Research Project:
Prototype Digital Solutions (ARTS2U) Final Report

Between August 2018 and March 2019, ELAN's Prototype Digital Solutions research project conducted prototype development toward a more effective digital marketing system for Quebec-based English-language arts producers. For the purpose of communications and marketing, and as a unifying title for the prototype and the research components, the project uses the working title of **ARTS2U**.

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Abstract

Purpose

The objective of this research is to evaluate the recommendations and test the assumptions of the Digital Solutions research project, funded by ISED (report submitted by ELAN on March 28, 2018), via a prototype and preliminary marketing plan. The previously recommended solutions for producers are only viable if they can be successfully marketed. This research project has tested a marketing plan in order to expand the scope of this project to develop for a Minimum Viable Product (MVP). The MVP identified at the end of this research addresses the need discovered for a state-of-the-art digital solution that will successfully market artistic productions. The research herein validates previous recommendations and assumptions. Next, ELAN and Quebec's English-speaking arts community can begin developing a pilot project, for which three sources of funding are available.

Statement of Problem

To achieve visibility and make significant connections between artists and their audiences, producers must migrate their marketing and sales from traditional tools for media promotions to more current and relevant distribution and advertising platforms alongside traditional print media, particularly across the internet and social media.

Independent artists also need options so they can achieve visibility and growth of their audiences. Transnational intermediaries like Facebook, Google, and Twitter now receive the bulk of local arts producers' social media advertising spending. There exists no established listings platform for local arts producers since the demise of alternative weekly newspapers like *The Montreal Mirror* and *The Hour*. This is an acute problem in English-speaking Quebec, but it is also a problem for French-speakers in Canada, as well as nationwide. In the face of social media giants, small players need a united voice.

Early discussions with research participants clearly indicated that the problem is not only in achieving visibility through public-facing media or of findability of events in web searches. The push of information to media is complicated and resource-heavy for producers. Participants stated that they lack the financial and human resources required to advertise in the myriad of available media outlets. Each media outlet has a different process for receiving content from arts producers. When media pull information from producers, they have a similar problem; they have to contact many producers to get comprehensive arts and culture event listings. Thus many arts events do not find an effective match with a media partner to receive exposure.

Methods

Work began with a review of previous research, existing systems, and available technologies that could be examined as solutions to the problem. This revealed that it was essential to undertake active research with industry participants, as statistics are not readily available to gauge the problem. The central methodology of the research involved querying participants who are engaged daily with the problems that are presented by the lack of visibility of English-language productions.

Within the project's scope and budget we devised a prototype development strategy that built upon open source frameworks, and existing Web 2.0 and 3.0 code bases. ARTS2U used structured data conventions to store multi-disciplinary arts information in a database that is interoperable and accessible to the creators of the data (artists and producers whose events are listed). In cases where producers were not fluent in the required web technologies, we held one-on-one information sessions to prepare them to use the prototype. To outline basic marketing strategies, we reviewed advertising and publicity practices including website usage and social media distribution behaviour.

Research participants were divided into four categories:

> 1. Artists and producers
> 2. Media outlets
> 3. Technology developers and system operators
> 4. Public user testers

Participants from the artist and producer group were interviewed to evolve the system to suit the parameters and needs of multiple arts disciplines. After the interviews, iterative findings were communicated to the technical developers to improve the system so it would achieve all essential functions of a usable prototype.

The technical development took place in three stages:

> 1. Producer suite
> 2. Media suite
> 3. Public user suite

The producer suite required the most attention as development in this stage included the database, user access, scraping and API integration technologies. The media suite was built out of the search functions that were created at a basic level for the producer suite. The public user suite was focused on establishing a user-friendly experience (UX) to make the arts consumer comfortable to engage with the database, and to encourage public users to share preferences.

Recommendations

1.   ELAN constituency learning initiatives
ELAN should devise a Digital Literacy program to develop skills among its membership and extended community, and to inform them of sectoral developments related to organizing and publishing arts events in the Web 3.0 universe. ELAN should continue research into funding sources for programs to address digital literacy gaps among members and partner organizations.

2.   Specific digital engagement initiatives
ELAN is well placed to engage with youth and young digital developer talents by hosting hackathon-style events. Events can be imagined to engage youth in creating systems that increase value for artists and products, for example through gamification and rewards systems. Engaging with youth, and including young artists and arts patrons, will encourage them to become early adopters of the ARTS2U platform. Learning activities such as question-and-answer workshops about digital privacy concerns, publishing and sharing digital versions of artwork, and working towards adoption of guidelines for posting art online are possible areas of discussion.

