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PEER REVIEWED ARTICLE

Grant Hurley

## Your Comments Here: Contextualizing Technologies, Seeking Records and Supporting Transparency for Citizen Engagement

### ABSTRACT

Today, governments the world over are opening decision-making processes to citizen engagement as an aspect of open government. Citizen engagement initiatives may range from making information available and seeking feedback, to highly dynamic processes that transfer authority to communities and individuals. As part of these initiatives, governments are actively using digital technologies to gather, analyze, and store citizen input; activities that in turn create an array of records. My paper surveys a range of digital technologies used by Canadian citizen engagement case initiatives. In linking technologies, recordkeeping and citizen engagement, I present the combined frameworks of the IAP2 Spectrum and archival diplomatics as one method of understanding how recordkeeping and citizen engagement frameworks may be joined. I conclude with a discussion on defining and locating the records of citizen engagement initiatives and how records and recordkeeping may support transparency and trust in citizen engagement.

### 1 Introduction

Today, governments the world over are opening decision-making processes to citizens as an aspect of open government. Citizen engagement initiatives may range from making information available and seeking feedback, to highly dynamic processes that transfer authority to

communities and individuals. There is room for both optimism and cynicism in evaluating the present state of citizen engagement. The promise is that these initiatives will create stronger links between citizens and governments, bolster trust in government, and ensure that decisions and services adequately reflect citizen needs, from local issues to national matters (Nabatchi, 2012). In democratic countries, confidence in governments and investment in traditional forms of democratic engagement are in decline (Foa & Mounk, 2017). The ideal presented by citizen engagement is that focused initiatives, particularly when combined with widely available digital platforms, may invigorate citizen relationships with governments. As one *New York Times* commentator recently noted, “virtual direct democracy through social media has outflanked representative democracy” (Cohen, 2016). However, the question remains whether these initiatives have a meaningful impact or are initiated only to legitimize governments and entrench existing power. The word “consultation” is quickly becoming a synonym for government gestures towards accountability and transparency that do not adequately consider or implement submitted feedback (Jay, 2016). One method of investigating this tension is to examine the relationship between citizen engagement, digital information technologies, and recordkeeping. Digital software, systems, and platforms are actively used by governments to mediate the exchange of information between parties in citizen engagement initiatives. These technologies gather, analyze, and store data resulting from initiatives, activities that in turn create an array of records. Records emerging from citizen engagement activities stand as evidence of the engagement process and how input or collaboration produced (or failed to produce) results, and which may hold governments accountable to promises made. However, government uses of specialized and proprietary technologies can lock in records and fragment them among a number of local and third party systems currently in use, meaning that technologies have the possibility of doubling the untrustworthiness of a citizen engagement initiative if the records generated by them are not available or preserved. Just as governments are committing themselves to the principles of accountability and transparency through citizen engagement, so can the archives and records management community support the accountability and transparency of citizen engagement itself through records creation, capture, management, access, and preservation.

In order to approach these issues, this paper seeks to answer the following questions: What frameworks are required to understand the role of records in citizen engagement? What technologies are in use for citizen engagement and how can they be contextualized using these frameworks? How can a survey of citizen engagement technologies provide insights into locating relevant records and supporting trusted and transparent recordkeeping? To address these questions, I define and trace citizen engagement and present the combined frameworks of the IAP2 Spectrum of Public Engagement and archival diplomatics. I provide a preliminary inventory of technologies derived from Canadian engagement cases and contextualize them using these frameworks. I conclude with a discussion on defining and locating the records of citizen engagement initiatives and how records and recordkeeping may support transparency and trust in citizen engagement. My focus is limited to thinking about citizen engagement, digital information technologies, and their impacts on records and recordkeeping. While the literature on the

interactions between governments, citizens, and a variety of new technologies is enormous,<sup>1</sup> none to my knowledge discuss the relationships between technology-driven citizen engagement initiatives and the creation of records.<sup>2</sup>

## 2 Background

This paper is one of several products from a research project titled “The Implications of Open Government, Open Data, and Big Data on the Management of Digital Records in an Online Environment” (NA08) that was initiated under the InterPARES Trust project.<sup>3</sup> InterPARES Trust is an international five-year research initiative headquartered at the University of British Columbia to explore records and data entrusted to the Internet. The project’s goal is to “generate the theoretical and methodological frameworks to develop local, national and international policies, procedures, regulations, standards, and legislation, in order to ensure public trust grounded on evidence of good governance, a strong digital economy, and a persistent digital memory” (InterPARES Trust, 2013, para. 3). As part of the North American team of InterPARES Trust, the NA08 project was established to clarify the concepts of big data, open data, and open government and to identify records-related issues relating to these concepts. Its previous areas of study have been the retention and disposition of open data (McDonald & Léveillé, 2014) and an investigation of Canadian open government programs and recordkeeping issues informed by business process analysis methods (Léveillé & Timms, 2015).

## 3 Methods

### *3.1 Defining citizen engagement*

I define citizen engagement as a communicative, interactive and iterative process or initiative that actively involves citizens in policy or program development at any level of government. The level of engagement and flow of information can range from making information available, to gathering feedback and ideas, and on to more complex relationships where individuals and groups are transferred greater decision-making power and authority to deliberate over issues and

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<sup>1</sup> For example, see Norris (2001) for a book-length study on the subject. Much work has tended to focus on social media (Gil de Zúñiga, Jung, & Valenzuela, 2012), youth engagement (Hosio, Kostakos, Kukka, Jurmu, Riekk, & Ojala, 2012), or both (Bridges, Appel, & Grossklags, 2012). Other work, such as De Cindio & Peraboni (2011) and Yetano & Royo (2015), bridges into broader empirical research on the uses and effects of citizen engagement technologies. Sanford and Rose (2007) and Susa and Grönlund (2012) are two examples of meta-analysis in the field of e-participation and e-democracy.

<sup>2</sup> James Lowry’s 2015 literature review on open government data in relation to archives and records management notes that “civic technologies” have “gone unexamined by the records and archives professional community” (p. 76). A related area of study is government social media and records. See Franks & Weck (2015).

