

DCCADI: Developing Connections and Collaborations Among Digital Initiatives

Final Report to: CANADA COUNCIL - DIGITAL STRATEGY FUND

Land Acknowledgement

ELAN is an official minority language organization within a country that recognizes two languages as official. ELAN is located in Tiohtiak:ke, the original name for Montreal in Kanien'keha:ka, the language of the Mohawk—also known as Mooniyang, which is the Anishinaabeg name given to the city by the Algonquin. While we are based in this city, our projects have also taken place in many regions across Quebec.

We acknowledge the colonial origin of English and French in Canada, and recognize that both languages benefit from official status throughout the land. The province that we know as Quebec is an amalgamation of the traditional territories of the Innu and Inuit nations, Algonquian nations, as well as the Mohawk nations of the Haudenosaunee Confederacy. Kanien'keha:ka and Anishinaabeg are but two of the original languages of this province; Atikamekw, Cree, Inuktitut, and Innu-aimun are also among the many Indigenous languages spoken across Quebec as majority languages, all well before French and English.

ELAN acknowledges the important work being done by First Nations, Inuit and Métis peoples to revive the traditional languages of these territories, and their advocacy for the official status of Indigenous languages.

To cite this report:

DCCADI: Developing Connections and Collaborations Among Digital Initiatives, Final Report, ARTS2U - ELAN, 2019.

January 2020

ARTS2U Project Manager:	Daniel Webster
ELAN Executive Director:	Guy Rodgers
Program Manager:	Swati Khanna

Table of Contents	Page
Developing Connections & Collaborations Among Digital Initiatives - DCCADI Cover page	1
Table of Contents	2
Abstract	3
Methodology	4
Conclusion	5
Participants and Review Subjects	6-7
Focust List & Technology Partners	8
Mapping: Value Chain	9
Mapping: Information Flow	10
Funding and Connected Initiatives	11
National Listings Models	12
Listings Fields	13-15
Listings Fields Findings	16
Adaptability of Platforms	17
Diversity & Inclusion Discussion	18-23
Linked Open Data	24
Unique Resource Identifiers	25
Canada's Knowledge Graph	26
Recommendations	26-28
Annex 1: Collaboration and Engagement Follow-up	29
Annex 2: Questionnaires	31
Annex 3: Webinar & Sharing of Project	31,32

Abstract

With the ***Developing Connections & Collaborations Among Digital Initiatives (DCCADI)*** project, ELAN's ARTS2U has worked with Canada-wide digital initiatives in the arts. ELAN has forged strong relationships among similar projects with the review of data structures, research of commonalities, strategic alignments, and best practices. The ARTS2U - DCCADI initiative provides recommendations for the benefit of Canadian artists and organizations seeking to have increased visibility on digital platforms.

The shift to digital platforms has had resounding impacts on creators of art in Canada. Visibility and find-ability are key concepts when artists are seeking to connect with their audiences. The key ideas are central to artists as they strive to achieve sustainable business models in a world powered by AI, machine learning, and structured data. The distribution of arts events and products is currently dominated by social media and technology companies, and Canadian artists are largely not in control of their capacity to reach audiences.

This has created a value gap that has left many well-known artists marginalized and beholden to intermediaries such as Facebook, YouTube, and Spotify. The value gap describes the growing mismatch between the value that many digital platforms or user upload services gain from distributing arts information, and the revenue returned to the arts community who are investing their energies to create digital events and content. With a more strategic approach to the use of digital technologies, the arts sector can address this value gap.

There are two major problems that need to be addressed by the arts sector. First, in the digital realm, the control of data is necessary to achieve value. Artists and creators do not currently have ownership over their data and its distribution channels. Second, producers do not have the human resources needed to successfully manage promotions as they grow each year. Communicating to media outlets through multiple interfaces is overwhelming, and more media and arts blogs state that producers do not have the time to inform.

ARTS2U is a project for artists and producers to take back control of the data they create, and use the aggregated metadata to their advantage. The accumulated metadata and the aggregated user base becomes a resource to develop more effective sales, resulting in profitability for arts producers.

Methodology

The DCCADI initiative identified forty four projects on a *Long List* that were working to increase digital listings of arts events, or working to organize and structure artists' data. Many of these projects were government-funded and some were privately-funded. From the Long List, a shorter list of nine *Focus List* projects was identified and researched more completely. A third list of *Technology Collaborators* was identified as having potential partnership and collaborative value to ARTS2U. One-on-one interviews were conducted with project representatives to glean deep information about data structures, presentation strategies and vocabularies. Websites and app platforms were diagnosed to learn the use of specific fields in databases and backend functionality. A fourth group of participants was identified and surveyed regarding questions of diversity and inclusion to offer suggested practices for representation of marginalized groups on digital listing platforms. A further and wider review of existing and in-development arts listings platforms or data aggregation technologies was compared to glean a basis for vocabulary practices and database features.

Conclusion

ELAN's ARTS2U project has been working to make arts producer websites machine-readable to save producers time in providing listings to the media and public. Having built the bilingual model prototype based on Québec activity, the obvious next steps are to investigate the potential models in the rest of Canada. With the review of other systems—existing and in development—from many regions of Canada with the DCCADI phase of ARTS2U, we have identified that a focused national listings prototype feed should be tested for its potential benefit to arts events producers. A standardized upload procedure, with a minimal data set, would save producers time to inform the media as events were confirmed. The same feed via a public user interface could eventually be released to the public based on user preferences. Based on existing digital capacities of arts organizations, the next step is a nimble and adaptable approach from which data fields can be mapped to be interoperable with developing linked open data models.

DCCADI found that there was near consensus on the use of vocabularies and essential presentation elements among arts listings services designed to inform the public about artistic offerings. A standardized translation of fields was in use through multiple offerings which could be documented and suggested for use by a consortium of platforms. Across multiple platforms, data structuring was common, but the understanding of Linked Open Data was limited. Among more advanced models, structured data and use of schema was well understood. A view to implement Linked Open Data is on the horizon but is not essential to currently operating models. Most arts data is currently recorded in relational database models. Migration to graph database models will be gradual, as well-tested solutions are adopted by leading arts data producers.

The research adds important information on the state of the sector to existing work that is done in parallel with regard to arts metadata, including research done by the Linked Data Future Initiative (CAPACOA) as well as with *Québec's Measure 111, l'État des lieux sur les métadonnées* (Québec). A group of advanced initiatives who have been identified in the Focus List is willing to collaborate to move the Canadian arts sector toward the use of semantic web standards, graph databases and the use of linked open data practices. The identification of projects that are at work in rights attribution offers further potential revenue streams if platforms can harness a controlled and accountable distribution of high quality digital files.