3.   Leadership in minority language communities & inclusion across disciplines
ELAN represents artists and organizations from all disciplines and backgrounds. Many are from marginalized communities. The impact of the ARTS2U platform on inclusion and representation of all art forms and communities was raised as a topic in producer meetings. As an open platform, ARTS2U has potential to be explored and developed in future work in these areas, with the goal of developing models that can be shared for other platforms and regions.

4.   Leadership and national participation
ELAN should continue to collaborate with Quebec-based and national initiatives that are working toward the standardization of linked and open data sets for events. This work has already started through ELAN's participation in the Digital Arts Symposium (Toronto, March 2019) and through sharing project outcomes as part of ELAN's *Developing connections & collaborations among digital initiatives* project, recently approved for funding by the Canada Council for the Arts' Digital Strategy Fund.

5.   Platform Development Recommendations
The ARTS2U prototype has been developed utilizing a core of community assets, including producers, media and technology experts to demonstrate behaviour and potential that can increase value for English-language artists in Quebec. Scaling the prototype to work as a feasible solution on a larger scale is essential before building a minimum viable product. Investigating the core set of components and participants to launch a working and sustainable public release of the system will require a revised scope and further resources.

ELAN should seek further resources for technical and marketing development in key areas including:

   1.1.   A detailed user growth study to verify and test growth strategies.

   1.2.   Technical development of automated content aggregation tools, as an increased volume of content will drive user growth. Scraper development, and management of the suite of scrapers as a prime means to acquire key content, must be further developed beyond the limited scope of the five scrapers that were developed as part of the prototype. Use of Uniform Resource Identifiers (URI), and schema microdata need to be implemented in the system to achieve interoperability with other platforms.

   1.3.   Further study and prototyping of user interface and wider user testing to achieve rapid user growth capability. This would include user experience tests and profile development to determine frictionless paths to access the desired content.

   1.4.   Testing of the ARTS2U feed with media outlets. For example, testing sessions of content delivery to external websites.

   1.5.   Programmable advertising tests with working advertising publishers to determine wider audiences for arts events.

   1.6.   Tokenization and value creation. Loyalty programs and customer points systems are a key feature of most major digital retail operations. The arts sector lacks strong loyalty programs, and loyalty schemes require additional research and implementation testing beyond the scope of the ARTS2U prototype.

   1.7.   Brand and image development through testing a short list of brand names for the ARTS2U service prior to launching an MVP. Public facing interfaces need to be rigorously tested and a full graphic review should be conducted.

Conclusion

ELAN has made important strides to test assumptions, understand digital arts marketing, and inform its community of challenges and solutions in the Web 3.0 era. A revised scope for an MVP has been achieved through the ARTS2U prototype development. ELAN has gained insights and experience, and has shared knowledge with many community members most specifically with a core group of arts producers involved in the prototype development process. ELAN is continuing its work to represent Quebec English language artists and be part of sectoral developments in the digital space, including the initiation of a collaborative open data structuring project.

These results move ELAN's community toward the adoption of technologies that have the potential to expand arts audiences and create meaningful consumer relationships. The implementation of these technologies will allow producers and media to receive and re-distribute arts data more efficiently. A clear path has been identified to reach public users and arts audiences who will have direct access to event information through the ARTS2U feed. A further MVP development is expected to bridge the value gap between the energy put forward by the arts community and the return of resources back to this community.

In two specific ways, ARTS2U is expected to deliver additional value for the arts sector:

1. Increased visibility through multichannel distribution of arts event listings.
2. With a turkey solution to structure data at no cost to producers, a higher quality of metadata resources is available to arts producers when they participate in ARTS2U.

PROTOTYPE DIGITAL SOLUTIONS

1.   INTRODUCTION

Between August 2018 and February 2019, ELAN's Prototype Digital Solutions research project surveyed a range of participants in Quebec's English-language cultural ecosystem. Interviews and information sessions were conducted with producers, publishers and broadcasters, technical specialists, individual artists, and informed public actors in the cultural sector. Focus groups were hosted for producers and for a dynamic group which included members of the public, producers and publishers. For the purpose of communications and marketing, and as a unifying title for the prototype and the research components, the project uses the working title of ARTS2U.