<sup>3</sup> For links to additional research products, visit [https://interparestrust.org/trust/research\\_dissemination](https://interparestrust.org/trust/research_dissemination), click on “InterPARES Trust Research Documents” and search for “NA08.”

their solutions. Rowe and Frewer (2005) differentiate the terms “public participation” from “public communication” and “public consultation” that they gather under the umbrella term of “public engagement.” Public communication is the one-way delivery of information from an initiative to the public without explicitly seeking a response. For example, a government may proactively make information available for use, activities that are often coordinated and collected under open data and open information programs for structured data and records and information, respectively. Public consultation is the one-way transfer of information from the public back to the initiative as requested by the initiative, such as the use of surveys or polls. Public participation is defined as depending on two-way information exchange: “rather than simple, raw opinions being conveyed to the sponsors, the act of dialogue and negotiation serves to transform opinions in the members of both parties (sponsors and public participants)” (pp. 255-6). A citizen engagement initiative may include aspects of all three engagement types separately or in mixture. An initiative may begin by disseminating information about an issue, proceed with opinion polls, and finish with a focused workshop or public planning event. Other definitions of “citizen engagement” may emphasize the more dynamic aspects of public participation over one-way communication or consultation. In my survey of technologies used in engagement, I take a broad view by including all three engagement types to capture the many methods by which governments seek to interact with citizens and the records that result from these activities. Key additional definitional considerations for citizen engagement are that citizens are given the opportunity to participate as themselves rather than exclusively on behalf of stakeholders, and that participation takes place in an environment of mutual respect (Sheedy, MacKinnon, Pitre, & Watling, 2008). The idea that citizens should be able to represent themselves does not preclude the involvement of organized community groups, but that group members or representatives do not come to the table with pre-determined opinions, as the process of opinion-formation constitutes the basis of engagement itself (Rowe and Frewer, 2005). The cultivation of an environment of mutual respect, even if participants desire potentially conflicting outcomes, means that debate can occur in a trusted space. Finally, though citizen engagement is often discussed in the context of democracy and democratic theory, its application is not limited to democratic governments. Indeed, the only easily generalizable feature of citizen engagement is that it is heavily context-dependent: each instance necessarily reflects a particular rationale, set of participants, and methods used to create engagement.

Other commonly used terms in the field are e-democracy and e-participation. E-democracy is commonly taken to mean the use of information technologies “to support ... democratic decision-making processes” (Macintosh, 2004, p. 1) and is often used interchangeably with e-participation (Susha & Grönlund, 2012). Susha and Grönlund (2012) draw the distinction between e-participation as largely concerned with “socio-technical” aspects, such as user experience and design, and e-democracy, which tends to focus on “political impact,” such as assessing the democratic effectiveness of information technology use (p. 374). Based on their review of publications in the field, they argue that the terms are under-theorized and depend too heavily on an understanding of technology use as an unqualified good. For my own purposes, I am interested in the study of citizen engagement at the level of the contexts, activities, and

functions that produce records that can be made available for citizens as evidence, rather than the evaluation or assessment of the effectiveness of engagement technologies and processes. I do not wish to be dependent on information technology as a definitional requirement for citizen engagement, as many initiatives may use a mix of “traditional” methods (in-person meetings, conferences, town halls) and digital technologies. Such activities may not be easily separated for the purposes of records management, which emphasizes understanding function and context to determine classification, retention and accessibility before considering format. Therefore, the broad term “citizen engagement” in combination with the IAP2 Spectrum is used for consistency in this paper as opposed to specifically “e-” focused terminology.

### *3.2 Tracing citizen engagement*

The basic principles behind citizen engagement have existed for as long as governments have actively sought citizen support and feedback, whether through the basic function of elections, or town hall meetings, surveys, consultative studies, and the influence of protest. The philosopher Jürgen Habermas is one of the earlier contributors to the related field of deliberative democracy through his foundational work *The Structural Transformation of the Public Sphere* (1989). Over the first part of his work, Habermas traces his vision of the public sphere as it developed during the eighteenth and nineteenth centuries in Europe. He outlines how, during this time, the propertied bourgeois class gathered in coffee houses and taverns to discuss and debate. Their public discourse, experienced in an open field of relatively mutual interest, contributed toward challenging the power of the absolutist state. Following the fall of absolutist governments, ensuing public debate turned towards the legitimacy of democratic governments and the function of democracy itself (Susen, 2011). In contrast to this image, Habermas gives the last half of his book over to the decline of this emancipatory form of civic engagement in the modern era. In its stead is the “refeudalization” of the public sphere. Here individuals have transferred their decision-making power to elected officials and administrative bureaucracy, and their capacity for critical thought to the media, who only serve to shore up political division. Pointing towards a potential reopening of the public sphere, Habermas concedes that the “outcome of the struggle between a critical publicity and one that is merely staged for manipulative purposes remains open” (p. 235). Doing so means “minimizing bureaucratic decisions” and “relativizing [the] structural conflicts of interest according to the standard of a universal interest everyone can acknowledge” (p. 235). In other words, governments must prevent themselves from determining public discourse as much as possible, and there must be openness towards rational opinion-formation and discussion based on respect between debaters. These terms are commonly repeated in discourse around the functions of citizen engagement. As Tina Nabatchi writes, the benefits of citizen engagement are manifold: strong citizen engagement initiatives can help remedy the power inequities between citizens and governments, boost the “intrinsic value” of government through creating stronger governance and policy, and help citizens cultivate a better understanding of the issues their communities face (2012, p. 7). Critics of citizen engagement point to the inefficiencies created by the time, money, and effort used to consult citizens, both on the part of governments’ and citizens’ lost time (Nabatchi, 2012). Citizen engagement initiatives

may also be criticized as merely token measures to make governments appear more accountable and transparent without necessarily acting on the results of an initiative – what Habermas describes as “publicity merely staged for the purpose of acclamation” (1989, p. 235).