Continued work in multiple technical areas must be supported by arts sector funding agencies in order to achieve interoperability and build a strong arts data resource for the sector. Work toward a Canadian arts data repository, and a resulting arts knowledge graph, will be required to create value for the sector. Digital literacy programs are essential so that the mutual goals to create future resources are well understood. A range of options and projects that test development of semantic models for the arts must be supported to bring about robust solutions.

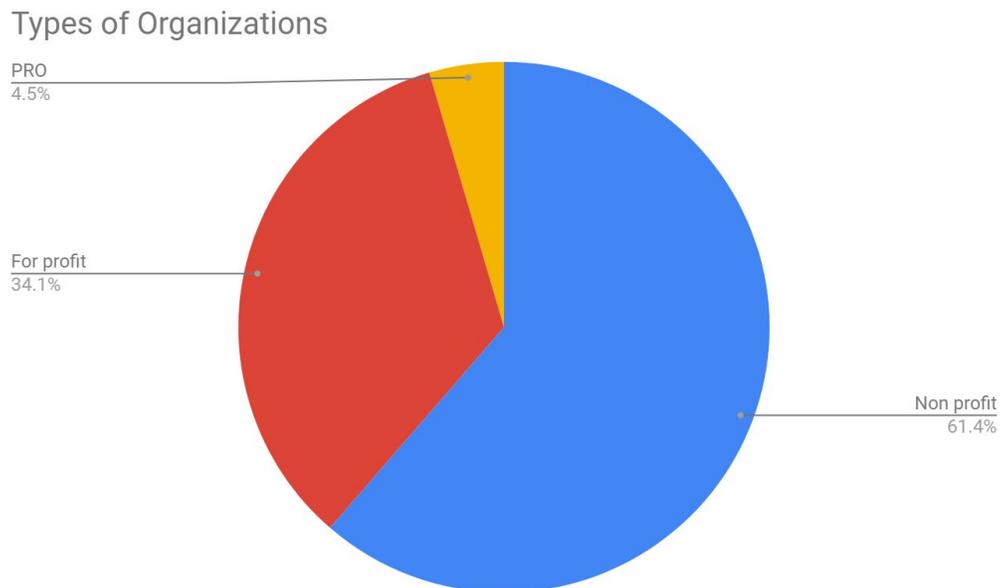
Participants and Review Subjects

DCCADI Long List

A posted list of projects on the website of The Canada Council, Digital Strategy Fund *2017 results* (a link to the [spreadsheet](#)) was shortened to a list of projects that clearly addressed data and structuring of arts information, or have arts listings and visibility aspects that could be compared with ARTS2U. The list was expanded by active research through arts industry contacts and through questions asked to Long List participants. The complete table lists forty five initiatives in Canada that are working to organize data which can eventually be used in or linked to arts listings services to enrich arts listings.

[DCCADI Long List](#)

The types of organizations identified in the DCCADI Long List are represented in the graph below:



A second attached list is the result of Québec's Measure 111 initiative that uncovered approximately thirty metadata and arts initiatives in the province of Québec entitled *PROJETS EN COURS, PRODUITS ET SERVICES LIÉS AUX MÉTADONNÉES (ET AU WEB SÉMANTIQUE)*. Nine of these Québec initiatives have been transferred to the DCCADI Long List as they relate directly to arts listings research. As a result of collaboration and information sharing between DCCADI and Québec's Measure 111, additional initiatives have been added to the Québec list since discussion with the two initiatives began in March 2019.

[Québec Arts and Metadata list](#)

Focus List: Collaboration and Engagement Initiatives

The focused list of collaboration and engagement initiatives is taken from the long list and includes only initiatives that have important similarities or commonalities with ARTS2U. Several listings platforms and technology initiatives are elaborated upon in this grouping. Culture Creates, CAPACOA's LDFI, La Vitrine, Québec Spectacles, Culture Cible, Stagepage, *Exclaim!*, and Espaces temps are key projects from whom we have learned and shared information that is important to the national development of exceptional new models for the Canadian arts sector. Potential collaboration on multiple levels is currently being studied with each of the listed initiatives.

[FOCUS LIST - Collaboration and Engagement](#)