ELAN's previous research (Digital Solutions, 2018 — funded by ISED) found that 80% of artistic producers and media wanted a more comprehensive listings platform to increase visibility for English-language arts productions. ARTS2U research was undertaken to identify key user experiences and client user interface parameters which will inform the design of an arts listing platform suitable for arts consumers. To accomplish this, ELAN set out to collaborate with multidisciplinary partners to develop aggregated data sets which will be used to grow audiences for arts events. The ARTS2U project also communicated with existing projects related to arts community listings, including with several initiatives supported by the Canada Council for the Arts' Digital Strategy Fund, and with projects in the Francophone arts community.

Key research conducted by ARTSU included:

- Research into incentive plans that reward users for engagement;
- Construction of tools to build user profiles;
- Research into data sets;
- Specification and implementation of data structures which will result in comprehensive data sets to be delivered by feed to arts media.

Desirable design elements and features that were not achievable for the prototype version have been listed (in Annex 5.)for future reference so they may be included in an eventual Minimum Viable Product (MVP). With this research, ARTS2U will have a working prototype to demonstrate the potential of a comprehensive listings platform with a range of state-of-the-art features for producers, media and public users.

1.1   Background

The arts and culture sector creates more than 650,000 direct jobs and countless spin-off jobs. It also accounts for 2.8% of Canada's overall gross domestic product.[1] The benefits of a thriving online engagement with the arts are multiple, as two-thirds of Canadians engage in some way with arts and culture on the internet. The same study found that 95% of Canadians believe that arts experiences are a valuable way of bringing together people from different languages and cultural traditions, and 86% of Canadians believe that the arts and cultural activities are important to a community's economic well-being.[2]

There are, however, serious problems in the sector which we refer to as a "value gap". The value gap is the gross mismatch between the volume of art being enjoyed by consumers and the revenues that are being returned to the arts community. Arts communities in general, and Quebec's English-speaking arts community in particular, have been negatively impacted by the decline in traditional media and rapid changes in emerging, digital media. It is increasingly difficult for artists to connect with audiences and for cultural consumers to discover and follow art that is being produced. Leading distribution platforms have not successfully served the purposes of Canadian artists in their quest to address the value gap.

In March 2018, ELAN completed a study to research Digital Solutions to connect artistic producers with cultural consumers with the intention of finding comprehensive solutions to narrow the value gap in favour of artists. The current research report builds on the recommendations that emerged from the 2018 study. The particular challenges that the value gap has caused for Quebec's English-speaking artists as an official minority language community necessitated this research, but the solutions that were identified will be applicable to other regions.

This research will uncover methods of building trust between arts producers and consumers, and incentives for consumers to engage with artists and their events. This work will build upon other studies which researched the problem of connecting artists and audiences, and will identify new solutions that could have a strong economic impact on Canada's arts and culture sector. This research is both timely and significant for developing the knowledge base of how Canadians consume arts and culture.

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[1] "Federal government to invest $125M in domestic art programs, cultural exports", CBC, June 26th, 2018.
[2] "Arts and Heritage Access and Availability Survey: 2016-2017", Environics Research Group, prepared for Department of Canadian HeritageandCanada Council for the Arts, March 2017.

# 2.   PRELIMINARY RESEARCH

2.1   SOFTWARE PLATFORM RESEARCH

Mandate: Create Prototype

Create the basic model of a feed to get multi-disciplinary events and artistic creations to the media, and ultimately to grow a user base.