The modern uptake of citizen engagement discourses has been characterized by Yetano & Royo (2015) as a “shift from government to governance” (p. 2), an observation that links to the work of Robert B. Denhardt and Janet Denhardt. Their 2000 article and subsequent book titled *The New Public Service: Serving, Not Steering* argue that in opposition to private sector practices used to manage government as a business, the “new public service” is motivated to “place citizens at the center” (p. 550). Their observations are drawn from a variety of sources published on democracy, citizenship and government management from democratic theorists of the 1960s to the late 1990s that “assert that administrators ... should share authority and reduce control, and ... should trust in the efficacy of collaboration” (p. 552). These concepts are clearly connected to the approach towards citizen engagement taken up by the Obama Administration in the United States. The Obama Administration’s 2009 *Open Government Directive* implemented its principles of transparency, participation and collaboration within a technological framework and directed agencies to enable participation using new technologies (Orszag, 2009). Echoing Denhardt and Denhardt directly, the Canadian province of British Columbia released a 2010 “transformation and technology strategy” for open government and citizen engagement titled *Citizens @ The Centre: B.C. Government 2.0*. Similarly, the Open Government Partnership, a multi-national organization that monitors and assesses the status of open government in its signatory nations, include both citizen engagement and technology adoption as core aspects of its *Open Government Declaration* (2011). The Open Government Partnership currently manages the assessment of member nations’ commitments to these principles in developed open government action plans that include assessments relating to the values of citizen engagement and technology. Interestingly, Denhardt and Denhardt do not mention the role of technology in shaping citizen-government relationships. However, in a 2000 paper, political scientist Bruce Bimber addresses the issue head on. He “advocates rejecting the idea of a distinction between technology-related civic engagement and traditional civic engagement” (p. 330) with the idea that citizens care more about the relationship with government than the medium they use to negotiate this relationship. Instead, Bimber suggests rather that the “characteristics of information itself” (pp. 330-31) and the circumstances of its production and dissemination should be the site for analysis. My paper follows this idea in part by exploring how records are created in the various web-based platforms and software currently in use.

### *3.3 Frameworks*

#### 3.3.1 The IAP2 Spectrum

I make use of two frameworks when I survey different technologies used for citizen engagement. The first is the IAP2 Spectrum of Public Engagement (figure 1). The Spectrum was developed in 1999 as a tool to assess public participation initiatives. It provides a more granular classification of engagement types to complement Rowe and Frewer’s typology (2005) as described in section

3.1. The Spectrum includes five categories: Inform, Consult, Involve, Collaborate, and Empower, which are listed from left to right. As one moves to right of the Spectrum, one can expect that citizens will have greater power over decision-making in an engagement. A second section of the chart involves what promises governments make to citizens at each level. Whereas Inform at the far left involves the presentation of accurate information (and a government’s promise to keep citizens informed), the Empower level at the far right involves enabling decision-making to occur solely in the hands of the public, with a government’s promise to implement these decisions. An example of a degree in between these is Involve, where citizens are consulted for information throughout a process and this information is directly reflected in a government’s final decisions. While the movement from left to right indicates increasing complexity and a shift in power from the government to the public, each level has an appropriate use, sometimes at the same time or as part of the same initiative. No level of the Spectrum is necessarily “better” than another: its application is flexible and descriptive rather than prescriptive (Hardy, 2015).

INCREASING IMPACT ON THE DECISION					
	<b>INFORM</b>	<b>CONSULT</b>	<b>INVOLVE</b>	<b>COLLABORATE</b>	<b>EMPOWER</b>
<b>PUBLIC PARTICIPATION GOAL</b>	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	To obtain public feedback on analysis, alternatives and/or decisions.	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	To place final decision making in the hands of the public.
<b>PROMISE TO THE PUBLIC</b>	We will keep you informed.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision. We will seek your feedback on drafts and proposals.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	We will work together with you to formulate solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	We will implement what you decide.

Figure 1: The IAP2 Spectrum (International Association for Public Participation, 2014). Image copyright the International Association for Public Participation, www.iap2.org. Image used with permission.

Critics such as Grönlund (2009) have noted that that the IAP2 Spectrum does not specifically address information technologies and therefore does not accurately represent the sphere for the purposes of assessment or evaluation. Grönlund discusses Tambouris, Liotas, and Tarabanis (2007) who adapted the IAP2 Spectrum to information technologies by adding an “e-” to each of the levels of engagement with the idea that each level from “e-informing” to “e-empowerment” means a greater level of sophistication in the technology used. However, this model cannot be easily used to map engagement to technologies since there is no perfect ratio of technology sophistication to engagement level. Simple technologies could theoretically be employed at any

level of the Spectrum, as could more complex ones. Grönlund writes that “such ‘e’-focused measures hence fail to connect the ‘e’ [technology] use, to participation” (p. 16). It appears from the discussion of these models that a single-dimension method of representing citizen engagement and technology is not enough to represent the complex relationships between the two. I propose that a second dimension informed by the field of archival diplomatics holds promise for assessing technologies used for citizen engagement.

### 3.3.2 Archival diplomatics

Diplomatics is the study of documents: their origins, structures, uses and forms. In addition to detailed, systematic enumerations of the form and format of individual documents, diplomatics also considers the broader context in which records are created, a shift “in analysis away from the record itself to the broader structural, procedural, and documentary framework in which the record is created and managed” (MacNeil et al., 2001, p. 6). After the juridical-administrative, the documentary, and the provenancial context of documents, a document’s technological context as a framework for analysis was added by the InterPARES 1 project in 2000. The technological context is defined as the “characteristics of the technical components of the electronic system in which the record is created” (Authenticity Task Force, 2000, p. 7). The InterPARES 1 Project *Template for Analysis* subdivides the technological context into sections that consider the hardware, software, data, system models, and system administration in which a document is produced (Authenticity Task Force, 2000). A full diplomatic analysis of a digital document takes into account the relevant system and software rules, structures, storage methods, and data models that make up any technological system in order to determine how records are created and what their functions are. Taken together, the combination of the IAP2 Spectrum and the detail-oriented approach of archival diplomatics provides for a more nuanced view of the cross between citizen engagement and technology than discussions of either alone.

