance: Advancing*
12 *the Paradigm*. Oxford: Oxford University Press.

13
14 Tranfield, D., D. Denyer, and P. Smart. 2003. “Towards a Methodology for Developing
15 Evidence-Informed Management Knowledge by Means of Systematic Review.” *British*
16 *Journal of Management* 14 (3): 207–222.

17
18 *Van Bueren, E. M., E.-H. Klijn, and J. F. Koppenjan. 2003. “Dealing with Wicked Problems
19 in Networks: Analyzing an Environmental Debate from a Network Perspective.” *Journal of*
20 *Public Administration Research and Theory* 13 (2): 193–212.

21
22 *Van Damme, J., and M. Brans. 2012. “Managing Public Consultation: a Conceptual
23 Framework and Empirical Findings from Belgian Case Studies.” *Public Administration* 90
24 (4): 1047–1066.

25
26 *Van Tatenhove, J., J. Edelenbos, and P.-J. Klok. 2010. “Power and Interactive Policy-
27 Making: A Comparative Study of Power and Influence in Eight Interactive Projects in the
28 Netherlands.” *Public Administration* 88 (3): 609–626.

29
30 Voorberg, W., V. J. J. M. Bekkers, and L. G. Tummers. 2015. “A Systematic Review of Co-
31 Creation and Co-Production: Embarking on the Social Innovation Journey.” *Public*
32 *Management Review* 17 (9): 1333–1357.

33
34 *Ward, P. 2010. “Participatory Development in Jamaica: Does It Work in Practice?” *Social*
35 *and Economic Studies* 59 (4): 167–196.

36
37 *Yang, K., and S. K. Pandey. 2011. “Further Dissecting the Black Box of Citizen
38 Participation: When Does Citizen Involvement Lead to Good Outcomes?” *Public*
39 *Administration Review* 71 (6): 880–892.

40
41 *Zhang, Y., and Y. Liao. 2011. “Participatory Budgeting in Local Government: Evidence
42 from New Jersey Municipalities.” *Public Performance & Management Review* 35 (2): 281–
43 302.

Table 1 Obstacles and solutions to successful citizen participation featured in the empirical literature

Articles	Obstacles					
	Contextual factors		Organizational arrangements		Process management issues	
	Information deficit and asymmetries	Attitude of officials	Community representation	Process design	Group dynamics	Collaboration quality
Abelson et al. 2003	e		f, g, n	m, n		g, k
Agranoff 2006		k			i	j, k
Barnes et al. 2003	l	h, i, n	h, i, l, n			
Boxelaar et al. 2006						c, i, l
Buckwalter 2014	a, b	a	g			g, k
Busenberg 2007	a, b			k		a, b, d, h, k
Bussu and Bartels 2014		i	c			h, i
Callanan 2005		a, d	d		f	
Campbell 2010			c, e, g, n	a, l, m	e	j
Cheyne and Comrie 2002				f, g, m		m
Collins and Ison 2009	b, i, n	g, i		g, m, n		
Cooper et al. 2006		f, g	f, g	m		a, e, m
Davies 2009						c, n
Donnelly and Majka 1998		f, g, n				d, k
Edelenbos 1999	b		b, n	g		
Edelenbos and Klijn 2005			c, f, g	h		
Foster-Fishman et al. 2013			c, m		a	a, m
French and Bayley 2011	n		c	e, h, l		
Fung 2006			c			k, n
Guertz and van de Wijdeven 2010			n		h	j, k
Gusmano 2013	a		a, c, d, f	f		
Halvorsen 2003						a, e, j
Huitema et al. 2007			c	f, l	f	
Irvin and Stansbury 2004			i, n			i, m, n
Juarez and Brown 2008			b, c	e, m	e, h	b, e, f, g
Kasymova and Schachter 2014						e, h, n
Kearns 1995		d, k, i	c, d, n	m		k, n
Kim and Schachter 2013	a, l	a, d	l	a, e, l	e	k, l
Landry and Angeles 2011				f, g, n		d, j, k, n
Leach 2006			c	f		
Leighninger 2007		a, h, k	e, n, k	e, m, n, l		a, d, g, h, i
Lowndes et al. 2006		d, i, n		d, e, m		

Articles	Obstacles					
	Contextual factors		Organizational arrangements		Process management issues	
	Information deficit and asymmetries	Attitude of officials	Community representation	Process design	Group dynamics	Collaboration quality
McGuire 2006				m	e	
Michels and de Graaf	a		c, g			n
Pozzebon and Mailhot 2012	b		c, d	a, i, k	d, f, i, h	b, c, g, i, k
Raco 2000		i, k	i, n			
Sanderson 1999	a, j	a, j				
Sheikh and Rao 2007		d, f		m, n		d, k, m, n
Simrell King et al. 1998		i, n	b, f, g	e, i, l, m		
Skotnitsky and Ferguson 2005				f, n		
Sun et al. 2009	b		i		n	
Stout 2010		h, n		n	n	d
Thomson and Perry 2006				m		a, g
Tijūnaitienė et al. 2009			a, n			
Van Bueren et al. 2003	a, b					k
Van Damme and Brans 2012		l		l, m, n		l, m, n
Van Tatenhove et al. 2010	b	f, g	c			d, k
Ward 2010			m	h		k
Yang and Pandey 2011		i	e	e, i		i
Zhang and Liao 2011		d	d			

