Between Grassroots and the Hierarchy: Lessons Learned from the Design of a Public Services Directory

Andy Dow
Open Lab,
School of Computing,
Newcastle University, UK
a.r.dow@ncl.ac.uk

Rob Comber
RISE SICS,
Stockholm, Sweden
rob.comber@ri.se

John Vines
School of Design,
Northumbria University, UK
john.vines@northumbria.ac.uk

ABSTRACT

There is a growing interest in HCI research studying technology for citizen engagement in civic issues. We are now seeing issues around technologies for empowerment and participation, long discussed in HCI literature, appropriated and formalised in government legislation. In the UK, recent reforms stipulate that community-based service information should be published in continuously updated, collaboratively designed and maintained, online platforms. We report on a qualitative study where we worked with stakeholders involved in the collaborative design, development and implementation of such a platform. Our findings highlight tensions between the grassroots desire to innovate and local governments' rigid compliance with statutory obligation. We pose a series of challenges and opportunities for HCI researchers engaged in the design of civic technologies to consider going forward, addressing issues of engagement in policy, measures of participation and tools for enabling participatory processes in public institutions.

Author Keywords

Civic technologies; public services; service directories; civic engagement; digital civics; qualitative research.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous;

INTRODUCTION

The field of Human-Computer Interaction (HCI) has a growing interest in technologies for civic participation that promote bottom up processes in communities [3,17,18,43,47]. Recent work evidences a 'civic turn' in the field [5,27] that privileges citizen voice and empowerment, and the expansion of 'digital civics' as a field of enquiry [2,38]. This domain is concerned with the design of

technologies supporting new interactions and relationships between citizens, local community organisations and their local governments [18], with recent studies centering on the challenges of designing tools to support communities of marginalised people, e.g. the urban homeless [32], people with disabilities [14,40] and sex workers [44].

In parallel to this, a period of 'austerity politics' has seen increasing efforts in various nations to rethink how public services are delivered. Increasingly, governments have looked towards digital technology to promote greater citizen and community involvement in public service provision. Central to these efforts have been two overriding goals: (i) to make better use of digital technologies in engaging citizens in being aware of, and to actively shape the design of services; and (ii) to build mechanisms for greater collaboration, for example citizen led commissioning, into acts of parliament. This latter goal has the effect of formalizing such mechanisms in ways that local government must deliver on them.

This has been particularly the case in the United Kingdom (UK), the site of our research, where new acts of parliament [21] require that local government authorities, in collaboration with other relevant organisations, develop online 'Local Offer' platforms. These Local Offers mandate local government to make information about local care, support and advocacy services available online, collate this information in a single location, and continually maintain it as a resource similar to other directories of public services [49,50]. Furthermore, Local Offers need to be underpinned by continual public consultation activities, intended to identify gaps in service provision [22].

In this paper, we report on research conducted over a 12 month period where we participated in the design, development and implementation of a Local Offer digital platform. We worked with local government staff, voluntary sector workers, disability rights activists and parents of young people with Special Educational Needs or Disabilities (SEND). During this period, we conducted fieldwork at public events, held workshops with families and steering group members, and interviewed members of the Local Offer steering group where members reflected on the process of developing the Local Offer. In collecting this diverse data, we examined the challenges and opportunities associated with the policy led design of civic platforms. Our

This work is licensed under a Creative Commons Attribution International 4.0 License.

CHI 2018, April 21–26, 2018, Montreal, QC, Canada

© 2018 Copyright is held by the owner/author(s).

ACM ISBN 978-1-4503-5620-6/18/04.

<https://doi.org/10.1145/3173574.3174016>

findings highlight tensions arising from consultation exercises where statutory requirement converges with the values of grassroots organisations and citizen groups. We contribute to the ongoing discourse of technology design in a civic setting in two ways: (i) by presenting learning from the design challenges of a digital public services directory in the context of favourable and progressive legislation, and (ii) by building on this to identify priorities for future research focusing on civic technologies that are driven by policy, rather than the motivations of researchers or activists.

HCI, DIGITAL CIVICS & PARTICIPATORY DESIGN

There has been an expansion in work within HCI on issues related to civic matters as research and design projects take an evident ‘turn to the local’. Examples of work in this space concerns itself with improving citizen involvement in consultation [28] and decision making [26], expressing matters of local concern [45], or to support the formation of communities and publics around specific topics [12,30] as well as citizen activism [1,35]. These projects demonstrate the ways in which digital tools, configured in various ways, can quickly engage citizens in-situ to collect their opinion and capture their experience, in turn creating data for use as part of social advocacy or civic decision making.

While much of this work results in the production of new civic technologies, Balestrini et. al [4] note the limitations with these kinds of researcher-led engagements with communities, especially those designed to support greater participation and collaboration with citizen actors. Tools seeking to empower citizens through the recording and sharing of their common experience are often poorly integrated with practice [15], struggle to become relevant for public bodies [42] and can create challenges for sustaining work beyond project timescales [46]. There is a growing acknowledgement with much of this work that embedding these systems into municipal systems and governmental organisations is complicated and represents a significant challenge [42].

Additionally, supporting organisations of any kind to engage in new practices and processes that are grassroots, bottom up, or advocate for specific groups is challenging. For example, in deploying *PosterVote*, a lightweight tool to capture public opinion on matters of concern to activist groups, researchers reported suspicion about data captured by the system for its provenance and relevancy [47]. Johnson et. al describe difficulties in actioning digitally collected consultation data, citing a lack of social capital for citizens or ‘buy-in’ from public bodies as limiting factors [27]. Time and again, difficulty has been found in impacting government policy, and insufficient organisational support [25] and complexity of civic bodies [2] are often noted as challenges. Moreover the conflicting perspectives of multiple stakeholders [8] limit collaborations with local governmental structures.

The use of participatory design within HCI has been invaluable to the process of supporting the articulation of civic issues [13,31] and understanding the tensions at play in involving publics around those issues. For example, Bødker et al’s [7] work in unpicking notions of participation in municipal collaborations complicate the notion of democracy present in such design spaces, while alerting us to the importance of timing to interventions. Expanding this, the Malmö Living Labs work observes that the infrastructuring of such projects is more than the substrate on which they are built, but a fluid ‘constellation’ that fosters alignment across contexts [6]. This frames Universities, for example, as agnostic spaces inbetween conflicting actors as well as highlighting the shortcomings of designing to a hegemonic consensus.

HCI researchers’ work in this domain is therefore necessarily politically charged and, in executing these kinds of engagements with stakeholders, they have found reason to suspect that government motivations for involvement in the development of innovative civic technologies has more to do with advancing neo-liberal marketization than inclusivity [41]. This is especially so in the UK, at a time of ‘austerity politics’ where cuts in staffing of public services are often rationalized in relation to a Localism agenda that seemingly offers greater citizen control [36] and comes with the prospect of new digital tools that support communities in ‘doing things for themselves’.