### 3.3.3 Data collection

As a member of the NA08 research project group, I assisted in conducting a series of semi-structured interviews with citizen engagement and open government leads in Canadian jurisdictions. Interviews took place from April to June 2015 and included the City of Toronto and City of Vancouver at the municipal level; the provincial governments of Alberta, British Columbia, and Ontario; and the Treasury Board Secretariat at the federal level. Jurisdictions and individuals were selected based on active open government programs and contacts made through the prior phases of the project. The interviews discussed the components of each jurisdiction’s open government programs, and asked interviewees to identify key cases of citizen engagement initiatives they had conducted. While the interview results informed other NA08 project deliverables,<sup>4</sup> the particular cases pointed to by the interviewees are the focus of the present paper, rather than the contents of the interviews themselves, except where specifically noted. The NA08 team coded these cases in greater detail for common elements, including technologies in use, and this subset of analysis informed the more detailed investigation of the technologies in

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<sup>4</sup> See Suderman, Timms, Léveillé, Hurley, Rovegno, & McDonald (2015).

use in this paper as elaborated in sections 4.1 and 4.2. Replication of this paper’s approach to additional jurisdictions or across jurisdictions could make use of other sources of citizen engagement initiative case information such as through *Participedia*, an international catalogue of citizen engagement initiatives.<sup>5</sup>

## 4 Results

### *4.1 Records-creating technologies: Public uses*

The following chart lists eight broad categories of digital information technologies used by governments as observed from the series of Canadian cases examined by the NA08 project. The chart focuses on the government side of the equation and excludes potential citizen-motivated uses of technologies to engage government. All of the technologies identified are web-based platforms, whether simple text submission platforms such as blogs, surveys, or e-mails; somewhat more complex (mainly textual) networks made available via common social media platforms; or more expansive and immersive open data and social media-like platforms specifically tailored for citizen engagement activities. Since most of the system-level details relating to the different technologies used are not available for public view, I consider the key elements of these technologies visible to users coded as “user abilities” and “data input” in the chart below. “User abilities” refers to what a system permits users to submit and what rights they have over the information they have submitted. “Data input” refers to the types of data that can be entered directly by the user.<sup>6</sup> These terms are a simplified modification of the “system models” and “data format” elements, respectively, of the InterPARES *Template for Analysis*. Finally, I assign the levels of the IAP2 Spectrum that (in my view) most closely match the technology used in the context of the example initiative. The chart is followed by a detailed discussion of the technologies observed in use.

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<sup>5</sup> Participedia is accessible at <https://www.participedia.net/>.

<sup>6</sup> This definition does not include metadata, which may be entered or collected with or without user knowledge. See section 4.2 for a continued discussion on this subject.

<i>Technology</i>	<i>Case Use</i>	<i>Case Jurisdiction</i>	<i>Case Initiative</i>	<i>Case User Abilities</i>	<i>Case Data Input</i>	<i>Case IAP2 Elements</i>
A. Blogs	Posts with comments	British Columbia	Liquor Policy Review <sup>7</sup>	Comments	Unstructured text	Inform-Consult
B. E-mail	Letters in response to an issue	British Columbia	Liquor Policy Review	Comments	Unstructured text	Consult
C. Surveys and polls	Series of directed questions requesting opinions on issue	British Columbia	Digital Services Consultation <sup>8</sup>	Comments, scale ratings, etc.	Structured, and unstructured text and numerical data	Consult
D. Popular social media platforms	Twitter comments	British Columbia	Liquor Policy Review	Comments	Unstructured text	Inform-Consult
E. Collaborative documents	GoogleDocs	Ontario	Ontario Open Data Directive <sup>9</sup>	Editing, comments	Unstructured text	Inform-Consult
F. Open data/open information catalogues	Open Data Catalogue <sup>10</sup>	Vancouver	General	Read only, feedback form	Unstructured text	Inform-Consult
G. Open data/open information portals	Open Data Portal <sup>11</sup>	Alberta	General	Read, data analysis, feedback form	Interactive tables, charts, visualizations and comments	Inform-Consult-Involve
H. Proprietary social platforms	IdeaSpaceTO <sup>12</sup>	Toronto	General	Contribute “ideas,” comments, voting	Unstructured text	Inform-Consult-Involve-Collaborate

Figure 2: Summary chart of citizen engagement technologies encountered with characterization of user abilities, data input, and the matching levels of the IAP2 Spectrum relevant to particular case.

<sup>7</sup> Province of British Columbia, 2014b. Internet Archive snapshot at: <https://web.archive.org/web/20160420104346/http://engage.gov.bc.ca/liquorpolicyreview>

<sup>8</sup> Province of British Columbia, 2014a. Internet Archive snapshot at: <https://web.archive.org/web/20160429141722/http://engage.gov.bc.ca/digitalservices/>

<sup>9</sup> Province of Ontario, 2015a. Available at: <https://www.ontario.ca/page/consultation-draft-open-data-directive>

<sup>10</sup> City of Vancouver, n.d.-a. Available at: <http://vancouver.ca/your-government/open-data-catalogue.aspx>

<sup>11</sup> Government of Alberta, n.d. Available at <http://open.alberta.ca/>

<sup>12</sup> City of Toronto, 2014b. Internet Archive snapshot at: <https://web.archive.org/web/20160317024450/http://toronto.mindmixer.com/>

### A Blogs

Blogs are a commonly used method to push information out to citizens for engagement since their barrier to implementation is typically low. However, the opportunity for input is restricted to unstructured text in the form of commentary unless users are encouraged to write their own blog pieces. In the case of the BC Liquor Policy Review (Province of British Columbia, 2014b), the Minister responsible for the consultation wrote a series of posts tackling different aspects of the subject, such as the sale of alcohol in grocery stores, the approaches taken by other jurisdictions, and the perspectives of police. Citizens were given the opportunity to comment on these posts by filling out their name and region of residence. Each comment was date and time stamped. If blogs are used to disseminate information but comments are closed, the appropriate IAP2 level is Inform; if comments are deployed or blogs used conversationally early in the process, they can also match the Consult or Involve levels, respectively. Moderated blogs (wherein government representatives approve posts based on their content) may also influence the type of engagement depending on the moderating standards used and how visible these standards are to users.

### B E-mail

Much in the same manner as blogs, e-mails enable input through unstructured text sent to a specified account, and commonly from citizens to a government account in a consultative capacity. However, e-mail input is not typically made available to other citizens for further commentary or observation, and is more traditional in form in that it typically is composed and addressed as a single response to an issue or question. As a result, the clear one-way and private nature of e-mail means that Consult or Involve is the appropriate level of the IAP2. The Consult approach was the one used by the BC Liquor Policy Review (Province of British Columbia, 2014b). E-mail may also be used to simply push information out to citizens (Inform).