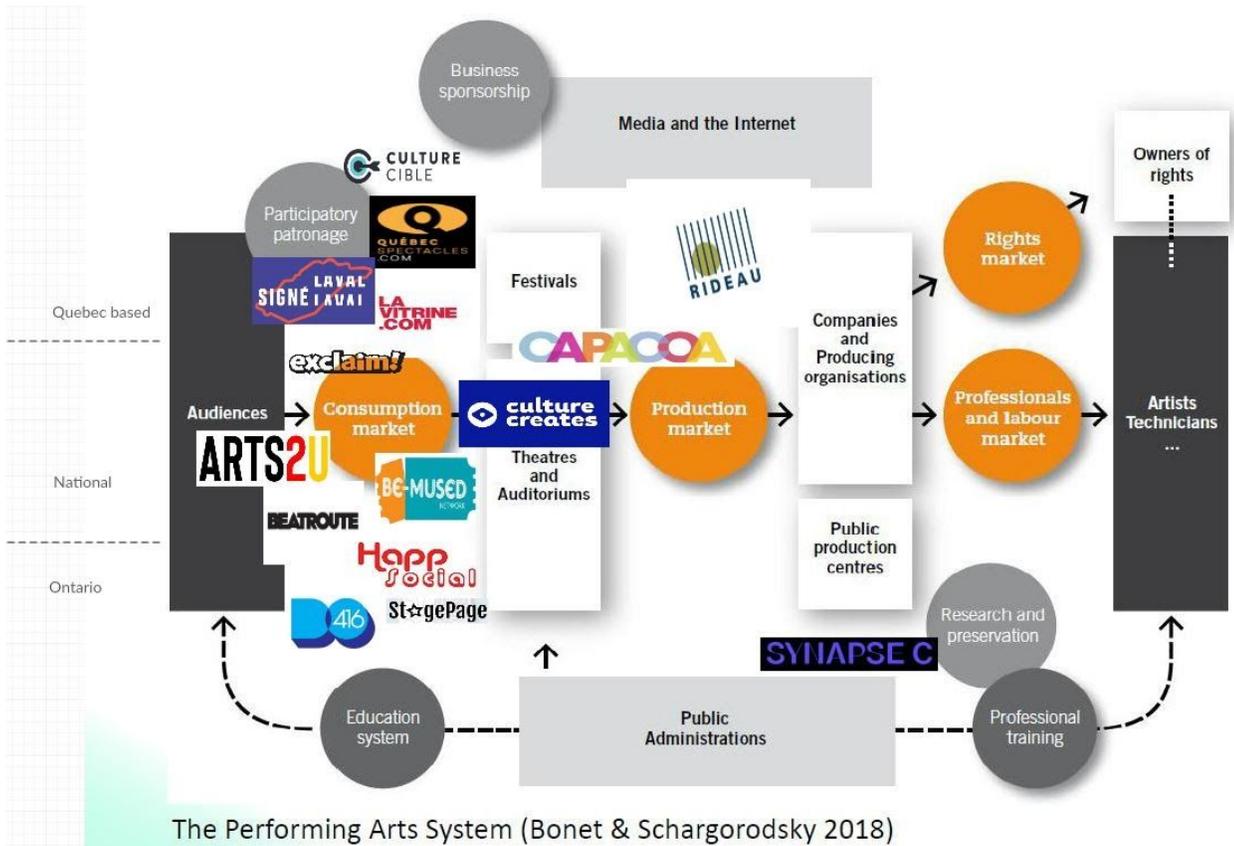
Potential Technology Partners to ARTS2U

A second grouping of potential technology partners that identifies who is working on or developing technologies that could be of benefit to ARTS2U in the longer term.

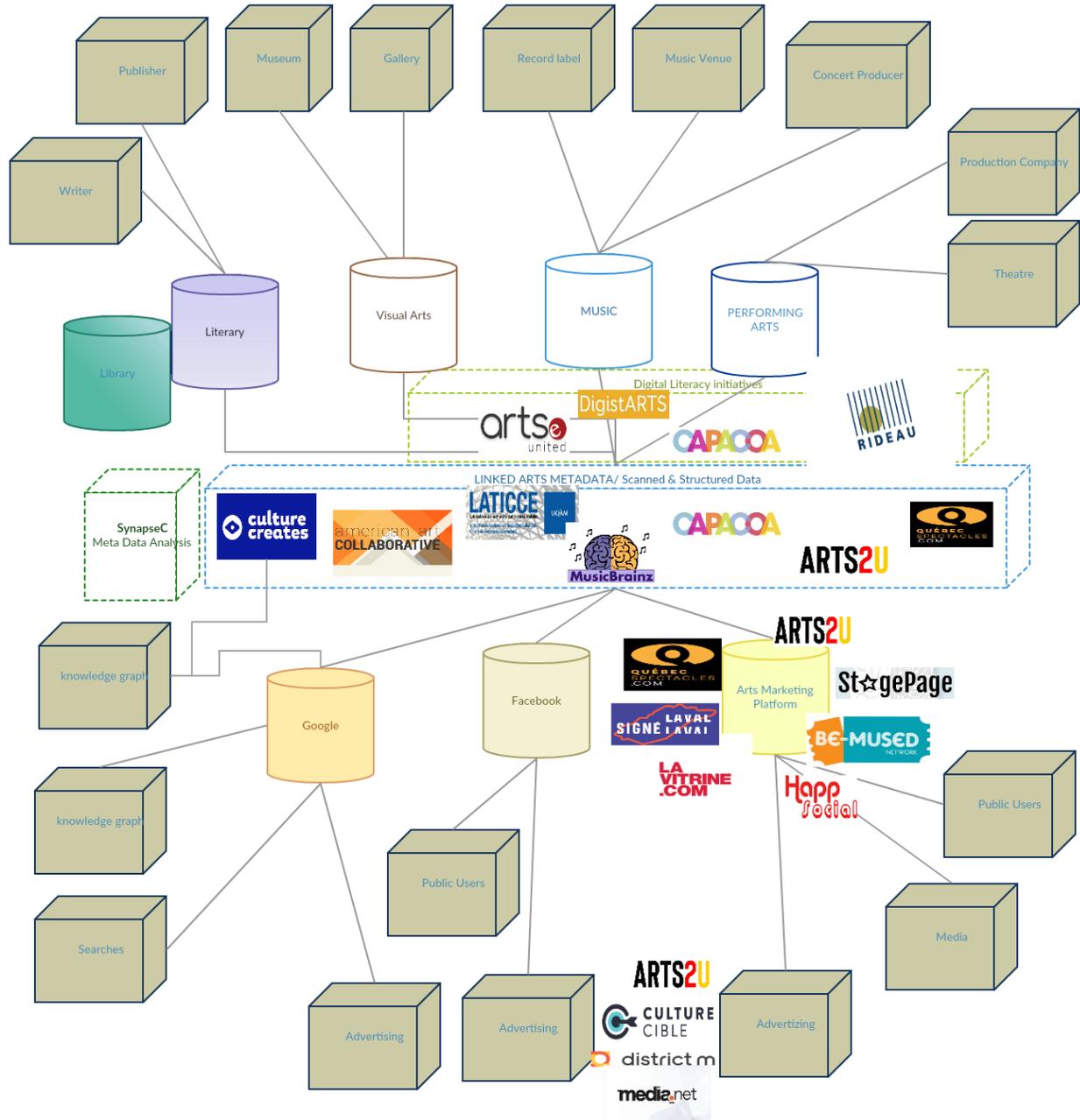
[Potential Technology Partners](#)

Mapping Digital Listings Initiative Participants

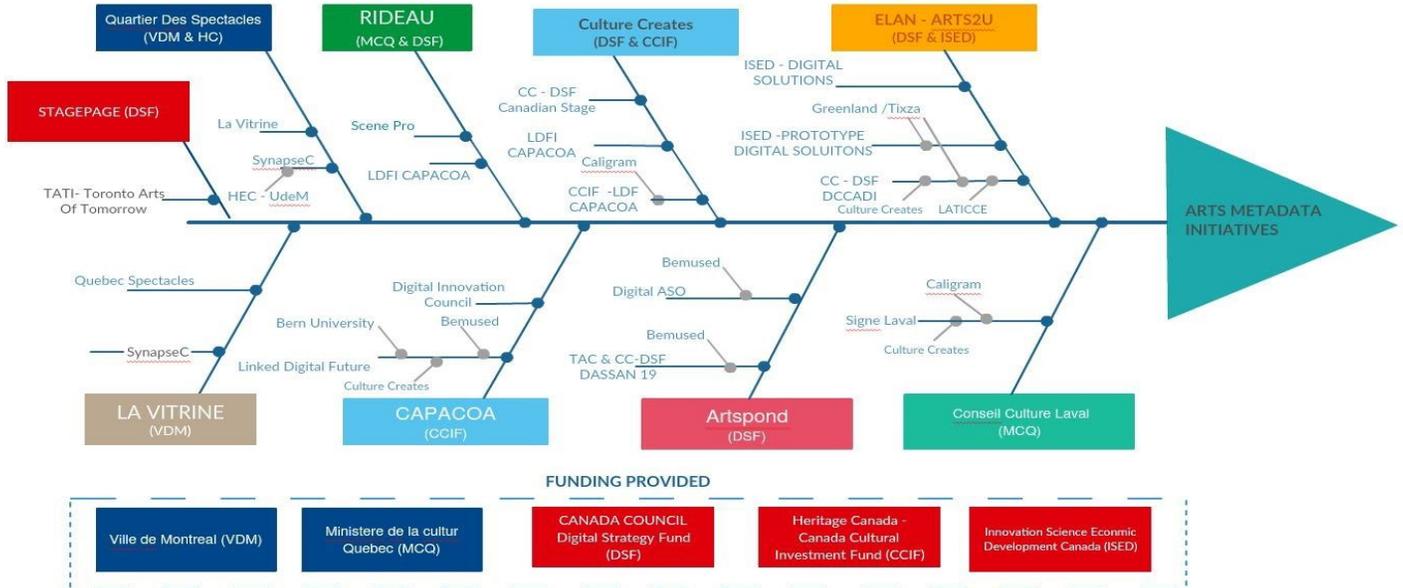
DWG 1. Canada Arts Value Chain: Initiative mapped to Bonet & Schargarodsky drawing