An ongoing challenge for HCI researchers is then to identify ways for technologies that value citizen participation and empowerment to be embedded into the practices of local governance. There is, furthermore, a need for researchers to question their role in furthering specific political agendas that demonstrate the semblance of greater citizen participation while at the same time justify cuts to public service provision. These are cogent matters of concern at a time in the UK when recent acts of parliament stipulate a legal requirement for community-led participation that demonstrates engagement with, consultation on, and feeding back around matters relating to local service provision [21]. Such legislation, along with its enactment, is central to our work and makes up part of much larger reforms to care service delivery across the UK. Our study was therefore an opportunity to explore some of these issues of relevance to HCI in these contexts, which we explain in more detail below.

THE LOCAL OFFER

Recent reform to the delivery of care for young people with disabilities in the UK places the service user as central to how health, care and education provision is configured [21]. Specifically, these reforms introduced the Local Offer which requires local governments (of which there are 418 across the UK) to publish online details of health, education and social care provision for young people with SEND (see Figure 1 for an example). However, the Local Offer, as described in this new legislation, is intended to be much

Figure 1 - The Local Offer Service Directory Website.

more than just an information provision tool. The Local Offer mandates that local governments must engage in an open and transparent process of participation with groups and individuals who might benefit from or have a stake in local service provision—namely, children and young people with SEND, their parents and families, and local non-state care service providers. Furthermore, Local Offer platforms needed to provide space for the submission of comments and feedback related to service provision, and these must then be made publically available online. Additionally, the online presence of the Local Offer needed to be underpinned by frequent local consultation and engagement activities—such as workshops, feedback events and forums—where further feedback could be collated and made publically available. Thus, this legislation could potentially support new forms of citizen-led commissioning of services, where the continual publication, maintaining and feedback on local service provision would identify critical gaps for people with SENDs and lead to new services being created.

The introduction of the Local Offer invokes numerous aspects of recent HCI research: the development of information services for specific underserved populations [3]; the use of data generated by such services to support advocacy and service improvement [14,15,37,42]; bringing together diverse groups of actors and creation of publics around digital data and information [33]; and to bridge gaps between consultation exercises and decision making [26]. However, unlike work thus far in HCI, much of these community-oriented attributes of the Local Offer come from a top-down agenda from central government in the form of legislation. While being highly aspirational it also invokes many complex challenges, not the least of which is designing for a target group of young people with multiple and complex needs. A primary requirement is therefore the development of a usable and accessible online platform where information can be sought for, navigated and submitted.

Furthermore, the Local Offer requires ongoing cooperation with multiple organisations, as well as potentially disparate departments within a given local government body. This is coupled with the provision of no additional funding to

develop the Local Offer. As such, the development and implementation of Local Offers presents an important site where some of the values and commitments of civically orientated HCI research might be translated into practice and scaled, but also challenged and problematized.

OUR APPROACH

We report on fieldwork, workshops and interviews conducted as part of the design, development and implementation of a Local Offer platform in the northeast region of the UK. Our involvement in this work was initiated through being invited to a steering group meeting following a visit of local government workers to the authors' institution. The steering group was a committee convened to influence and direct the qualities of the Local Offer as an online digital resource. In effect, this formed a design group composed of 19 people, including the research team. The group was formed at the instruction of a senior public worker at the city council responsible for the platform's implementation. The inclusion of certain specific individuals, both employees of the local council and workers from charities and grassroots organisations, was attained through word of mouth between public and voluntary sector workers at meetings where they work together. As such, the group represented a diverse, heterogeneous committee of stakeholders, including 10 members of the local government from different departments, 2 representatives of a local college, 2 parents of children with SEND and 2 representatives of charity sector organisations working to support young people with a disability. Of this diverse range of workers, many gained the experience necessary to obtain their public positions through work in the voluntary sector, moving freely between grassroots organisations and public bodies. Indeed, at least one of those individuals working for the local government at the time of our research has now returned to a voluntary sector organisation, emphasizing the 'churn' of public and voluntary actors.

Initially, the researchers were invited to the group to act as 'critical friends', attending monthly meetings, providing constructive feedback and helping generate ideas for designing and implementing the Local Offer platform. Over time our involvement changed, as we helped group members with public engagement activities and facilitating workshops. As the development of the first version of the platform started to reach its conclusion, the steering group asked us to help in documenting aspects of the group's work to ensure lessons learned were captured. The latter appeared to be of great importance as several new parliamentary acts were being introduced, all of which had a similar scope to the Local Offer but for different populations and citizen groups.

Above the steering group, there was a 'SEND board' that was responsible for the wider suite of care and service reforms that were being introduced. As such, the board had ultimate responsibility for ratifying and approving

suggestions from the steering group, especially those that might represent more radical shifts in the proposed design of the platform or may have implications for staff in certain departments of local government. As a result, it was unclear how much the group could affect changes above and beyond those that were necessary to ensure that the project fell in line with statutory obligations. Our presence and participation as committee members provided an opportunity to observe in detail the processes of development of the Local Offer, and to document the various challenges and issues group members and other stakeholders encountered during the project. In particular, it gave us privileged insights into the tensions group members faced in advocating for service users and giving voice to families, and the interpretation of the SEND reforms and policies by the SEND board, staff in the local government, and those who assess whether the Local Offer meets necessary requirements.

Data collection and analysis

Balestrini et. al have shown how methods and approaches drawn from Participatory Action Research (PAR) can be more practical for the engagement of grassroots actors [4]. Similarly, our data collection methods were inspired by PAR to ensure sensitivity to the complexities of the specific context within which our research was being conducted. In this way, we draw from Hayes [20], reporting on engagements with actors that are prolonged, incorporate elements of ethnography and aspire to knowledge outcomes that are co-constructed. As a result, over the course of a 12 month period, we collected a diverse array of data. This included:

- i) Fieldnotes and (publically documented) minutes from attendance and participation in 10 steering group meetings, 7 of which were attended by at least one of the authors.
- ii) Fieldnotes from a series of consultation and public engagement events that the researchers helped committee members plan and facilitate. This included: a parent and carers conference of approximately 100 people from families and service providers; a workshop with a grassroots, voluntary sector community interest company that delivered support and advice to families with children with SEND; a 'Fun and Feedback' day, organized in collaboration with this grassroots organisation, where parents and family members expressed their thoughts and opinions about service provision across the region; and the initial public launch event for the Local Offer where citizens were invited to contribute suggestions for services and local assets that were missing from the platform.
- iii) Finally, we conducted a series of semi-structured interviews lasting between 47 and 92 minutes with a cross section of the steering group members (n=7). Of these members, we interviewed: four were members of the local government; two were family and young person workers that had experience of working within grassroots, charity sector organisations; and one was a parent of children with

Part.	Role	Affiliations
P1	Disability Worker	Voluntary Sector
P2	Advice and Support Worker	Voluntary Sector
P3	Parent	Voluntary Sector
P4	Family Information Service	Council
P5	Disability Worker	Council
P6	Young people w/ disabilities team lead	Youth Service
P7	Senior advisor for special schools	Special Schools

Table 1 - Interviewee professional roles and organisation affiliations

SEND that was also a member of a parents forum organisation (Table 1). These interviews were structured based on data collected from the meetings and events we had attended over the preceding year. Interviews concerned how members had come to be involved in the steering committee; their reflections on the nature of the reforms and the Local Offer development process; as well as their thoughts on the outcomes from the entire design process.