### C Surveys and polls

Surveys provide useful opportunities for structured input from citizens that enable governments to gather data for ready analysis. While the form of surveys can vary widely from basic HTML or PDF forms to more complex proprietary platforms, they resemble e-mail in that they invite a single response from a single individual in a one-way relationship, where a citizen submits a response directly to government. This information may be made public if anonymized or compiled. The BC Digital Services Consultation (Province of British Columbia, 2014a) included a flash-based survey tool using a software product called MetroQuest, which enables users to design surveys specifically for public engagement (MetroQuest, n.d.). The survey was organized into sections on “my daily life,” “my child’s education,” and “my small business,” depending on the priorities of the respondent, and in total received over 1,106 responses. These results were published for public view (Province of British Columbia, 2014c). In general, surveys relate to the Consult level of the IAP2 because they typically invite comment on a predetermined set of questions: the role of the citizen is to respond to a set of ideas or indicate needs, not usually to help develop solutions, which requires a more conversational, dialogue-based approach.

#### D Popular social media platforms

Social media platforms for which citizens already have accounts are another easy method to gather input and commentary that can offer more complex engagements. For example, Twitter users may be invited to converse in response to a question using a hashtag that ties the conversation together into a single thread. Similarly, Facebook users may respond to a posted question in a series of replies, and governments may respond in kind. As in blogs and e-mail, input is unstructured but opportunities for citizens and governments to declare, revise and debate responses offer more nuanced and potentially collaborative engagement experience, leading these platforms more toward the Consult-Involve areas when feedback is conversational. If governments simply relay information via social media without responding or enabling responses, the IAP2 level is Inform.

#### E Collaborative documents

Collaborative documents, such as those available through GoogleDocs, enable a more targeted approach to engagement where the feedback sought relates to a document that can be commented upon, such as a proposed policy. The Ontario Treasury Board Secretariat opened a Google document version of their draft *Open Data Directive* for comment, which allowed users to read, edit and annotate the document in a collaborative context (Province of Ontario, 2015a). In combination with e-mail input, the initiative received over 200 comments (Province of Ontario, 2015a). The format also enables a unique method of supporting transparency, as the original draft was marked up using track changes in Microsoft Word, which enables individuals to see exactly how the document was altered following consultation (Province of Ontario, 2015b). The initiative corresponds most closely to the Consult area of the IAP2 because citizens were asked to comment on a document that was already in progress, but other uses of this technology could be described elsewhere in the Spectrum depending on the level of dialogue and opportunities to influence the final result.

#### F Open data and open information catalogues

##### G Open data and open information portals

Open data and information catalogues provide and describe datasets and records for download by users as part of open data and open information initiatives, but do not provide any means for interaction or comment. Immediate opportunities for engagement are limited to informing citizens unless the catalog allows for comments, which would include the Consult area of the IAP2. For example, the City of Vancouver Open Data Catalogue includes a general feedback form to request new datasets or ask questions of current data (City of Vancouver, n.d.-a). Other catalogues may enable commentary on individual data sets and records and include this information publicly. I use the phrase “open data and open information portals” to differentiate applications from catalogues that support interactive uses of data within the applications themselves, though the terms “portal” and “catalogue” can be used interchangeably.<sup>13</sup> Open data and open information portals may add features that enable users to visually display statistical data,

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<sup>13</sup> For example, see <http://open.canada.ca/en>

mash datasets together, or plot different layers of geospatial data together for analysis. For example, the Alberta Open Data Portal (Government of Alberta, n.d.) includes a Tableau visualization dashboard that lets users navigate through predetermined visualizations. At the City of Vancouver, the VanMap application<sup>14</sup> allows the layering of many different geospatial data sets. Though the appropriate IAP2 area may still be primarily Inform, these new methods for analysis can enable more complex interactions with government that could relate to practices at all levels of the IAP2.

#### H Proprietary social platforms

Proprietary social platforms are built specifically for individual or multiple engagement initiatives. The City of Toronto piloted the use of a proprietary platform called IdeaSpaceTO developed by Mindmixer to host numerous consultations (City of Toronto, 2014b). Topics and questions were described in detail by City representatives, and citizens were encouraged to submit “ideas,” which are specific solutions to a posed problem. City representatives responded to ideas, and all were able to add further comment and promote ideas with a star icon. An example that ran from December 2014 to June 2015 asked citizens about new bicycle lanes in certain sections of the city and whether they should be made permanent: “Your feedback will help the City decide if we should keep, expand and/or modify the cycle tracks on these streets” (City of Toronto, 2014a). 45 ideas were submitted, along with 140 comments. Using a platform specifically targeted for engagement has clear advantages: citizens can be involved early in a process and discussion is fluid and flexible, moving the IAP2 level closer to Involve and possibly Collaborate if the platform enables government to hand more decision-making processes to citizens.

In this survey of technologies encountered, it is notable that few involve the Collaborate and Empower sections of the IAP2 Spectrum. This could be a result of the small sample and country-specific focus, or a condition of the technologies in use that do not as easily enable these more complex engagements in a mediated environment.<sup>15</sup> When a government creates or deploys a particular technology as part of an engagement, the power of that technology’s use remains in their hands, whereas the engagements at the right side of the spectrum imply that power over deploying and maintaining that technology would shift into citizen hands. As such, less complex and more widely available digital information technologies might be more effectively used by both parties for information exchange in Collaborate and Empower-focused engagements in combination with the irreplaceable dynamics of in-person meetings and debate. However, all of these factors depend on how technologies are used, and citizens may have an equal interest in

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<sup>14</sup> City of Vancouver, n.d.-b. Available at: <http://vancouver.ca/your-government/vanmap.aspx>

<sup>15</sup> A study of citizen engagement initiatives in Latin American countries conducted by the Open Government Partnership showed that 79% of the 80 commitments surveyed fell in the Inform, Consult or Involve range of the IAP2 (Whitt, 2015). The study did not correlate these figures with technology use, though a separate section discusses the impact of technology uses, concluding that technology use is not necessarily a precondition of an initiative’s positive impact.

creating and hosting their own technologies for engagement with government. Further research in this area to answer these questions is necessary.