The prototype was developed using data science processes. The prototype scope was defined with submission of the research application. Research was conducted leading to iterative development and deployment of the prototype (see diagram below).
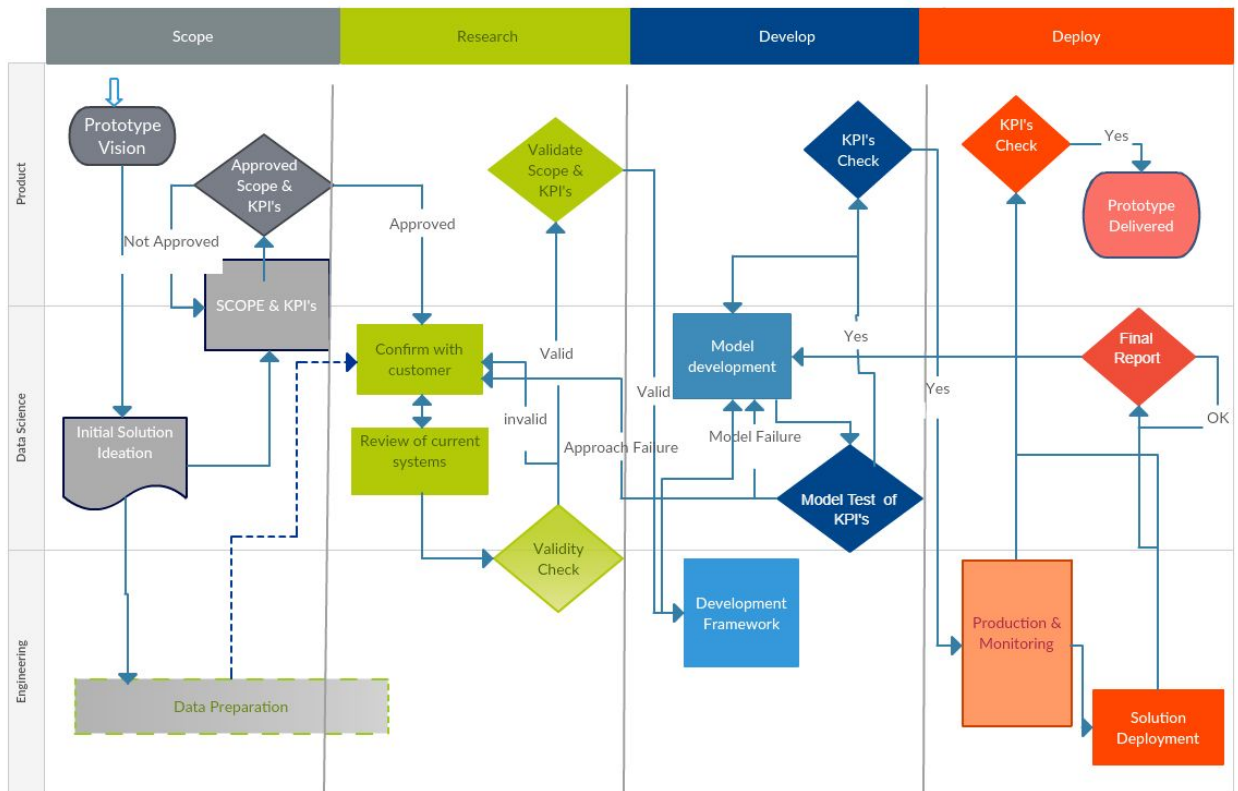
2.2   REQUIREMENTS
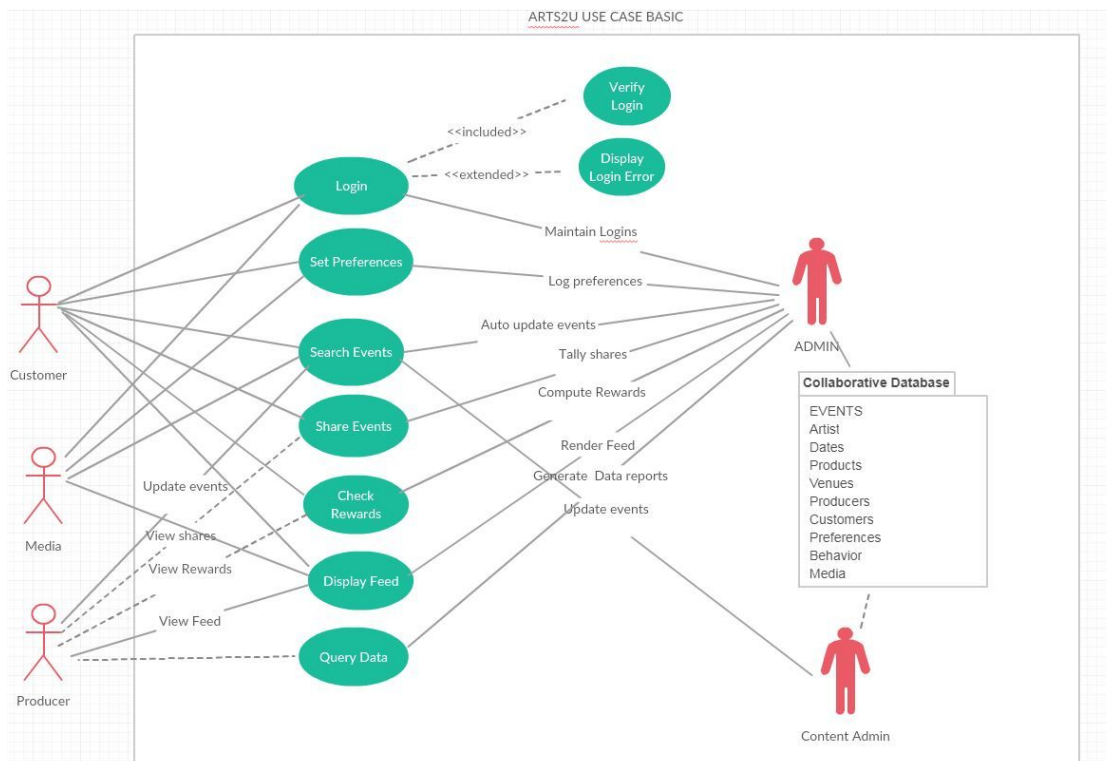
User Requirements:
The prototype was required to serve three specific users:

1. The producer who uploads content to the platform;
2. The media who will share and re-distribute event information found on the platform;
3. The public user who will be exploring the platform, be exposed to arts events, and, once e-commerce features are enabled, purchase tickets to events on the platform

The prototype was required to be controlled by two types of administrators:

1. The technical admin, who would automate and code all processes;
2. The content admin, who would moderate the platform's content and interact with user queries regarding platform completeness, correctness and usability.

Use Case Diagram:

*Use Cases: See **Appendix 1.1 - USE CASES***

System Requirements

The prototype system must be web-based and responsive to all formats. It is to be technologically agnostic, in that it should function on all major browsers and operating systems. Design and development should respond to user behaviour and environment based on screen size, platform and orientation. The website should have the technology to automatically respond to the user's preferences. This may eliminate the insistent requirement to design updates to address each new gadget on the market. We are seeking to identify and utilize responsive products that autonomously provide a "best fit" experience to the end user.

Software Specifications

Software specifications are abstracted from the previous Digital Solutions research identified functions and benefits; from preliminary producer, media and public user research; and from discussions with technology advisors. The software specifications identified through this phase of ARTS2U research are:

1. Register users
2. Manage users & administrate platform, manage import, and scrape data
3. Render Feed
4. Producer & promoter-specific module: upload content, register venues
5. Public user-specific module: accumulate public user preferences
6. Media-specific module: search Feed
7. Advertising capability
8. Segmentation of content
9. Display statistics, data mining