Our field notes and interviews were used as a corpus on which we conducted thematic analysis [10]. Data was coded by the lead author, and then clustered into initial themes that captured shared issues across codes. These were shared with the two other authors, where agreements and disagreements in interpretations of data led to the refinement of codes and themes. This process resulted in six themes that describe the results of our analysis. We describe these in the following sections.

FINDINGS

In the following sections, we first discuss stakeholder *motivations and aspirations* for the new Local Offer platform. Following this, we highlight how shared values were enacted through *shaping the Local Offer*. We then highlight how important it was to get 'buy-in' from relevant power brokers, and the challenges the Local Offer steering group faced in getting this. This leads us onto discussing *concerns and suspicions* that arose in relation to the government legislation as team members started to realise the limited scope for its interpretation. We then highlight issues group members raised in relation to *feeding back* and their relationship to official *commissioning processes*. Finally, we discuss the challenge of *sustaining the system* beyond the completion of the steering group's design and development phase.

Motivations and Aspirations

Steering group members were each motivated to be involved with the group because of a wide range of professional and personal experience of working with young people with SEND. Some were involved directly with service provision, such as education or support, others by association with advocacy groups or parent forums. As a result, there was a wide range of expertise available, as well as differing perspectives, priorities and hopes for what the system could be.

Early on in the process there was optimism and enthusiasm for innovation around how the Local Offer could support young people and families to find information about services for themselves. At early meetings, the group agreed that ‘choice, empowerment and cooperation’ should be the tagline to which the system aspired. An experienced voluntary sector Advice and Support service worker, explained what, in her view, the Local Offer was about:

“It is about that whole inclusion thing and that is what the Local Offer is about for me. It is about everything from the specialist end of service right down [...] It is about opening everything up and providing the maximum amount of choice and the maximum amount of availability to as many people as possible.” (P2)

The council employee principally responsible for implementing practical changes to the Local Offer website echoed this optimism:

“It should be dynamic. This idea of it being a moving reflection of what is actually existing in the city that you have to engage with [...] it is about having hold of that information, about feeding information into that website, about extracting information from that website and about engaging with it.” (P4)

Instead of creating a static directory of services group members aspired for it to be more interactive, giving people the chance not just to get the information about services, but also to contribute their knowledge and experience through engagement with it. The aspiration for something dynamic and evolving was repeated by the chair of the group: *“How can it be a tool that is useful for them and empowers them in a more creative way than just a website?” (P6)*. This idea of the system being ‘more than’ a website, having an empowering, community-led aspect represented taking the new legislation and interpreting it in the best possible light. P5, a social worker at the council specializing in working with young people with SEND, with many years of experience, saw it as reaffirming long held professional views:

“I think we need to reach out and do different things with folk, and we need to work with other people locally in their areas, or within their schools, or wherever it is that’s the most comfortable place for them – within their homes.” (P5)

P5 was not alone in interpreting the legislation in a way that emphasised learning from collective community knowledge: *“[the] Local Offer, it’s very much about that. How can we look at that community wealth?” (P1)*. For both there is real value in drawing on the knowledge held by the ‘disabled community’, and finding new ways to harness and share that knowledge, something that P5 observed as a community strength: *“I think people do word of mouth much more in this world.” (P5)*.

Shaping the Local Offer

Enacting the values behind these aspirations was a key challenge throughout the design of the platform, and was manifest in decisions made during meetings. For example, questions arose around what types of information should be included in the Local Offer, particularly with respect to what types of service should be on there. This was an issue discussed often at meetings and public events. People explained that some services meeting the needs of people with disabilities were not necessarily formal care services, but those that were just cafes or cinemas. Sometimes labelling these, ‘the best kept secrets in the city’. Unsurprisingly, across stakeholders there were differing perspectives on what was appropriate to include, whether those included should be more readily identifiable as ‘special’ services, or whether it should include anything young people with SEND would feel able to access and participate in. This was stated by a parent who was both a parent carer of children with SEND and parents’ forum member: *“Parent carers felt that they wanted, you know, a place where they could get information and other things, and this wasn’t just special education needs.” (P3)*. Council workers agreed, and saw the risk in limiting the scope of the types of services that were included:

“the danger of doing it that way is that it just becomes service land. It becomes what professionals know rather than a conversation about what needs to change sometimes.” (P5)

This enmeshed with the concept of a new type of system, not just a static directory but instead a space of dialogue and knowledge exchange about the services available across an area. However, as meetings and the timeline progressed and the Local Offer came together the scope of what was achievable became narrower:

“A lot of stuff people use perhaps isn’t on [...] we are not really bringing in what’s actually happening or that other stuff and that’s more important.” (P1)

The emphasis shifted to making sure that the information that appeared in the Local Offer in the first instance at least addressed the basics, for example: *“The thing about the schools is it’s they have to be on. Otherwise if they are not [...] then the local authority would have been penalised.” (P1)*. Partly this was a result of having to work to strict timescales. These timelines also had ramifications for the development of the system, as the question of who would build it rapidly required addressing. To answer this, group members turned to a software company that already held a contract with the council and was providing resource for other local authorities in the region: *“Certainly in the period of time that we had to do what we had to do it seemed that was a good solution.” (P4)*. Critically, it was seen to be a cost saving measure as well: *“because it was going to be cheaper than starting afresh.” (P1)*. This accomplished two things: first it handed some of the interpretation of the legislation off to another council’s

vision, as the platform now being ‘bought in’ was designed to another authority’s initial specification; and secondly it imposed limitations, raising tensions around specificity for their own solution and adopting a generic, off the shelf system.

Getting Buy-in

There were further limits for the steering group in terms of working with and across different departments of the local government, many of whom did not see the Local Offer as a priority since it wasn’t part of their job. As the chair of the group reflected, getting ‘buy-in’ from relevant departments and individuals was a constant struggle: “[We] *really struggled with getting buy-in from other departments that weren’t represented on the Local Offer [steering] group.*” (P6). This was not just a problem in terms of people giving their time to provide information for the Local Offer but also in managers agreeing to resource the work properly. Even the steering group itself was not immune from being critically under resourced meaning that members had to find time to squeeze in tasks along with their regular workload: “*That was the biggest pressure, because it was a bolt on, on top of everything else you still had to do.*” (P6) This was unfortunate since the Local Offer was a project that required the input of a wide range of stakeholders, both inside and out of the council. Partly the problem was thought to be a lack of understanding of legislation generally, as P2 remarked with reference to the schools that they were trying to engage:

“You will find a lot of people in schools who don’t understand ... I would challenge you to find anyone in school who understood the Education Act and what it said in its entirety.” (P2)