#### *4.2 Records-creating technologies: Government uses*

In addition to the technologies that governments use to engage citizens, it is also important to consider what kinds of technologies governments use to manage, analyze and store citizen input and metadata relating to that input. Citizen engagement initiatives must occur with some end goal in mind. How governments use technologies to reach these conclusions is as important as the methods used to gather citizen input in the first place. The survey of technologies below is exploratory and based on discussions with interviewees and feedback from reviewers of early drafts of this paper. It does not represent particular commitments to government uses of technology on the part of the interviewees unless explicitly indicated.

##### A Social media management

Social media management tools enable governments to more easily gather commentary on various social media platforms for analysis. A commonly cited example by interviewees was the product Hootsuite. Though the product is often used for managing outgoing messaging across multiple platforms, it also includes an analytics module that captures evidence of engagement on social media sites such as Twitter using keywords and enables the user to download the results as a PDF or CSV file. The Canadian Government announced in June 2016 that Hootsuite would be used to manage its social media accounts (Pileci, 2016).

##### B Web publishing

Web publishing platforms beyond internal website design and implementation are a second set of tools that match similar public-facing sides such as blogs. These tools, such as Wordpress, enable the setup of quick websites to present information and possibly enable commentary, but they may not always store citizen input.

##### C Metadata and data analytics

Technologies used for analysis by governments pose a problem for discussions of engagement because their use is not part of the engagement process and may not be transparent to citizens. Though citizens may provide a mass of data through web-facing technologies that includes both the content of their input and metadata describing their input (such as demographic or other personal information), the actual analysis of this data often happens elsewhere. For example, analysts might use a text analytics tool to gather input text into a database, which the system then auto-classifies using natural language processing tools. Analysts also might also access citizen metadata such as locality and demographic information to pivot comments and characterizations, and drill down from characterizations to specific comments to view the details. The movement from such a tool to the result produced by the consultation is not always available to citizens. In the BC Liquor Policy Review, some detail was described by the initiative lead, legislative assembly

member John Yap, in a blog post called “How we make sense of all your ideas and feedback” (2013). Yap writes,

With categories in mind, we then use software designed to sift through the public input we’ve received to draw all the relevant comments together. The information that some of you have provided about where you live and your age also helps us understand who is saying what in different parts of the province, and whether different age groups have different ideas. Once these categories are in place, our experts then begin to summarize the essence of the ideas we’re hearing from both the public, stakeholders and industry. From there they begin the analysis process to understand the impacts of the different ideas we’re hearing. It’s then up to me to decide what the final recommendations to Justice Minister Anton will be.

This description complicates the engagement process because it is unclear from the process as described by Yap how the software used actually works to analyze citizen input. Furthermore, metadata on citizen participation is described, but it is not communicated how this information was used to provide insight. I discuss some methods for building on this information in section 5.2 below.

#### D Incidental records

Incidental records are created as a product of an initiative that makes use of technologies, but they are secondary to the initiative’s goals or intended outcomes. For example, an online platform for engagement may require a user profile to be set up with login information, a password, and other metadata about the account for creation and maintenance information. Some or all of this information may be managed and stored by third parties, particularly if governments use proprietary social media platforms or contract out engagement platforms as described above, and managing records for privacy considerations may be paramount. In contrast, demographic or identifying data scraped from the social media profiles of contributors or included with input as metadata would not be incidental if they were used in analysis of the engagement, but it depends on how closely two datasets are linked. If identifying information is linked or in the same dataset as data from citizen input, the organization must consider what records will be kept and how they are managed when it comes to matching a particular individual with their stand on an issue.

#### E Integration with other systems

This paper has not discussed the many other kinds of records that can be created by engagement initiatives as a whole, from the records of decision-making around the goals, actions, analysis and products of an initiative, to the methods for analysis, and the records of final results. Integration of records of engagement created via technologies with existing systems supported by governments is one such area requiring additional documentation and analysis. For example, the harvesting of citizen input from the originating platform into an analysis platform is one step that may or may not be completed automatically. If not, normalization or data mapping will need to occur. A second step may also require automatic or manual transmission of analyzed data to higher level decision-making systems, such as an agenda or motions database or dashboard.

Finally, decisions will have to occur about what of these records may be transferred to electronic document records management systems for ongoing action and reference, and eventual retention and disposition.

## 5 Discussion

### *5.1 Seeking records*

As is summarized by the above chart and descriptions, there are a wide range of digital information technologies being used for citizen engagement, meaning a wide set of areas in which to find potential records. This is not in itself a bad thing, since a broad set can expand the potential toolbox of engagement methods and reach wider audiences. However, it also means that evidence of citizen input could be easily fragmented among a number of different systems and platforms, some of them proprietary. In the case of e-mail input, data may be harvested from an account or the e-mail records themselves stored within an e-mail system or some other electronic records management system. Social media input may also be harvested and stored via Hootsuite or within whatever proprietary social website the input was created on. Other information may be stored within the internal systems for engagement and analysis that governments themselves have purchased or developed. In all cases it is unclear how this information can be managed as records without a government determining what constitutes a record in each context. Are the bulk files of citizen input stored as data in relational or NoSQL database records? Or are the individual records of every citizen's interaction managed according to a more traditional schedule-oriented environment? Or will both cases exist at once? One method of approaching these questions is to consider what constitutes a record from the point of view of citizens in this relationship. If a tweet, an e-mail, a comment, or more detailed contributions in person or online can constitute a "document made or received in the course of a practical activity"; one that provides information for action or reference on the part of governments; and finally, provides evidence of past activities, then individual citizen submissions constitute records (InterPARES, 2007). A citizen takes her time, effort, and interest to the table in an engagement initiative and it seems wrong to consider this contribution as something less.