DWG 2. Value Chain: Information Flow from Creators to Audience



DWG 3. Funding and Connected Initiatives



DWG 4. National Listings Models and Geo-locations



DCCADI: Listing Fields

A comparison of existing and in-development arts listings platforms and data aggregation technologies provided a basis for vocabulary practices and database features. The field vocabularies were also reviewed in two languages, and suggested common vocabularies for Canada's listing platforms are included below. If many listing outlets use similar vocabularies, links to open data repositories will be less cumbersome.

Listing Models and their captured and presentation fields, instances of use:

Fields (EN)	Champs (FR)	TOTAL SCORE	ARTS2U
Event Name	Production (nom)	13	
Event Type/s	Type de production	11	
Lead ARTIST Name	Artiste principal (Nom)	13	
Date	Date	12	
Venue	Salle	13	
Neighbourhood	Quartier	3	
Buy tickets (<i>Offer</i>)	Lien d'achat	12	
Phone	Téléphone	5	
More Info	Informations complémentaires	7	
Graphic	Image / Ressource audiovisuelle	12	
Image Credit	Crédit de l'image (<i>créateur</i>)	3	
Producer	Producteur	5	
Artist Type	Artiste principal (type)	6	
Support Artists	Artistes en première partie	8	
Event Time	Heure	11	
Door Time	Heure d'ouverture des portes	6	
Genre	Genre	5	
Description	Description	11	
Map Geo-location	Coordonnées GPS	5	
Artist Website	Site officiel de l'artiste	7	
Artist Twitter	Twitter	3	
Artist Facebook	Facebook	3	
Facebook Event URL	Lien de l'événement Facebook	3	

Instagram	Instagram	2	
Youtube ID	Canal YouTube	3	
Bio	Biographie	5	
Accessibility Information	Informations sur l'accessibilité du lieu	4	
Media Contact		1	Media view only
Media Context		0	
Ticket Information		6	
Ticket Description en fr		6	
External functioning URI		1	
Alternate URL		2	
Announce Date		5	
Onsale Date		5	
Event Pixels		4	
Optional Title		5	
Slug - human readable and uri		2	
Recommendation engine		3	
User preferences		4	
Logged activity		4	
Using Schema or other structured data		7	
Recurring		1	
Frequency		1	
Count		1	
Timezone		1	
Image in multiple sizes		1	
Denotes the Field in ARTS2U feed			
Fields additional to the ARTS2U feed in event page			

Listing Fields (continued)

There were subtle differences between English and French models, generally due to arts priorities that were established by the Québec government to achieve visibility for French language production. Québec models are evolving quickly, and are being supported to achieve high degrees of automation and interoperability. A view of models according to language can be found in the full Listing Field sheet linked below.

[Listing Models - Languages](#)

Listing Fields Findings

Accessibility

Several key points were made in discussions with listing platform developers. Accessibility iconography, or specific standardized texts to describe accessibility, are not widely used in practice over digital media. Good examples of accessibility are available on some arts producers sites. Fringe festivals across Canada have been working to furnish patrons with complete information in their marketing offerings. Toronto Fringe has incorporated iconography in the listings of their events which include icons for the tone of the performance, where sign language is provided and audio description assistance which is a superlative example what can be achieved.

Described as a cultural connector, organizations like Creative Users who are dedicated to bridge disability, accessibility and arts communities are a solid resource. They are committed to: “Cultivating the visibility of artists with disabilities as well as the spaces that are built with different bodies in mind.” and “Helping to mobilize change of both the built environment and the way we think about space towards creating more accessible communities”.

Some larger arena venues list information about wheelchairs including the Bell Center in Montreal, though information on venues at most website is not consistent and often depending on individual show listings. Vancouver Civic Theatres website consistently lists accessibility in general information regarding wheelchair access, elevators, washroom and audio visual assistance. But accessibility is not visible with each events full description.

Digital Literacy

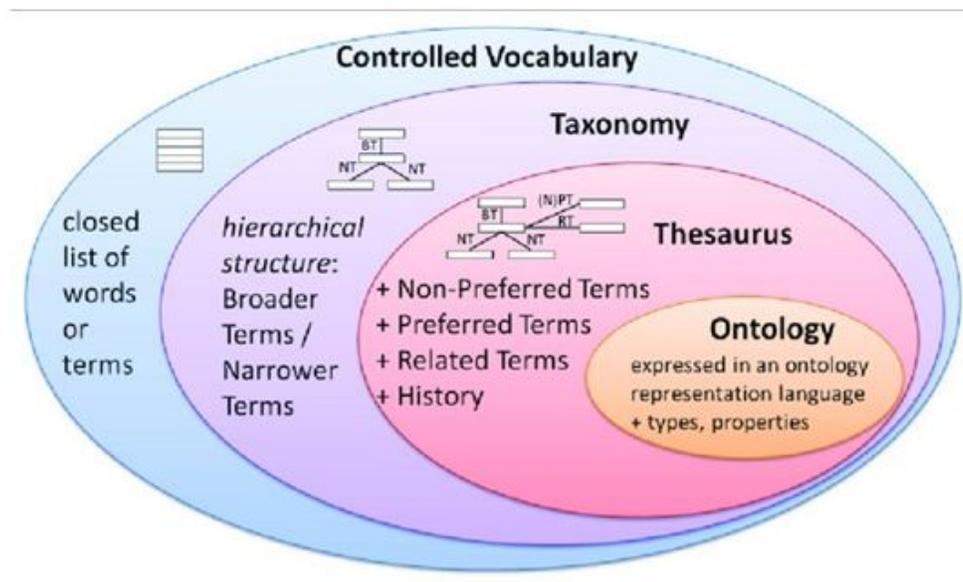
Digital literacy and knowledge of semantic technologies are required skill sets for today’s webmasters, website designers and for producers who are writing the descriptions of arts events. Though the successful discovery of arts events is highly dependent upon organizational knowledge of how the semantic web works, many organizations are struggling to catch up to technological change and the learning that is required. Increased efforts on the part of arts funding agencies needs to be dedicated to this reality so that Canadian arts productions can stay relevant and make arts visible in the AI-powered world.