There was further the suggestion that within the local council disparate departments were lacking in their engagement with the project and that this manifested in an ongoing struggle for cooperation from and between them:

“That’s really messy. It’s much easier within the local authority than it was, but it’s still difficult. You still need protocols and agreement within the local authority, so we still struggle.” (P5)

For the group members, this appeared as though they were not being listened to, and applied pressure that could ultimately result in rifts within the steering group itself:

“People that were within [the] group were very disgruntled. It was a real shame because it was almost like we were going to lose parents [or] our voluntary sector colleagues.” (P1)

As a result, there were frictions between notions of participation and community led-ness and the processes of public authorities. Meeting minutes from across the study period evidence the ongoing battles group members faced. There are references to getting additional administration staff to support the development of the new site, it failing to

appear on several occasions, and when it does the worker is only able to assign two days of their time. What’s more, within months of the group convening, the original chair had to take a step back: “*The Local Offer Group... was struggling because they had somebody managing it who really didn’t have the capacity to manage it,*” (P1). More critically, the person most directly responsible for implementing changes to the system, P4, was moved to another department following the launch of the platform after the twelve-month consultation period. About which the group’s chair commiserated: “*Jayne’s departure, I was sat in a meeting already this week and that was raised as a concern [...] And I know that all you need is two or three months, things go adrift*” (P6). P4 acknowledged that:

“One of the key strengths that the steering group had [...] were these key individuals who felt embedded in the process and signed up to the offer willing to champion the processes for me.” (P4)

Despite this, there was no guarantee that those individuals would be able to maintain their commitment. Given the goal of using the system to identify gaps and fill them, however, perhaps the failure to get buy-in from the commissioning department was most critical, since this was the body principally responsible for the creation of new service provision. This is a concern that we will return to.

Concerns and Suspensions

As time progressed and frustrations grew, there emerged suspicion surrounding the new act, despite its positive tones, that it is a resourcing and efficiency exercise, directed by a central government intent on austerity: “*Part of the problem was the way the government handled the whole reforms bit.*” (P2). In interviews there was a continual concern expressed in relation to cost saving and cuts: “*I think the background is council cuts.*” (P6). A voluntary sector worker blamed these cuts for having created gaps in service provision, directly related to the kind of gaps the Local Offer aimed to fill, such as in services offering advice, guidance and signposting to families: “*Quite a lot of those [participation worker] posts are cut [...] the Children’s Right’s team all got cut alongside Youth Service and Play Service*” (P1). Moreover, efficiency savings and their effects were seen as a countrywide problem, “*nationally local authorities have been squeezed and squeezed with budget.*” (P1). For steering group members, who were also council workers, they reported the impact on their own departments: “*There used to be 12 [...] Now it is pretty much me with a little bit of support.*” (P4). As such, over time the group members and other stakeholders started to question whether this new legislation was part of a cost cutting strategy: “*there’s a limited pot of money it’s about making the most effective use of resources and having a real attempt to improve those services.*” (P7). The Local Offer’s principle utility then becomes its needing fewer staff for signposting citizens to services. This was linked with the perception that it could

be: *“low cost, no cost [...] getting people thinking about taking ownership and being in control of their own lives.”* (P1). Here cost saving is a result of shifting work to individuals.

The Local Offer and platforms like it then become viewed as a way of reallocating human work to computers; however, as the group was finding, this was a false economy given that digital platforms need updating and seeking the information to go onto it is a job in itself. As concerns grew, it was also starting to be seen as unrealistic:

“the local offer is one of those lovely ideas [...] it looks lovely in theory, but the actual practicalities on the ground are very different.” (P6)

This was in contrast to the more ambitious elements expected of the system, elements that some feared were not being addressed:

“There’s also supposed to be this whole thing of identifying the gaps in the provision and getting the feedback and being a much more interactive thing, that for me, my fear is, that’s going to get lost in (anon) and basically, tick [a] box.” (P6)

In this way, knowledge is captured, and aggregated and even used to: *“see where the gaps are in services provided in order that people will then identify those gaps and start to provide the services that are missing.”* (P2). While ambitious, these system qualities were mandated by the new legislation. Unfortunately, the legislation did not stipulate how this was supposed to be achieved. As the Local Offer came together the realities of the work involved in identifying such gaps, much less filling them, started to become apparent to the group members:

“There is a whole extra level of research that needs to then be done because somebody needs to work out if there is a gap and that doesn’t sit anywhere.” (P4)

Here the tensions between experienced voluntary and youth disability sector workers and motivated council workers and the council management are thrown into relief. For some, the members of the steering group, the reform is an opportunity to innovate, creating efficiency savings while providing the relevant information and links for disabled children and their families and help them to live the life they want. Local government on the other hand appears as an ossified bureaucracy, inflexible in providing resource or support to the steering group, while making sure that they comply with that which national government has asked of them: *“I think sometimes people who have worked for councils have worked in a certain, sort of, very autocratic way. It can be very hard for them to change.”* (P1).

Feeding Back and Commissioning Processes

Collecting feedback, as part and parcel with the Local Offer, was identified as a way of addressing the challenge of identifying gaps in service provision, but this needed consideration in terms of how it would fit with established

commissioning processes: *“Feedback is going to work and how that links to commissioning is the real and present challenge really.”* (P4). This was in line with the idea of the Local Offer and the legislation on which it was predicated, that it should feed into decision making to the extent that it was seen as a priority for the regulator Ofsted, the government office for inspecting and reporting on standards in education and children’s services in the UK: *“Ofsted will want to see that as part of when they come in and their checks and balances will be around that.”* (P1). In this way the local offer would establish a conduit through which people could participate in identifying gaps in provision, that in turn would generate data upon which the local government could commission appropriate services that were responsive to a specific need.

P1 who had experience of both the voluntary sector and the local government was doubtful that the Local Offer would so easily be integrated with the existing commissioning processes: *“It’s not very fluid. The way they commission things it has to be like this, it has to be like that and it’s not open to change or accepting”* (P1). Moreover, there was an understanding that commissioning is led by the funding that is available: *“As money becomes available the charities are right there looking at what is the money being funded for. We are not actually being user driven.”* (P2). Yet further, there was a fear around the public forum and opening up the platform to comment and feedback:

“I don’t think we’re going to open up the website to people to write comments, are they? [...] I think they’re really wary about something where it’s a public forum.” (P5)

The intention behind these platforms is to stimulate discussion, debate and awareness around gaps in service provision and to even highlight where currently services are under-supported. However, the extent to which this was achievable was unclear as there are clearly anxieties around the public nature of this activity and how individuals and organisations are unsure about how they would be able to respond to these new innovative practices.

Innovation itself was viewed as something that could represent risk taking: *“I think people are very scared to try and be innovative unless it’s within a certain parameter”* (P1). However, innovation is what it would take to ensure that those that need to participate can actually participate. This could apply to new methods and processes that would be required to make sure that the appropriate person would ‘sign-off’, for example, on new data required to keep the Local Offer up to date: *“That function doesn’t exist as such, so it ends up a low priority item of work to be done in a very senior person’s in-tray almost without exception.”* (P4).