A second method of analyzing engagement technologies that produce records is to determine the function of the records being produced. Luciana Duranti's work on diplomatics (2015) has identified six possible record functions: dispositive, probative, supporting, narrative, instructive, and enabling. Dispositive and probative records are required by the legal system (such as contracts and birth certificates). Instructive and enabling records specifically describe digital records that allow processes and workflows to be run in computer applications, such as CSS or XML style sheets or written procedural manuals. In the case of dispositive and probative records, legal systems do not generally require evidence of the kind discussed in this paper, though an initiative may result in any number of legislative consequences and related records that themselves have dispositive or probative value. And though some citizen engagement records emerge from special applications that create or require instructive or enabling records, the key

record in question here is the input created by citizens, rather than the method with which it may be viewed or analyzed (though these too remain important records, as will be discussed below). Supporting and narrative records make much greater sense to describe the records of citizen input. Supporting records help guide an activity in which they take part. They are “created to provide support for, and procedurally linked to, a legally relevant action. They do not in themselves constitute the action and are not used to prove the action, but they assist in decision-making” (Gilliand-Sweetland, 2002, p. 207). Narrative records simply convey information. They “do not participate procedurally in any legally relevant action but are created as part of routine work processes” (Gilliand-Sweetland, 2002, p. 207) As Duranti writes, “while both categories of records participate in some kind of action, neither is able to carry out an action or provide evidence of it by itself” (2015, p. 338). This description fits the kind of records created through the technologies described: while each tweet, comment or post conveys important information and supports the engagement process, it does not provide a whole picture of the events and actions alone. Hence, records of citizen input, such as those described in figure 2, will generally be supporting records. Other types of records created through engagement initiatives, such as plans, statements and drafts, will likely be a mix of narrative and supporting records, though other circumstances might apply based on the engagement initiative structure and methods.<sup>16</sup> All of these records may lead to a final product, such as a report, set of recommendations or motions for legislation, which may have probative or dispositive value. For narrative and supporting records, the recordkeeping requirements are fewer and less pressing: records may be compiled or stored as datasets, and they may not need to be retained for a great length of time. However, governments will still need to record the decisions made from an engagement initiative and how these decisions were reached through accountable records management. Selecting the appropriate records that document this information may prove a challenge – and finding them is another. On reviewing British Columbia’s operational and administrative records schedules, it was unclear where citizen engagement records would be located. Though the provincial citizen engagement unit sits under the Government Communications and Public Engagement central agency, the communications operational schedule does not reflect citizen engagement activities. Certain records could be filed under “opinion polls and surveys” or “communication projects,” among other potential categories (Province of British Columbia, 2011). It is likely that while the communications agency provides advice and support, the ministries or groups that initiate and often operate engagement initiatives will also hold many relevant records, and perhaps the core group of records relevant to the narrative of that engagement. Ensuring that these records are accessible and retained properly will surely be a challenge where cross-government engagement activities are in operation.

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<sup>16</sup> Additional research could be completed on examining particular engagement cases and the resulting records in light of the four functions of records and in relation to the IAP2 Spectrum. However, I suggest that there is no one-to-one relationship between certain technologies, the IAP2 Spectrum, and the four record functions, as their categorization may differ depending on how the initiative is organized around juridical acts. See also Hurley, Léveillé, and McDonald (2016), chapter 4 for a similar discussion of the five diplomatics records contexts and citizen engagement.

## 5.2 Supporting Transparency

Final support for the accountable management of the records of citizen engagements comes from the need to provide greater transparency about the engagement process. In the case initiatives surveyed, it was not always clear or consistent how citizen data input necessarily resulted in a tangible result, such as a recommendation, policy or directive. As in the BC Liquor Policy Review outlined above, the government did make an effort to describe the engagement process and the role of citizen input, though the final report contained no description of the methods used to develop its recommendations. Transparency of the whole engagement process, and how different information technologies for input and analysis were used to get from the beginning to the end, is a crucial contributor to establishing trust in the system itself through the availability of evidence.<sup>17</sup> This need is particularly evident when a range of technologies for gathering and analyzing citizen input as data is involved. As Habermas (1970) notes in his essay “Technology and Science as ‘Ideology,’” technology itself has “legitimizing political power” as a tool used by the state (p. 101). Susha and Grönlund (2012) also point out that “technology tools can help create facades or even barriers to genuine public participation,” and that technology use is too often assumed to have “transformational effects” that have yet to be rigorously identified and assessed (p. 374). There is a danger that information technologies used in engagements are used for their own sake rather than to support the goals of an engagement. Understanding how technologies fit into the larger story of a particular engagement, and what records emerged from them, will in turn support (or oppose) the legitimacy of that engagement. Having the appropriate records available to attest to an engagement is a necessary precursor to making a judgement at all.

Provenance is a key concept available for use in this field. Well-known in the archives and records management field,<sup>18</sup> the concept has had recent development in the visual analytics community,

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<sup>17</sup> I do not attempt to outline a metric or assessment framework for the trust of citizen engagement initiatives in this paper. See Scherer and Wimmer (2014) for an elaboration of a trust model for e-participation. The InterPARES Trust project has made use of Franks, Chen, Evans, Poloney, Redic, Weck, & Becker’s (2016) definition of trust (developed in the context of government social media use) as follows: “Confidence of one party in another, based on alignment of value systems with respect to specific actions or benefits, and involving a relationship of voluntary vulnerability, dependence and reliance, based on risk assessment” (slide 9). This definition fits into the citizen engagement space by supporting the idea that the legitimizing power of transparent information relating to an initiative will assist in enabling trust by helping to align subjective opinions, values and assessments of the initiative’s promises and outcomes. However, as Grimmelikhuijsen and Meijer (2012) show, there is no one-to-one relationship between transparency and trust; the relevant factors are highly dependent on the individuals engaging with government.

<sup>18</sup> For example, Tom Nesmith (2015) defines provenance as documenting the “ongoing process in which records are created and re-created, arising from knowledge of the history of the records” and their creators (p. 287).