Adaptability of Platforms

In discussion with many arts producers who use listing platforms, adaptability for events that are not typical in terms of artists' names, personalities, or activities is considered to be important. A hierarchical organization of events with the name of the production as the event name, as well as the type of event as the top level description, are both common. Producers often categorize event names, event types, and artists all in one data storage field as an event name.

For example, Indigenous events or LGBTQ events do not often fit into standardized event forms or categories of Music or Dance or Festival, as more nuanced labels do not currently exist at higher levels for marginalized communities. For the time being, the adaptability of platforms and top-level labelling needs to be fluid to accept artistic concepts and other identifications that do not fit into mainstream categories.

As many systems in operation are using closed categories and a with similar vocabularies developers must look upstream to be sure that vocabularies in use can be connected to linked open data taxonomies and ontologies. Ontologies and taxonomies are being modeled as graph database technology is the basis for Linked open data platforms and interoperability among arts metadata . The structure connecting vocabularies to taxonomies should be well documented to make interoperability easily achievable between platforms.



Categories of Classification

Source: IMPLEMENTATION OF A CLASSIFICATION SERVER TO SUPPORT METADATA ORGANIZATION FOR LONG TERM PRESERVATION SYSTEMS by Sándor Kopácsit, Rastislav Hudak, Raman Ganguly.

Diversity & Inclusion Discussion: Becoming and Staying Visible in the Digital Universe

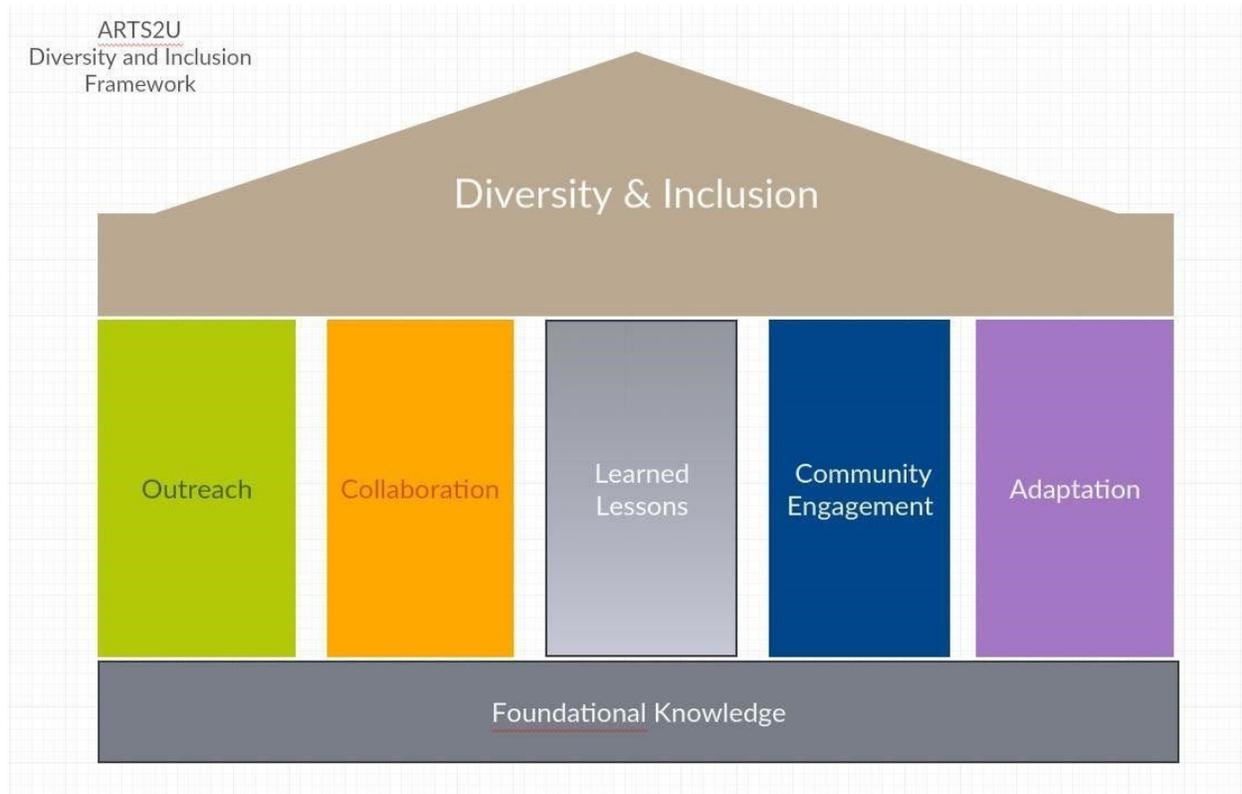
ARTS2U spoke to a range of arts representatives from organizations who work with diversity and inclusion issues on a daily basis. We were looking to discover what are the best practices to ensure that marginalised communities are included in event listings, for now and for the future. We can do this by sharing this discussion with Canadian arts producers and technology developers working with the arts.

ARTS2U produced a discussion questionnaire in consultation with ELAN's Inclusion Committee. Discussions were held with groups that represent women, LGBTQ communities, persons of colour, Indigenous communities, and linguistic minorities. ARTS2U has created a summary based on the responses to this questionnaire.

Inclusion Begins at the Source: Recognizing Precedents

As the umbrella organization serving the English-speaking artistic community, ELAN strives to ensure all artists can establish thriving careers in this province. ELAN's [Inclusion Plan](#) considers how identities and lived experiences are frequently marginalized based on factors that include language, dis/ability, race, gender, religion, sexuality, ethno-culture, age, socioeconomic status, and geography (urban/rural). As an arts organization, ELAN recognizes that artistic factors—such as an art form, artistic discipline, genre, career stage, or professional stature—intersect with identity and experience in ways that produce and contribute to marginalization.

ELAN's Inclusion Plan outlines actions taken to date, and introduces other actions that will be taken before the end of the five-year period from 2017-2022. Conversations about inclusion, diversity and equity have made clear that many of Quebec's English-speaking artists face specific barriers due to discrimination based on race. The work done by ELAN is the starting point for ARTS2U to ensure that a national listings platform would be open and available to a diversity of event listings, and inclusive of all arts communities.