Despite the enthusiasm for bottom-up engagement, given the scale of current commissioning processes within the council, there was scepticism about how the Local Offer could ever feed into established commissioning processes:

“I don’t know that in a way the Local Offer would have any impact on those reviews which are commissioning of big services.” (P7)

Taken together, this related set of issues are specific to digital platforms like the Local Offer and demonstrate the complicated temporal element involved, where the ‘local offer’ (which services are offered locally) is dynamic and changes very quickly. This underlines the point that, even if there were resources to support these types of new activities there is no guarantee that they would be sustained over time. This is a point we expand upon in the next section.

Making it Sustainable

Local governments, traditionally, are in the business of enacting policy handed down to them. The legislation concerning the Local Offer was thus seen as something to satisfy central government and then move on:

“We see a legal duty, and we jump to do something, and then, ‘Oh, we’ve done that now.’ We don’t think about how it needs to change, and evolve, and how it needs to become more involved with folk.” (P5)

This reveals a perspective and attitude of bureaucratic box ticking: *“The problem is when you work for an organisation that is absolutely so many people on a really senior level that just want to have things they can tick off the list, it’s very hard for them to move their thinking.” (P1)*. Here there is a managerial attitude that is both reductive and limiting. P2 reaffirms this, while helpfully identifying the site where the real work is located: *“Clearly from the local authority’s perspective it is a list of jobs to do [...] the actual working out happens somewhere between grass roots and the hierarchy.” (P2)*. People from the steering group were critical of this kind of attitude, and how inappropriate it was for the task in front of them, *“I think that that’s been our downfall really because I think it’s very much seen as start a task and finish.” (P1)*. Establishing the Local Offer was seen as a ‘job that had to be done’. This equally came through at the steering group meetings, where there was a real anxiety around the group being taken apart at the end of the ‘implementation’ process and the local government not seeing the Local Offer as an activity that needed ongoing support. The group chair reported how quickly it dissolved when its work was seen to be complete: *“And then of course the group was disbanded and it’s like, ‘Whoosh’. And it’s ceased to be part of my job, I mean it’s just unbelievable.” (P6)*

A critical point is the issue of resourcing following the implementation of the Local Offer, addressing what happens outside of the time frame, after the steering group had completed its work and the service was up and running. Certainly, it would need consideration to ensure sustainability. P4 at the council remarked of previous projects over which she had seen: *“It really wasn’t long ago and it seemed once the project had finished and it had dropped off people’s radars it just seemed very futile.” (P4)*.

Reflecting on this, others observed how it had been hamstrung from the beginning:

“the Local Offer didn’t come with any extra money I know we had the initial grant, but it doesn’t come with long term, sustainable funding, and I think that is the biggest weakness in it, because to maintain a website needs staffing.” (P6)

This is an issue of the great amount of work that comes into curating and generating ‘information’ in the first place. Or equally the impact of information not being up to date: *“the first time I used it something I showed them was inaccurate, so that doesn’t help [...] I suppose getting confidence in it will be the thing.” (P5)*. There were further issues regarding the continued engagement around feedback, its place in commissioning new services, as well as how ‘participation’ activities would be facilitated, all of which would need to be properly resourced. However, with the public sector contracting, and certain posts no longer existing, it was hard to see how any of this was going to be achieved.

DISCUSSION

The Local Offer, as first envisioned both in legislation and in the steering group, represented an enormous shift in the ways information about local service provision was collected, shared and disseminated. The reality of the design and development process of one Local Offer platform, and the prospective delivery, reveals a tug-of-war at the nexus of values, relationships and compromises that accompany a complicated multi-stakeholder service delivery process. Our findings reinforce existing knowledge that working with a diverse and complicated public organisation such as local government structures is both messy and difficult. While traditional HCI approaches have dealt with both the opposing ends of the citizen-government gradient, from participatory design [19] to e-government research [34], it is less clear what role we can play as mediators. At a minimum, we can elicit and interpret community needs, to deliver to local governments, a more nuanced and reflective set of requirements for systems like the Local Offer website. We might also, through a continuous commitment to embedded research, begin to shift the dominant narratives of modernist and neo-liberal working within local governments, towards understanding digital technology as one means through which we can embrace broader and more meaningful participation [48].

Policy led design versus participation led policy

We have seen how, even with prominent members of a local government body involved and favourable legislation, there are limitations that mean that innovation gives way to box ticking and the delivery of, at best, a minimally viable product. While it is easy to recognize the value of many of the ideas the Local Offer aimed to have authorities implement, public-policy engagements have enough history in town planning [9], public health [42], and other areas [39], to suggest that such efforts may ultimately be fruitless – at least at scale and with consistency. Moreover, in reality, there is an evident tension between scaling capacity

down at the behest of continual cuts to service provision and trying to scaffold the kind of community participation that the Local Offer system implies. In part, this is down to a misapprehension that a digital solution would provide a replacement for the human work that had gone on in the service delivery space before.

The local government operated as though a system could replace advice and support workers, help discover gaps in provision to ensure that future services were attending to well defined needs, and save money in the process. There was no acknowledgement that this was impractical from a design perspective; such a system would take much more time to develop and implement. Neither was it acknowledged that it was deeply problematic from a practice perspective, as it would require the reshaping of how services were currently commissioned and delivered and require a whole new set of staff with specific expertise to make it work. Such a design task is something with which the methods of HCI and digital civics research would doubtless be able to help. Balestrini et al's [4] work in developing a framework for a city commons helpfully discusses the applicability of PAR methods to civic projects. They demonstrate how civic engagement practices can be configured horizontally which in turn resolves issues arising from hegemonic power dynamics, fostering equality of stakeholders in the process. A design strategy that is particularly cogent with respect to the underlying neo-liberal forces observed to be at play in these sectors in many industrialised nations [36,41].

A major challenge faced by the group we worked with was negotiating the values of participation and engagement purported to be central to the Local Offer, and the ways in which the implementation of a 'successful' platform were measured. Based on its underpinning aspirations, we might have assumed success would be gauged on documentation of the process of engagement around the development of the platform, the content of this engagement, and indeed the quality of information gathered related to local provision. However, top down indicators of success focused on documentation of numbers of people at events (rather than what was learned from those events), whether the "right" type of information from the "right" sorts of local services were available, and that the platform was online, stable and up-to-date by a specific time. These findings demonstrate that policy isn't uniquely the problem but also the methods and processes employed in enacting that policy. As others have discussed before [15] organisations have to be seen to be compliant with specific outcome measures or face penalisation. The problem is the processes that exist for measuring what is success or failure around the policy, and not what the policy itself set out to achieve.

One view on these issues is that one of the reasons why the Local Offer was so challenging to assess was a lack of tools and techniques for the team to draw upon and evidence the participatory nature of the endeavor. There might be

opportunities here to explore the design of simple tools that allow those involved in consultation activities to not just facilitate dialogue between relevant citizen groups, but as per [26] to capture and record these in sensitive ways to inform next stages of decision making. This is a significant problem for those HCI researchers in the field of digital civics, work that has been characterized as evolving the relationship between citizen and government, moving from a traditional transactional model of service provision and consumption to a relational one [38].