2.3   DESIGN SPECIFICATION

Design Process

Working with the vision and Roadmap devised from previous research, ARTS2U used the Agile Method of software development. This method uses incremental, iterative work sequences that are commonly known as sprints. The development team was made up of two or three people at any given time. Tasks were broken into sprints and completed according to schedules. Bi-weekly scrums were conducted by the Project Manager and the developers, and an iterative review was initiated after each implementation of working components.
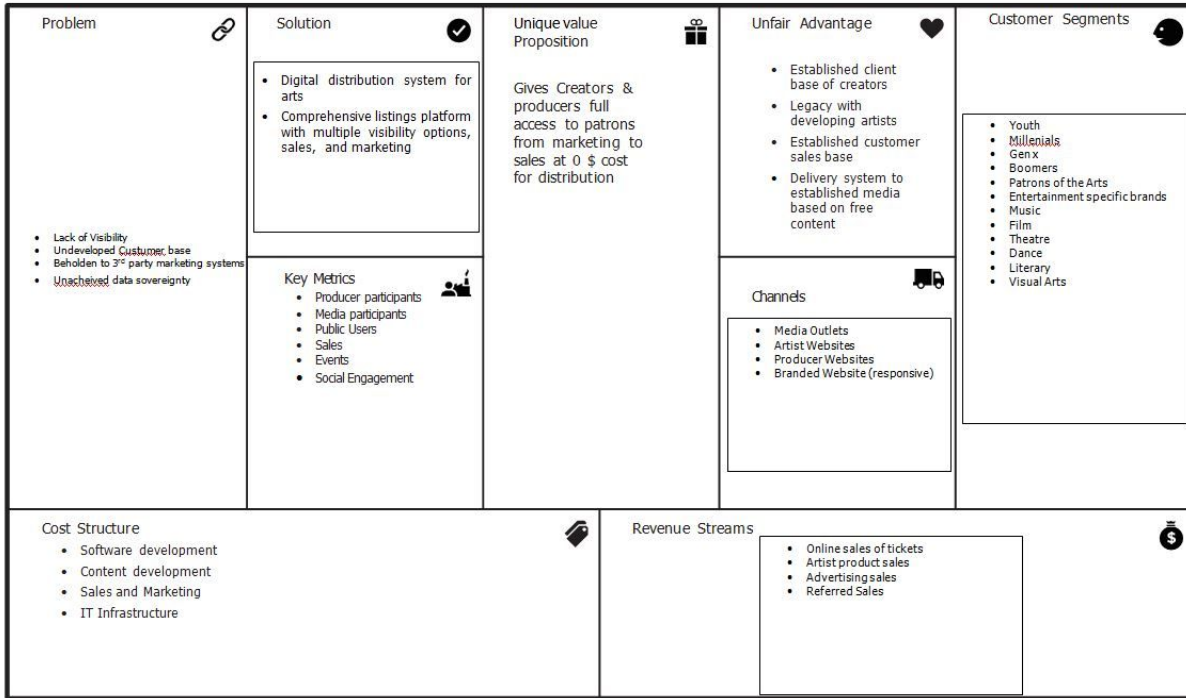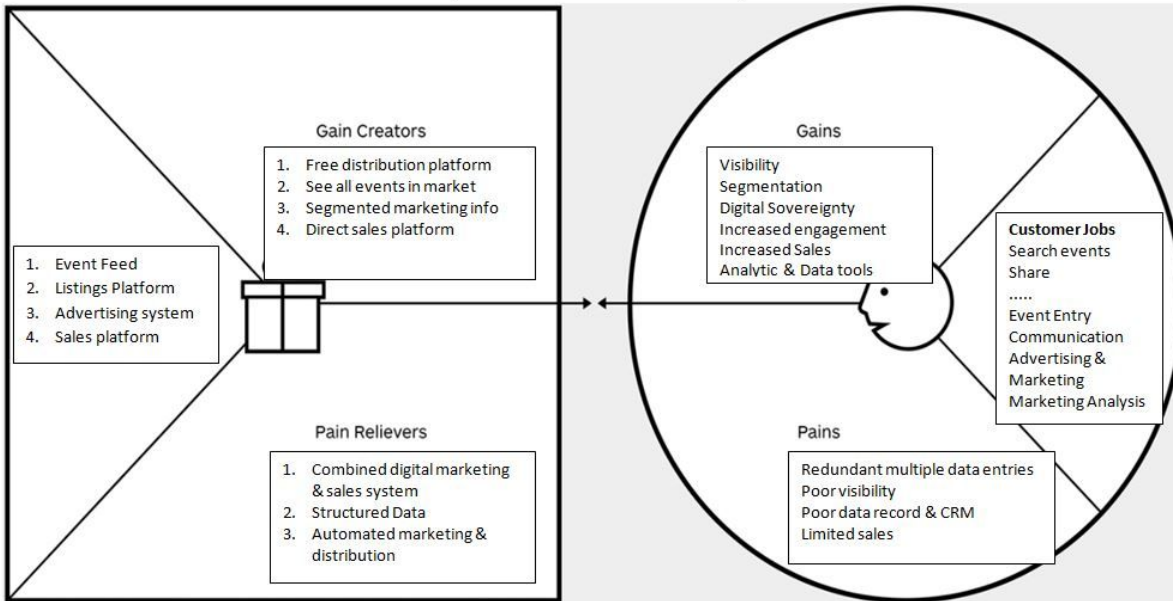
The Business Model Canvas

Designed for: **ARTS2U**　　Designed by: DANIEL WEBSTER　　Date: March 15, 2019　　Version: V2.2

Problem 🔗	Solution ✔	Unique value Proposition 🎁	Unfair Advantage ❤	Customer Segments ⬤
	• Digital distribution system for arts • Comprehensive listings platform with multiple visibility options, sales, and marketing	Gives Creators & producers full access to patrons from marketing to sales at 0 $ cost for distribution	• Established client base of creators • Legacy with developing artists • Established customer sales base • Delivery system to established media based on free content	• Youth • Millenials • Gen x • Boomers • Patrons of the Arts • Entertainment specific brands • Music • Film • Theatre • Dance • Literary • Visual Arts
• Lack of Visibility • Undeveloped Customer base • Beholden to 3rd party marketing systems • Unacheived data sovereignty	**Key Metrics** 🧑‍💼 • Producer participants • Media participants • Public Users • Sales • Events • Social Engagement		**Channels** 🚚 • Media Outlets • Artist Websites • Producer Websites • Branded Website (responsive)	