Concerns of Marginalized Communities

In a world dominated by multinational companies, there is growing concern about the loss of print media space, loss of journalist positions, and decreasing capacity for reviews.

ELAN's conversations about inclusion, diversity and equity have also made clear that many of Quebec's English-speaking artists face specific barriers due to discrimination based on race, gender, disability, Indigeneity, language, and a number of other factors.

Indigenous Communities and First Nations

According to the [2016 Census](#), "More than 1.67 million people in Canada identify themselves as an Aboriginal person". Aboriginal peoples include both the fastest growing populations in Canada (between 2006 and 2016) and the youngest populations in Canada (about 44% were under the age of 25 in 2016). According to [Crown-Indigenous Relations and Northern Affairs Canada \(CIRNAC\)](#), "There are more than 630 First Nation communities in Canada, which represent more than 50 Nations and 50 Indigenous languages."

Describing the process of posting event listings online across Indigenous media outlets, Indigenous artist Mack Mackenzie states: “Each individual band has its own website, and getting information from those websites would be a challenge given that they're all independent and there is no standardization. There are also many languages and many approaches to the way event promotions are structured. There are often three groups within a band who all contribute to the band's identity and events.”

Other digital initiatives across Canada indicate that a deeper review is needed on the organization of information for Indigenous events. In their research paper “A Linked Digital Future for the Performing Arts”, Estermann B. and Julien F. write, “There are a number Indigenous concepts and relations that would deserve to be adequately represented (or, at the very least, not excluded) in the linked open data ecosystem for the performing arts.”^[1]

Directions to Encourage Inclusion

ARTS2U has been developed across disciplines and in partnership with producers who have engagement and interaction with their communities. When difficult and potentially insufficient labels (such as LGBTQ2) need to be understood, we defer to the guidance of our collaborators. There are challenges to achieving inclusion when instances of exclusion are not reported.

Outreach and collaboration with other arts promoters is critical to increasing the visibility of marginalized arts events across Canada. There are situations when misrepresentation or cultural appropriation may arise, and an arts producer may not understand that a mistake has been made. General common sense, adaptability, and consistent monitoring of the ARTS2U system must therefore be in place. Contingency plans to react to divisive or contentious posts, and incorrect or incomplete information, are essential for ARTS2U.

As a public broadcaster, CBC has developed an extensive plan to address inclusion in the workplace, which they believe will encourage inclusive representation in the broader media landscape. The CBC’s [Diversity and Inclusion Plan](#) (2018-2021) states: “Our workplace culture must be truly inclusive, where everyone feels that his/her voice, views and ideas are valued. It's these different perspectives that are integral to our broadened understanding of one another and the rich fabric that makes up our country.”

Strong and comprehensive, well-funded strategies demonstrated by public corporations like the CBC are important references to craft inclusion guidelines for the ARTS2U listings platform.

[ArtsCan Circle](#) now sends teams of Indigenous and non-Indigenous artists to engage children and youth in northern Indigenous communities in art workshops. With a mission to teach new skills, promote self-esteem and creative self-expression, ArtsCan Circle gives marginalized

youth a voice. Amanda Hurst, Operations Manager of Artscan Circle, reports in the ARTS2U discussion questionnaire: “The impact of inclusion is that students see broad gender representation and culture in our teams, which has a high relatability factor. By including an Indigenous team member, it provides a deep cultural connection and motivation for our youth that a non-indefensible person could not achieve in the same way.”

Amy Blackmore, Executive and Artistic Director of [Fringe Montreal](#), states in the discussion questionnaire: “Working with other projects and being inclusive will increase our understanding of current digital transformations, point towards promising collaborations, and ultimately produce more effective tools built with the needs of the community in mind.”

It is clear that Fringe Festivals across Canada have built their audiences based on their accommodation of diversity in Fringe productions: there is no formal curation or jury selection, and every production accepted is done by a lottery. Fringe values diversity, and does so by conducting four separate lotteries with the following quotas for theatre productions: 35% Québec Anglophone; 35% Québec Francophone; 15% Canadian (outside Québec); 15% international companies.

As Jessa Agilo, founder and CEO of [Artspond](#), states in the discussion questionnaire: “Digital has the power to include a more dynamic accessible platform. The opportunity is to empower marginalized [communities] with their own data. Data has more value than gold or oil. If we don’t have ownership, small communities will be exploited. The best future is happening around cooperative solutions. “

Event Type

Name	
Comedy	<input type="checkbox"/>
Conference & Professional	<input type="checkbox"/>
Dance	<input type="checkbox"/>
Festival	<input type="checkbox"/>
Film	<input type="checkbox"/>
Interdisciplinary	<input type="checkbox"/>
Literary	<input type="checkbox"/>
Music	<input type="checkbox"/>
Theatre	<input type="checkbox"/>
Visual Arts	<input type="checkbox"/>
Workshop	<input type="checkbox"/>

ARTS2U “Events Types” Table.

Event Types: Revisions in ARTS2U

Where **Event Types** are concerned, ARTS2U received input on art event types that should be added to the above list. In practice, we anticipate that new event types will arise. Some suggested additions were **Accessible - AODA (Ontario)**, and **Disability Arts** (which is its own event type).

Genres and descriptors in the ARTS2U system are expandable. Basic Event Types, and twenty-six parent-level **Genres** are currently active in the system, but additional parent and unlimited sub-genres, even hundreds of thousands can be added. *The Dance Current*, a Toronto-based dance publication, uses four hundred and fifty tags to describe the dance discipline alone. Descriptive

layers that are currently being tested for the ARTS2U system include ‘sentiments’ or emotions such as *raucous, relaxed, chill, or intense*.

A keyword descriptive layer is being added that could offer more description around the cultural community of events (such as *Mohawk Pow Wow*), in addition to the tags of *dance, music, and festival*.