However, we should probably go one stage further than this to examine the ways in which citizen participation in processes of engagement is not just documented for the purposes of reporting but for making visible to citizens themselves how their input and work is being used, processed and incorporated. In other words, we need to facilitate processes of *downstream transparency* where systems help identify, trace and track citizens' participation—for instance, following the flow of citizen data within structures of decision-making through distributed ledgers. In this way HCI could support citizen evaluations of whether they feel that a local government body has consulted and evidence their role in the dialogue that they have had with them around issues of civic importance. In doing so, we may shift away from policy-led design, measured against potentially simplistic measures or outcomes, and instead support policy that is led by citizen participation and the content that participatory processes generate.

HCI, Grassroots and the Hierarchy

From a design perspective, our findings reinforce central tenants of participatory design: that without thoughtful engagement with the challenges of co-design the power dynamics at play in a given context impact what gets done and how and are skewed in a particular direction. In our study, this was reflected in the concentration of power between officially backed, if poorly resourced, government departments and grassroots organisations and actors.

Infrastructuring these engagements at the meeting point of multiple contexts is then a challenge. For Björgvinsson, et. al [6] a priori design decisions can be problematic to integrate, impacting flexibility and alignment with stakeholder priorities. In our case the a priori decisions were drafted in law and executed by a local government body more used to ticking boxes than innovating. Like [6] we demonstrate how the hegemony is all too easily the shaper of the innovation space. This leaves questions about how we might challenge hegemonic views of what innovation is and what the products of it can or should be. Whilst also suggesting that we aim to identify opportunities to influence legislation and policy before it is handed down.

Making the most of new legislation was a challenge familiar to the grassroots workers involved our study. Some even had past experience developing digital resources, often meeting with limited success or with a product that was

poorly adopted. It is a testament to their commitment that they continue to seek out opportunities to be involved and strive for the best outcomes in the face of adversity. The willingness of the grassroots actors to innovate was notable, as was their belief in the potential of digital technologies to create ‘real’ benefit for people with disabilities. Equally, they were well versed in the constrictions of hegemonic interests, yet continued to forge on for the right conditions where innovation might occur and were happy to take short term gains in the process. Sadly, their struggle in this respect is anecdotal and often goes unrecorded, something that we were uniquely placed to help with but which the research team failed to support them in doing—even when our field notes are filled with discussion about how the process could be better documented and learned from. Moreover, work in HCI has already explored the benefits of documenting the hidden work that goes on in care sector spaces [24]. Moving beyond this work we might consider how we design to support perseverance, scaffolding grassroots workers’ actions across time, across projects and across contexts, from the voluntary to the public sector.

In our study, we encountered people committed to disability activism, passionately striving for better services, opportunities and lives for young people with SEND. Similar values could be ascribed to all of the members of the steering group, however, each had their own particular allegiances either to a specific department of local government, such as education or health, while others had a wealth of experience working directly with families in the voluntary sector, or were parent carers. As a result, there was slippage in interpretation of the legislation between these perspectives, suggesting a new space that affords design opportunities for the HCI community. We might imagine designing tools that offered support to the group members in making sense of what legislation means, that afford exploring it, sharing ideas around it and the development of a shared understanding. Such tools would necessarily have to address the challenge of how to make sense of diverse perspectives. While being configured to afford the questioning of each other’s interactions, managing expectations of what is realistically achievable and helping to anticipate conflict before it arises.

For HCI researchers collaborating in the design of community-led participation tools it is important that we reflect on our roles as researchers and our position working between the grassroots and hierarchy. In our work, we observed a tension between empowerment and austerity; a repeated cycle of top-down initiatives eroding bottom-up enthusiasm, and the ‘real work’ happening from the middle out. This was reflected in the ‘middle-out’ nature of our project—by which we suggest that, although it is a project with elements that are both top-down and bottom-up, the majority of the work was conducted from the middle-out by the steering group. Indeed, this is a design space not unfamiliar to HCI researchers [11], especially those working in civic contexts with public and voluntary sector

partners [16,23]. Moreover, in the past, this has led to technologies that could be described in themselves as ‘middle-out’. For example [17], a platform designed to be shaped by a ‘movement’ of community actors. Taken altogether then, we suggest that HCI researchers can only hope to make significant shifts in these infrastructures by embracing their own middle-out position.

CONCLUSION

In this paper, we have reported on a 12-month study where we participated in the design, development and implementation of a Local Offer digital platform. We saw how new government legislation became a locus for conflict around individual interpretations and aspirations, concerns and suspicions. We have highlighted tensions that arise when new legislation is enacted and translated through the values of grassroots organisations and citizen groups working with inflexible bureaucratic hierarchies and discussed opportunities for the role of HCI in this context. In doing so, we assert that such opportunities cannot be pursued purely as a means for governments to save money by providing tools for ‘streamlining’ service provision. Rather efforts should support citizens and governments alike to share and make sense of their diverse perspectives.

Taking a more critical stance, however, where local government cannot fulfil its fundamental responsibility to citizens, we should use our position as ‘middle-out’ mediators and observers to narrate the struggles of potentially marginalised or disenfranchised groups in the production of government services. In doing so, we might call into question the logic and failures of neo-liberal government, and demonstrate and evidence successful workarounds. This is our responsibility as civic actors—to both create and record the ways in which digital technologies are shaping local government with and for their citizens. The work presented here is just one example of that record.

Finally, we present a short summary of the main implications that we derive from our work, that HCI researchers should: (i) support citizen evaluation of local government consultation and evidence their role in dialogue; (ii) identify opportunities to influence legislation and policy before it is handed down; (iii) design tools to document and support the perseverance of grassroots workers and activists and (iv) reflect upon and embrace their own middle-out position.

ACKNOWLEDGEMENTS

We’d like to thank all of our participants for giving their time and support. This research was funded through the EPSRC CDT in Digital Civics (EP/L016176/1). Data supporting this publication is openly available under an ‘Open Data Commons Open Database License’. Additional metadata available at: <http://dx.doi.org/10.17634/154300-62>. Please contact Newcastle Research Data Service at rdm@ncl.ac.uk for access instructions.