Table 2: Frequency of citations of obstacles and solutions

Solutions:	Obstacles:						Total
	Contextual factors		Organisational arrangements		Process management issues		
	Information deficit and asymmetries	Attitude of officials	Community representation	Process design	Group dynamics	Collaboration quality	
a. Allowing for long-term interaction	7	5	2	3	1	6	24
b. Involving participants in research	8	-	3	-	-	3	14
c. Favouring diversity and representativeness in participants' selection	-	-	14	-	-	3	17
d. Institutionalising participation	-	6	5	1	1	7	20
e. Using multiple participatory methods	1	-	3	7	4	4	19
f. Clarifying rules and mechanisms	-	4	5	6	3	1	19
g. Agreeing on expected outcomes	-	4	7	4	-	6	21
h. Involving knowledgeable facilitators	-	3	1	3	3	4	14
i. Avoiding hierarchical arrangements and red tape	1	8	4	3	2	6	24
j. Planning for short-term gains within a long-term strategy	1	1	-	1	-	5	8
k. Building supporting networks and collaborative capacity with key institutions	-	4	1	2	-	14	21
l. Mixing learning strategies that combine new ideas and refinement	2	1	2	7	-	3	15
m. Developing a context-sensitive design	-	-	2	14	-	6	22
n. Giving voice to participants' goals and agendas	2	5	10	8	2	9	36
Total	22	41	59	59	16	77	274

Figure 1: Flow diagram of the search strategy

For Peer Review Only

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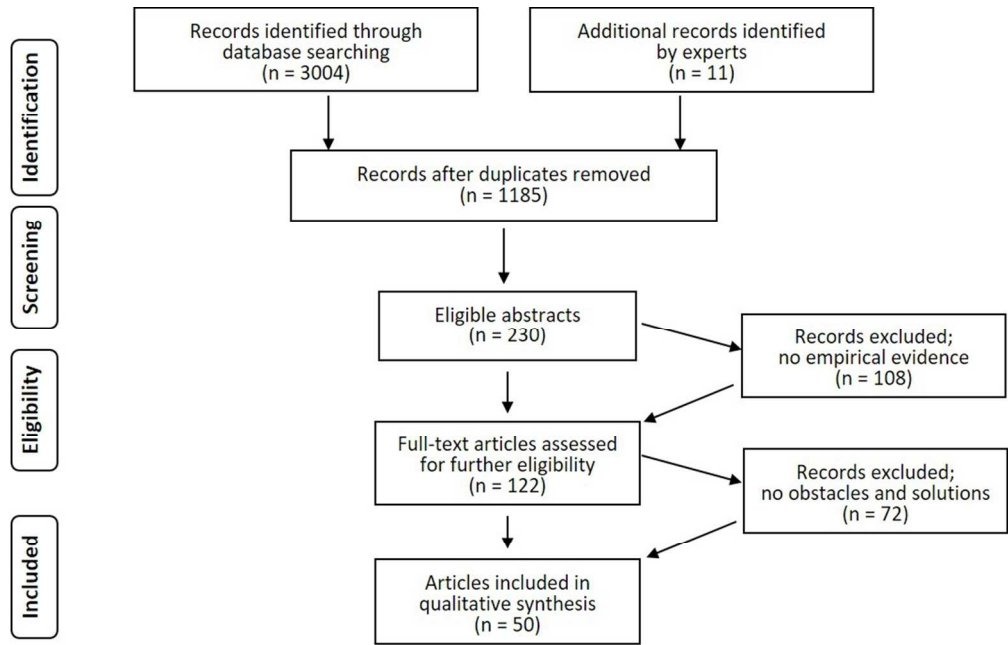


Figure 1 Flow diagram of the search strategy (JPG version)

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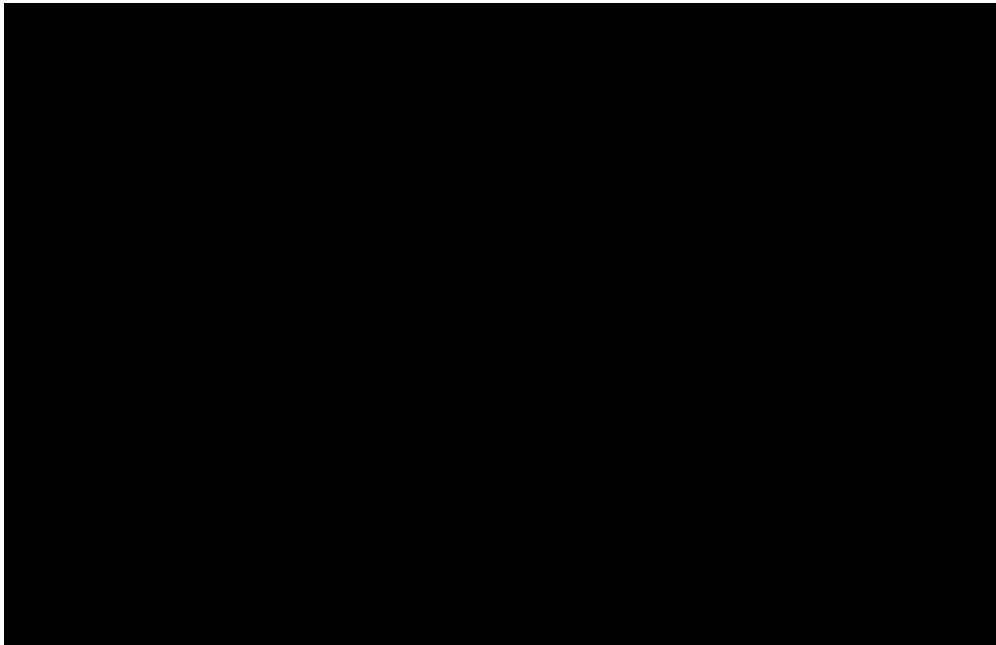


Figure 1 Flow diagram of the search strategy (TIF version)

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