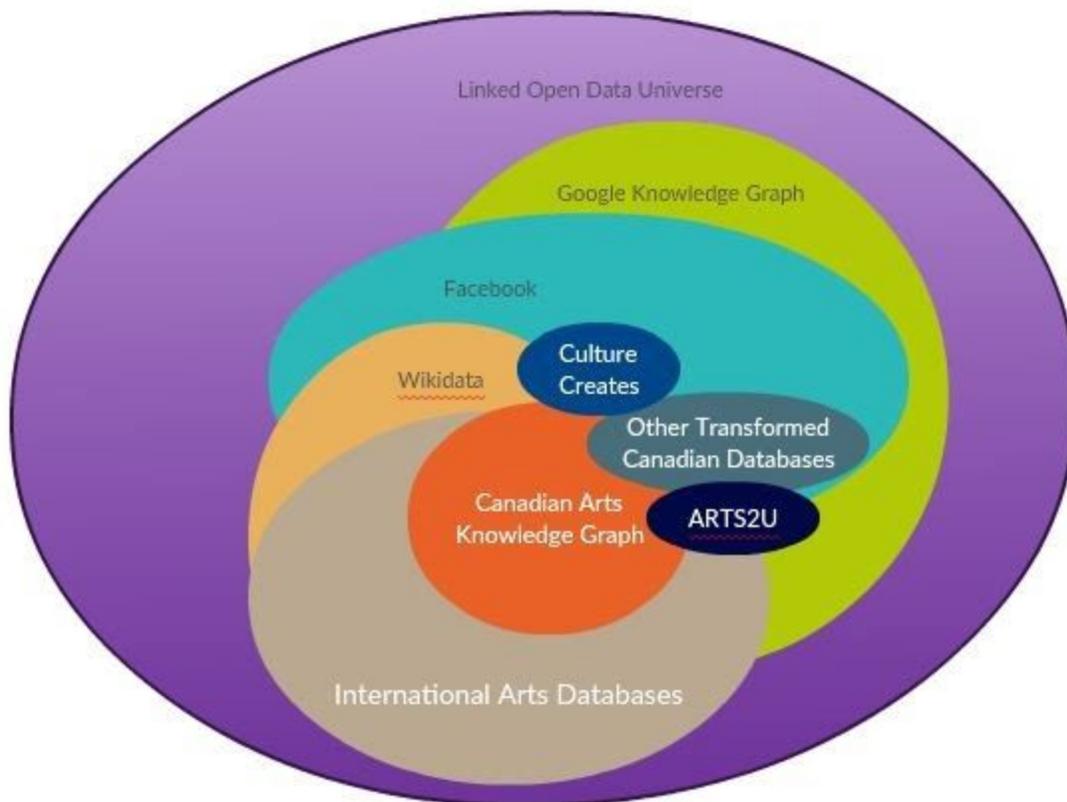
Respondents to the questionnaire were concerned with the capacity of the ARTS2U system to describe what was and was not present in the system to describe Indigenous or First Nations’ cultural events, such throat singing or a pow wow. ARTS2U advocates for a full understanding of the context of such events, and has a content review protocol in effect to monitor misuses of such terms.

Suggestions for additional genres or descriptors were taken as part of the discussion, including adding tags or icons to denote events that might be described as **Youth-centered, Community Engaged, Accessibility** (related to mobility), **Audio-** and **Visually-assisted**.

^[1] Estermann B. and Julien F. (2019) A Linked Digital Future for the Performing Arts: Leveraging Synergies along the Value Chain. Canadian Arts Presenting Association (CAPACOA) in cooperation with the Bern University of Applied Sciences. Sect. 3.5 Addressing Diversity.

Linked Open Data

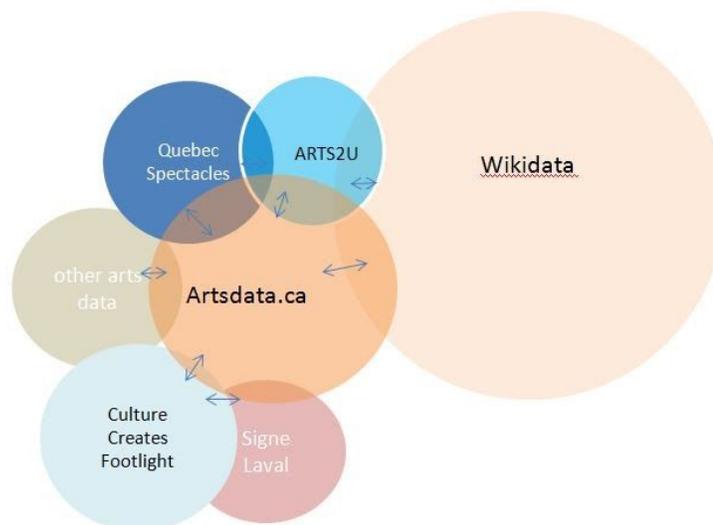
Linked open data, or LOD, is structured data that is interlinked with other data so it becomes more useful through semantic queries. LOD is used to identify and connect Artist, Event Type, Production Name, Personalities, and other such unique entities. ARTS2U alignment with initiatives such as CAPACOA-LDFI and the Artsdata.ca (Canadian knowledge graph)—which are active in the development of ontologies for arts events—will likely lead to creating international standards for arts data identification. Participating in collaborative development and developing best practices is essential to becoming the interoperable technology of the future.



Unique Resource Identifiers (URI)

Special events that link to multiple artistic labellings or data connections need to have Unique Resource Identifiers or URIs to connect, for example, an artist to an event. URI's for events need to be established, and ontologies describing arts events need to be specified so that systems can benefit and access external, rich semanticized data that is expected to promulgate across the internet of the future. For example when we connect the artist who is performing in a theatre production, it may be advantageous to link to the artists involvement in a popular film for promotional purposes. This could be easily done by connecting the artist to the theatre production by embedding the artist URI in the Theatre production URI, and linking the same artist URI in the film URI. Example DWG

Canada: Who is populating the Canadian Arts Knowledge Graph?



DCCADI Recommendations

Recommendation 1

Participants and partners in the DCCADI research agree on the minimal data set of suggested vocabularies for the basic model for the presentation of fields for listing platforms in Canada. Subsequently, agreement to map the fields from English to French, and vice versa, can be accepted and published through outreach in future ARTS2U and partner projects. Further mapping to connect the current models to linked data models should be undertaken in a future project.

Recommendation 2

ARTS2U graphic user interface for producers, and the event and content upload system—including the data field categories presented in DCCADI—should be shared widely so multiple users from across Canada can take part in testing and bolstering the prototype. Testing that includes mapping to semantic models and a wide range of multidisciplinary events from diverse arts communities across Canada should be undertaken in the next phases of the ARTS2U project.

Recommendation 3

Regarding usage of producer and user data, ARTS2U intends to produce a legally binding *Proposed Data Usage Strategy* which would be delivered through a *Terms and Conditions* sign-up mechanism. This sign-off form would be available on a website, should be tabled, and legal opinion should be sought to verify its validity. In addition to the development of a robust *Terms and Conditions* document, ARTS2U should be a participant in discussions regarding collaborative governance structures and data trusts.

Recommendation 4

Further projects for ARTS2U should identify and document the specific *Uniform Resource Identifier* (URI) process for arts events and the Linked Open Data (LOD) publishing process. Validation of the URI should be tested with third party Linked Data enabled initiatives such as Wikidata and Musicbrainz.