REFERENCES

1. Mariam Asad and Christopher a. Le Dantec. 2015. Illegitimate Civic Participation. In *Proceedings of ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW '15)*, 1694–1703. <https://doi.org/10.1145/2675133.2675156>
2. Mariam Asad and Christopher A. Le Dantec. 2017. Tap the “Make This Public” Button: A Design-Based Inquiry into Issue Advocacy and Digital Civics. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '17)*, 6304–6316. <https://doi.org/10.1145/3025453.3026034>
3. Madeline Balaam, Rob Comber, Ed Jenkins, Selina Sutton, and Andrew Garbett. 2015. FeedFinder: A Location-Mapping Mobile Application for Breastfeeding Women. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '15)*, 1709–1718. <https://doi.org/10.1145/2702123.2702328>
4. Mara Balestrini, Yvonne Rogers, Carolyn Hassan, Javi Creus, Martha King, and Paul Marshall. 2017. A City in Common. In *Proceedings of SIGCHI Conference on Human Factors in Computing Systems (CHI '17)*, 2282–2294. <https://doi.org/10.1145/3025453.3025915>
5. Mara Balestrini, Yvonne Rogers, and Paul Marshall. 2015. Civically Engaged HCI: Tensions Between Novelty and Social Impact. In *Proceedings of the 2015 British HCI Conference*, 35–36. <https://doi.org/10.1145/2783446.2783590>
6. Erling Björgvinsson, Pelle Ehn, and Per-Anders Hillgren. 2010. Participatory Design and “Democratizing Innovation.” In *Proceedings of the Biennial Participatory Design Conference*, 41–50. <https://doi.org/10.1145/1900441.1900448>
7. Susanne Bødker and Pär-Ola Zander. 2015. Participation in design between public sector and local communities. In *Proceedings of the Conference on Communities and Technologies (C&T '15)*, 49–58. <https://doi.org/10.1145/2768545.2768546>
8. Kirsten Boehner and Carl DiSalvo. 2016. Data, Design and Civics: An Exploratory Study of Civic Tech. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '16)*, 2970–2981. <https://doi.org/10.1145/2858036.2858326>
9. Bengt Brattgård, Elisabeth Dalholm, Roy C Davies, Ann Hägerfors, Birgitta Mitchell, and Jörn Nilsson. 1996. The Envisionment Workshop - from visions to practice. In *the Proceedings of the Participatory Design Conference*, 141–152.
10. Virginia Braun and Victoria Clarke. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology*, 3:2, 77–101. <https://doi.org/10.1191/1478088706qp063oa>
11. Audrey Crane. 2005. Middle-out Design. In *Proceedings of the Conference on Designing for User eXperience (DUX '05)*.
12. Clara Crivellaro, Rob Comber, John Bowers, Peter Wright, and Patrick Olivier. 2014. A Pool of Dreams: Facebook, Politics and the Emergence of a Social Movement. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '14)*, 3573–3582. <https://doi.org/10.1145/2556288.2557100>
13. Carl Disalvo, Thomas Lodato, Tom Jenkins, Jonathan Lukens, and Tanyoung Kim. 2014. Making Public Things: How HCI Design Can Express Matters of Concern. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '14)*, 2397–2406. <https://doi.org/10.1145/2556288.2557359>
14. Andy Dow, John Vines, Rob Comber, and Rob Wilson. 2016. ThoughtCloud : Exploring the Role of Feedback Technologies in Care Organisations. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '16)*, 3625–3636. <https://doi.org/10.1145/2858036.2858105>
15. Andy Dow, John Vines, Toby Lowe, Rob Comber, and Rob Wilson. 2017. What Happens to Digital Feedback?: Studying the Use of a Feedback Capture Platform by Care Organisations. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '17)*, 5813–5825. <https://doi.org/http://dx.doi.org/10.1145/3025453.3025943>
16. Joel Fredericks, Glenda Amayo Caldwell, and Martin Tomitsch. 2016. Middle-out Design: Collaborative Community Engagement in Urban HCI. In *Proceedings of the Australian Conference on Computer-Human Interaction (OzCHI '16)*, 200–204. <https://doi.org/10.1145/3010915.3010997>
17. Andrew Garbett, Rob Comber, Edward Jenkins, and Patrick Olivier. 2016. App Movement: A Platform for Community Commissioning of Mobile Applications. In *Proceedings of the SIGCHI Conference on Human Factors in Computing Systems (CHI '16)*, 26–37. <https://doi.org/10.1145/2858036.2858094>
18. Connie Golsteijn, Sarah Gallacher, Licia Capra, and Yvonne Rogers. 2016. Sens-Us: Designing Innovative Civic Technology for the Public Good. In *Proceedings of the ACM Conference on Designing Interactive Systems (DIS '16)*, 39–49. <https://doi.org/10.1145/2901790.2901877>
19. Kim Halskov and Nicolai Brodersen Hansen. 2015. The Diversity of Participatory Design Research Practice at PDC 2002-2012. *International Journal of*