which has developed frameworks for “analytic provenance” to demonstrate the processes taken on information to produce a certain set of results (Ragan, Endert, Sanyal, & Chen, 2015). Visual analysis shares some processes with data technology-driven citizen engagement: data is imported and manipulated iteratively until a result is achieved. Visual analytics is as much about the process, with many decisions and revisions along the way, as it is about the final result. Throughout the analytic process, it is important for the analyst to document the decisions they made in order to both replicate the result and to show that their analysis was valid. The same can be said for the principle of reproducibility of scientific research: the process used to gather data, analyze it, and come to a conclusion is always described, and is becoming increasingly documented through the availability of research data. In their literature analysis of provenance concepts in visual analytics, Ragan et al. (2015) identify five types of provenance information: data, visualization, interaction, insight, and rationale. For the purposes of this paper, all categories but visualization are directly relevant. In a technology-driven citizen engagement initiative that gathers input for analysis, the records of citizen input that are collected, collated or coded in some manner occur as data. The activities that govern the initial collection and formatting of this data constitute its data provenance. Ragan et al. define data provenance as “The history of data changes,” including “subsetting, data merging, formatting, transformations, or execution of a simulation to ingest or generate new data” (p. 34). Secondly, this data is analyzed in some way to create insight by detecting patterns and themes, or performing statistical or demographical analysis, which Ragan et al. describe as interaction provenance, the “history of user actions and commands with a system” (p. 35). This could include the many possible tools used and actions performed within analysis systems that lead to a possible set of results. The results themselves are contained within insight provenance, the “information derived from the analysis process,” including “hypotheses, insights, and other forms of analytic findings due to data exploration and inference” (p. 35). This type of information could include drafts of final results presented to engagement organizers, managers, or communities for discussion or action. Finally, rationale provenance offers a higher-level contextual account of the reasoning behind decisions and actions, including the objectives that motivated the analysis. These types of records could include the various planning and procedural documents that guide the initiative. Ragan et al. note that different aspects of provenance will be captured in a variety of ways. Data provenance may rely primarily on documented workflows and processes in addition to information captured by operating systems, while insight provenance may be captured by system logs. Insight and reasoning are more challenging to capture and additional information to complement system logs is usually required through qualitative notes, discussions, and reflections (p. 35). The types of provenance records discussed here fit into Duranti’s definition of narrative and supporting records, and may also include instructive or enabling records if digital information systems and computer code are more deeply involved. Citizen engagement initiatives that do not make use of data analysis as a methodology will still include many similar records as described above, particularly in the insight and reasoning sections.

Identifying relevant records according to these terms will depend heavily on the context and features of the engagement initiative itself. However, an understanding of the types of records

generated, coupled with the application of the IAP2 Spectrum and archival diplomatics, helps clarify how and where records of engagement are created and how they may be accessed and preserved as needed. Engagement initiatives need not provide a detailed record of how each individual citizen's input ended in a concrete result, if such a thing is even possible. Rather, knowing how data was created, gathered, transformed, and analyzed should provide sufficient evidence in addition to the other contextual records created by that initiative. Some governments may feel that engagement input data does not merit long-term preservation provided that the basis for the decisions made are adequately documented; others may take advantage of existing open data programs to host anonymized citizen input data for open use and re-use. Since the interviews took place with the British Columbia government last year, the province has put more development work into its GovTogetherBC "hub,"<sup>19</sup> a website that gathers together information on all active and inactive engagement initiatives performed since 2012. Entries on engagements include contextual information on the initiative's rationale, the scope of information gathered, and points to individual engagement websites if the initiative is open, or the initiative's results if the engagement is closed. GovTogetherBC's approach is a strong example of how these ideas can be developed in an integrated way, especially if greater information about an engagement's processes are made available, or records relating to an engagement are linked via the government's open data and open information websites. At the same time, the individual websites for three of the engagement initiatives studied<sup>20</sup> were removed from public view during the writing of this paper. Citizen engagement initiatives can have short lives: once a result has been achieved, it makes sense for governments to move on. However, ensuring that engagement technological frameworks – such as the capture of social media or web content into a records management system – match and enable workflows through to records retention and disposition will greatly support a more robust and accountable system overall.

## 6 Conclusion

Digital information technologies have considerably shaped how engagement happens, and though their use is still very much limited to familiar technologies and one-way flows of information, their maturity and complexity will only grow in the coming decades provided that governments continue to embrace them. Accountability and transparency supported by responsible records creation, management, accessibility and preservation can potentially level the playing field for citizen engagement participants by opening processes up to scrutiny and holding governments accountable to decisions and commitments made. Citizens may or may not choose to trust an initiative based on the transparency of the records emerging from that initiative, but the evidence must be made available for them to make a judgement at all. This paper has offered a preliminary survey of engagement technologies in use by Canadian governments with the

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<sup>19</sup> Available at <https://engage.gov.bc.ca/govtogetherbc/>

<sup>20</sup> The sites were: Province of British Columbia (2014a) [Digital services consultation] and (2014b) [Liquor policy review] and City of Toronto (2014b) [IdeaSpaceTO].

combined framework of the IAP2 Spectrum and archival diplomatics as a method of analyzing the records that emerge from engagement initiatives. The combination of these frameworks takes a contextual approach that identifies how records may be created by different technologies in use and based on the engagement type, and shows that records may be fragmented among a number of systems. Extending these observations into questions of records definition and transparent records creation and recordkeeping, I have suggested that a lack of transparency around how records are created, analyzed, managed, and preserved means that citizen engagement initiatives may create greater distrust in engagement processes themselves, thereby contradicting their original ‘open’ intent. Additional research could be completed in a number of areas, including investigating the relationship between different technologies and the IAP2 Spectrum using new cases; delving further into the relationships between archival diplomatics, records and the IAP2; and investigating the relationships between records, transparency and trust in assessments of citizen engagement cases.

In navigating the role of digital information technology within citizen engagement, it is prudent to return to Bruce Bimber’s suggestion to focus less on particular media and more on information mediation to avoid over-determining the role that technologies play. One of the most useful statements encountered from the citizen engagement practitioners I spoke to echoes this idea. They noted that technologies work best if the engagement is human and thoughtful: trust is mediated by technology, not created. Technologies for engagement create unique ways to engage with government, but not the only ones, and in theory, the relationship established exists outside the technological platform used to establish it. Nevertheless, the word “mediation” also implies that a change has occurred on both sides of the government-citizen equation. The many technologies employed do structure these relationships in different ways that are important to recognize, particularly in relation to the power that governments and citizens exercise in concert during an engagement initiative. When the records of citizen engagements are preserved, I believe they can have the power to reflect back on the communities that created them, whether as wide as a country or province, or specific and localized; communicating their thoughts, values and ideas in meaningful ways towards change.

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Grant Hurley is the Digital Preservation Librarian at Scholars Portal, Ontario Council of University Libraries. He graduated from the Dual Master of Archival Studies and Master of Library and Information Studies program at the University of British Columbia in 2015. He also holds a Master of Arts in English from UBC. He currently serves as a director and editor of *Off the Record* for the Archives Association of Ontario and as a researcher with the InterPARES Trust project at the University of British Columbia. He has published previously on digital preservation and community archives in *Archivaria* and is a contributor to the *Encyclopedia of Archival Science*.