Recommendation 5

Engagement activities in collaboration with the sector to bring the tech and arts industries together to solve tech problems in the arts. Sponsoring and developing youth skills in arts technology through events, hackathons and workshops.

Recommendation 6

A working group should be established to document shared concerns and initiatives between organizations working with arts metadata. To demonstrate a collective vision, DCCADI research participants and other partners may share concepts to resolve sector-wide technical issues and constraints to achieve greater adoption of best practices and accepted standards. Pooling knowledge to address technical problems, and fostering interoperability between technologies, can advance a collective strategy. Specific tasks would be: to review URI scheme candidates, and to dedicate resources to resolve linked open data publishing barriers. ARTS2U, Culture Creates, Espaces temps, Culture Cible, Stagepage, and CAPACOA are target participants to form a working group to follow through on collective recommendations.

Recommendation 7

ARTS2U must promote the concept that accessibility to all arts and culture events in all listings platforms should be communicated by text or iconography that defines the level of language, mobility, hearing and sight access.

Recommendation 8

To reach out to English-speaking artists in Québec, and extend what is being learned by ELAN's involvement with national projects with regard to understanding metadata and events listings, ELAN should continue Digital Literacy initiatives with minority communities and marginalized groups.

Recommendation 9

The Québec government has put in place an action plan concerning data (and metadata) on Québec cultural content. Measure 111 ([Ministère de la Culture et des Communications, Québec 2019](#)) has several objectives including to enable the public to discover the cultural content of Québec, and to promote all forms of data pooling, both for data aggregation and for more operational functions. Though the initiative has included a wide group of Québec arts sector participants on its assembled committees for Heritage, Music, Books & Audiovisual/Cinema—as well as a cross-cutting committee—there are no representatives of English-speaking artists or English-language arts institutions. With ELAN's connection through the Québec Relations project to the Secretariat for Relations with English-speaking Québécois—whose role it is to ensure that the concerns of English-speaking Québécois are taken into account in government orientations and decisions in collaboration with government ministries and bodies—ELAN should pursue a dialogue with the Minister of Culture to ensure that English-speaking Québec artists to have a voice in the Québec government's arts metadata strategy.

Annex 1

Collaboration and Engagement Initiatives follow up:

Survey Questions were sent to multiple participants identified by ARTS2U, and potential collaborators in either the technology development or marketing development of the ARTS2U system. *See Annex 2 - Questionnaires : Collaboration.*

As a result, the DCCADI project has developed a number of smaller initiatives for collaboration and engagement between actors in the digital strategy space.

ARTS2U made its introduction to many initiatives in Canada at the DASSAN 19 event (Toronto, March 2019). ARTS2U has been in dialogue with multiple organizations including LDFI initiative, Artse United, Mass Culture, Measure 111, and Espace Temps. ARTS2U has been made aware of all LDFI important milestones and research, and has contributed to meetings and surveys for the LDFI.

ARTS2U and ELAN have offered to help with outreach in the Quebec market with Mass Culture, who are growing a network to support arts and cultural research across Canada.

Since DCCADI began, ARTS2U continues discussion with StagePage regarding development of recommender systems and cooperative use of data for modeling.

In July 2019, ARTS2U participated in the Internet Engineering Task Force 105 (IETF) in Montreal. With the ARTS2U mission of continuing to make the arts machine readable, participants worked on preliminary arts-genre classifications, and a constructed machine learning algorithm that modeled user behavior in a rudimentary content-based recommender system.

ARTS2U is in discussion with Culture Creates regarding populating and governance of the Canadian Arts Database.

Culture Creates, and Espace Temps have also participated with the ARTS2U spearheaded inaugural edition of Hack Arts Montreal (with financial support from Heritage Canada's First Spark program), a design workshop and hackathon event to bring together the arts and technology communities.

ARTS2U is invited to present its initiative to the 10th edition of the Heritage Canada Working Group, which is hosted by ELAN and will take place in February 2020. The Working Group brings together representatives from the ELAN community to meet with federal institutions including Canadian Heritage, Canada Council, CBC, National Film Board, Téléfilm, Innovation Science & Economic Development, Conseil des arts et des lettres du Québec, and the Secrétariat aux relations avec les anglophones among others to discuss the current challenges and opportunities.

Annex 2
Questionnaires

Collaboration:

https://docs.google.com/document/d/1_WP851oB0tgQQo2Y6Cz66_SxY-mBhxMwb8Cah7tKkY/edit

Diversity and Inclusion:

<https://docs.google.com/document/d/1HVokBtPNIOMQjdppogmd7rpPLjDWKUyaSZyrvhhImag/edit>

Annex 3
Webinar and Information Sharing

Webinar recording:

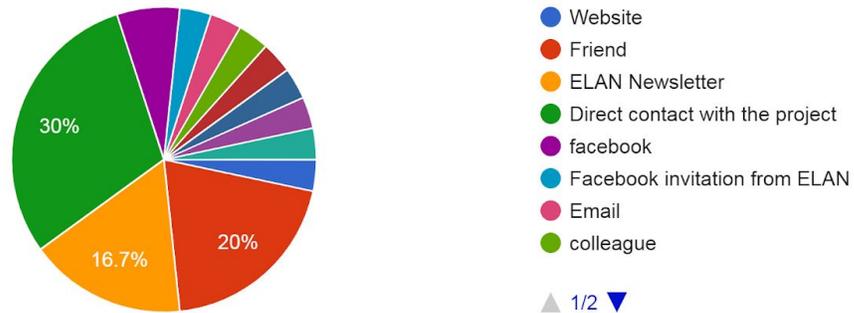
<https://vimeo.com/385121251/86932f06af>

Webinar registration statistics:

<https://docs.google.com/spreadsheets/d/1wmrNs5EcetNO-uF52185sdy1oWvMhzcxxUK1P4T8qEE/edit#gid=2095649064>

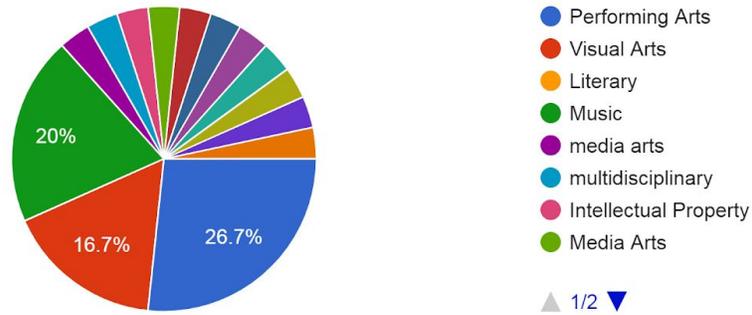
How did you hear about this event?

30 responses



With which arts discipline do you most work with?

30 responses



In which region are you located?

30 responses