- Human-Computer Studies* 74, 81–92.
<https://doi.org/10.1016/j.ijhcs.2014.09.003>
20. Gillian R. Hayes. 2011. The relationship of action research to human-computer interaction. *ACM Transactions on Computer-Human Interaction* 18:3, 1–20. <https://doi.org/10.1145/1993060.1993065>
 21. Department of Health. 2014. *Children and Families Act 2014*. Queen's Printer of Acts of Parliament. Retrieved July 18, 2015 from <http://www.legislation.gov.uk/ukpga/2014/6/contents/enacted>
 22. Cheshire West Healthwatch. 2016. *Identifying Gaps in Service Provision for Disabled Children / Young People, their Families and Carers*. Cheshire West Healthwatch, Cheshire, UK.
 23. Luke Hespanhol. 2017. More Than Smart, Beyond Resilient: Networking Communities for Antifragile Cities. In *Proceedings of the International Conference on Communities and Technologies (C&T '17)*, 105–114. <https://doi.org/10.1145/3083671.3083683>
 24. Jonathan Hook, Rachel Clarke, John McCarthy, Kate Anderson, Jane Dudman, and Peter Wright. 2015. Making the Invisible Visible: Design to Support the Documentation of Participatory Arts Experiences. In *Proceedings of SIGCHI Conference on Human Factors in Computing Systems (CHI '15)*, 2583–2592. <https://doi.org/10.1145/2702123.2702187>
 25. Youyang Hou. 2016. Understand the Design and Implementation of Civic Technologies in Public Organizations. In *Proceedings of the ACM Conference on Computer Supported Cooperative Work and Social Computing Companion (CSCW '16 Companion)*, 147–150. <https://doi.org/10.1145/2818052.2874353>
 26. Ian G Johnson, Alistair McDonald, Jo Briggs, Jennifer Manuel, Karen Salt, Emma Flynn, and John Vines. 2017. Community Conversational: Supporting and Capturing Deliberative Talk in Local Consultation Processes. In *Proceedings of SIGCHI Conference on Human Factors in Computing Systems (CHI '17)*, 2310–2333. <https://doi.org/10.1145/3025453.3025559>
 27. Ian G Johnson, John Vines, Nick Taylor, Edward Jenkins, and Justin Marshall. 2016. Reflections on Deploying Distributed Consultation Technologies with Community Organisations. In *Proceedings of SIGCHI Conference on Human Factors in Computing Systems (CHI '16)*: 2945–2957. <https://doi.org/10.1145/2858036.2858098>
 28. Lisa Koeman, Vaiva Kalnikaitė, and Yvonne Rogers. 2015. “Everyone Is Talking about It!”: A Distributed Approach to Urban Voting Technology and Visualisations. In *Proceedings of SIGCHI Conference on Human Factors in Computing Systems (CHI '15)*, 3127–3136. <https://doi.org/10.1145/2702123.2702263>
 29. Stacey Kuznetsov, William Odom, Vicki Moulder, Carl DiSalvo, Tad Hirsch, Ron Wakkary, and Eric Paulos. 2011. HCI, Politics and the City: Engaging with Urban Grassroots Movements for Reflection and Action. In *Proceedings of SIGCHI Conference Extended Abstracts on Human Factors in Computing Systems (CHI '11)*, 2409–2412. <https://doi.org/10.1145/1979742.1979568>
 30. Christopher A. Le Dantec. 2012. Participation and Publics: Supporting Community Engagement. In *Proceedings of SIGCHI Conference on Human Factors in Computing Systems (CHI '12)*, 1351–1360. <https://doi.org/10.1145/2207676.2208593>
 31. Christopher A. Le Dantec and Carl DiSalvo. 2013. Infrastructuring and the Formation of Publics in Participatory Design. *Social Studies of Science* 43, 2: 241–264. <https://doi.org/10.1177/0306312712471581>
 32. Christopher A. Le Dantec and W. Keith Edwards. 2008. Designs on Dignity: Perceptions of Technology Among the Homeless. In *Proceedings of SIGCHI Conference on Human Factors in Computing Systems (CHI '08)*, 627–636.
 33. Christopher A. Le Dantec and Sarah Fox. 2015. Strangers at the Gate: Gaining Access, Building Rapport, and Co-Constructing Community-Based Research. In *Proceedings of the ACM Conference on Computer Supported Cooperative Work & Social Computing (CSCW '15)*, 1348–1358. <https://doi.org/10.1145/2675133.2675147>
 34. Dennis Linders. 2012. From e-government to we-government: Defining a typology for citizen coproduction in the age of social media. *Government Information Quarterly* 29, 4: 446–454. <https://doi.org/10.1016/j.giq.2012.06.003>
 35. Elaine Massung, David Coyle, Kirsten Cater, Marc Jay, and Chris Preist. 2013. Using Crowdsourcing to Support Pro-environmental Community Activism. In *Proceedings of SIGCHI Conference on Human Factors in Computing Systems (CHI '13)*, 371–380. <http://doi.acm.org/10.1145/2470654.2470708>
 36. Richard Meegan, Patricia Kennett, Gerwyn Jones, and Jacqui Croft. 2014. Global economic crisis, austerity and neoliberal urban governance in England. *Cambridge Journal of Regions, Economy and Society* 7, 1: 137–153. <https://doi.org/10.1093/cjres/rst033>
 37. Kellie Morrissey, Andrew Garbett, Peter Wright, Patrick Olivier, Edward Ian Jenkins, and Katie Brittain. 2017. Care and Connect: Exploring Dementia-Friendliness Through an Online Community Commissioning Platform. In *Proceedings*

- of *SIGCHI Conference on Human Factors in Computing Systems (CHI '17)*, 2163–2174. <https://doi.org/10.1145/3025453.3025732>
38. Patrick Olivier and Peter C. Wright. 2015. Digital Civics: Taking a Local Turn. *interactions* 22, July-August 2015: 61–63. <https://doi.org/10.1145/2776885>
 39. Jon Pierre. 1998. Public Consultation and Citizen Participation: Dilemmas of Policy Advice. *Taking stock: Assessing public sector reforms 2*: 137.
 40. Sunil Rodger, John Vines, and Janice Mclaughlin. 2016. Technology and the Politics of Mobility: Evidence Generation in Accessible Transport Activism. In *Proceedings of SIGCHI Conference on Human Factors in Computing Systems (CHI '16)*, 2417–2429. <https://doi.org/10.1145/2858036.2858146>
 41. Toni Simonsen, Jesper Robertson. 2013. *Routledge International Handbook of Participatory Design*. Routledge, London.
 42. Emma Simpson, Rob Comber, Andrew Garbett, Ed Ian Jenkins, and Madeline Balaam. 2017. Experiences of Delivering a Public Health Data Service. In *Proceedings of SIGCHI Conference on Human Factors in Computing Systems (CHI '17)*, 6171–6183. <https://doi.org/10.1145/3025453.3025881>
 43. Angelika Strohmayer, Rob Comber, and Madeline Balaam. 2015. Exploring Learning Ecologies among People Experiencing Homelessness. In *Proceedings of SIGCHI Conference on Human Factors in Computing Systems (CHI '15)*, 2275–2284. <https://doi.org/10.1145/2702123.2702157>
 44. Angelika Strohmayer, Mary Laing, and Rob Comber. 2017. Technologies and Social Justice Outcomes in Sex Work Charities: Fighting Stigma, Saving Lives. In *Proceedings of SIGCHI Conference on Human Factors in Computing Systems (CHI '17)*, 3352–3364. <https://doi.org/10.1145/3025453.3025615>
 45. Nick Taylor, Justin Marshall, and A Blum-Ross. 2012. Viewpoint: Empowering Communities with Situated Voting Devices. In *Proceedings of SIGCHI Conference on Human Factors in Computing Systems (CHI '12)*, 1361–1370. <https://doi.org/10.1145/2207676.2208594>
 46. Nick Taylor, Peter Wright, Patrick Olivier, and Keith Cheverst. 2013. Leaving the Wild: Lessons from Community Technology Handovers. In *Proceedings of SIGCHI Conference on Human Factors in Computing Systems (CHI '13)*, 1549–1558. <https://doi.org/10.1145/2470654.2466206>
 47. Vasilis Vlachokyriakos, Rob Comber, Karim Ladha, Nick Taylor, Paul Dunphy, Patrick Mccorry, and Patrick Olivier. 2014. PosterVote: Expanding the Action Repertoire for Local Political Activism. In *Proceedings of SIGCHI Conference on Human Factors in Computing Systems (CHI '14)*, 795–804. <https://doi.org/10.1145/2598510.2598523>
 48. Vasilis Vlachokyriakos, Clara Crivellaro, Pete Wright, Antonio Krüger, Johannes Schöning, Matt Jones, Shaun Lawson, Evika Karamagioli, Eleni Staiou, Dimitris Gouscos, Rowan Thorpe, and Patrick Olivier. 2017. HCI, Solidarity Movements and the Solidarity Economy. In *Proceedings of SIGCHI Conference on Human Factors in Computing Systems (CHI '17)*, 3126–3137. <https://doi.org/10.1145/3025453.3025490>
 49. Sarah Walsh, Rob Wilson, Sue Baines, and Mike Martin. 2012. “You’re Just Treating Us as Informants!” Roles, Responsibilities and Relationships in the Production of Children’s Services Directories. *Local Government Studies* 38:5, 661–680. <https://doi.org/10.1080/03003930.2012.676439>
 50. David Wastell and Sue White. 2014. Making sense of complex electronic records: Socio-technical design in social care. *Applied Ergonomics* 45, 2, Part A: 143–149. <https://doi.org/10.1016/j.apergo.2013.02.002>