Cost Structure 🏷	Revenue Streams 💲
• Software development • Content development • Sales and Marketing • IT Infrastructure	• Online sales of tickets • Artist product sales • Advertising sales • Referred Sales

ARTS2U Value Proposition

Gain Creators
1. Free distribution platform
2. See all events in market
3. Segmented marketing info
4. Direct sales platform

1. Event Feed
2. Listings Platform
3. Advertising system
4. Sales platform

Pain Relievers
1. Combined digital marketing & sales system
2. Structured Data
3. Automated marketing & distribution

Gains
Visibility
Segmentation
Digital Sovereignty
Increased engagement
Increased Sales
Analytic & Data tools

Customer Jobs
Search events
Share
.....
Event Entry
Communication
Advertising & Marketing
Marketing Analysis

Pains
Redundant multiple data entries
Poor visibility
Poor data record & CRM
Limited sales

NOTES:

Graphic Experience

The prototype does not evolve beyond a simple graphic experience. Functionality, legibility and intuitive flow are the general guidelines. The producer and media interfaces do not stylistically differ. The only differences are that certain display items in the media interface can be made larger and more visible to satisfy a user's specific needs. The public user interface is different, as it is more customizable for the user, with more dynamic colours, sizes and layout.

3. MARKET RESEARCH

How does the public find events? The modern marketing funnel and the flow of event ticket purchases is depicted below. It can be summarized as REAN (Reach Engage Activate Nurture) or RACE (Reach Act Convert Engage). The idea is to create maximum awareness in order to funnel customers towards a sale.
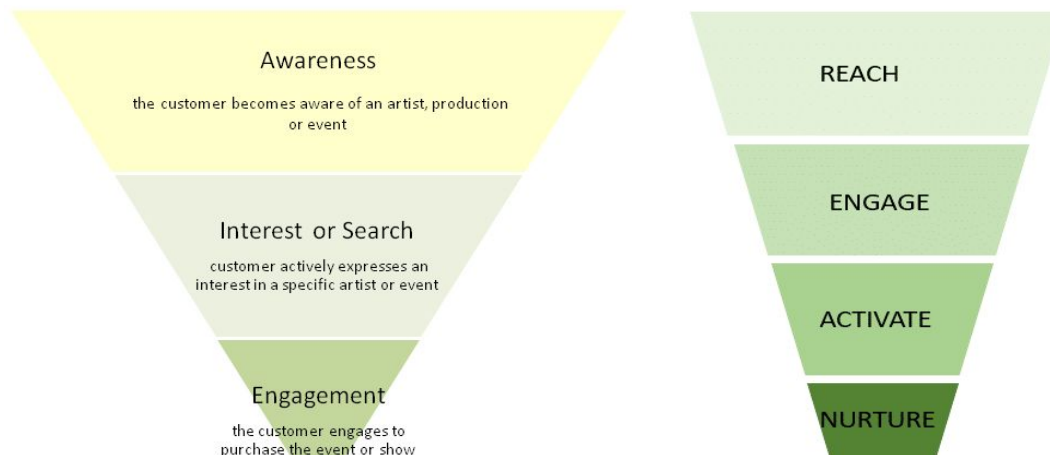
3.1   DIGITAL MEDIA & ADVERTISING

ARTS2U used traditional and digital media, including social media, to discover strategies for sectoral acceptance and rapid public user growth. SEO and SEM strategies are key to growing the platform's reach but, in our case, are dependent on brand, artist, genre, and event type. In order to better promote events and generate sales, and fulfill the project's requirement to aggregate data from a variety of events, artistic disciplines, and genres, we initiated basic SEO and SEM research. We worked with the marketing company Lab Urbain to conduct a preliminary review of search volume in Canada using non-specific keywords.

Observations

The Toronto market is at least five times larger than any other Canadian city. Toronto alone accounts for a quarter of the English-speaking market. 60% of the market is found outside of large urban centers in secondary cities, as well as suburban areas.
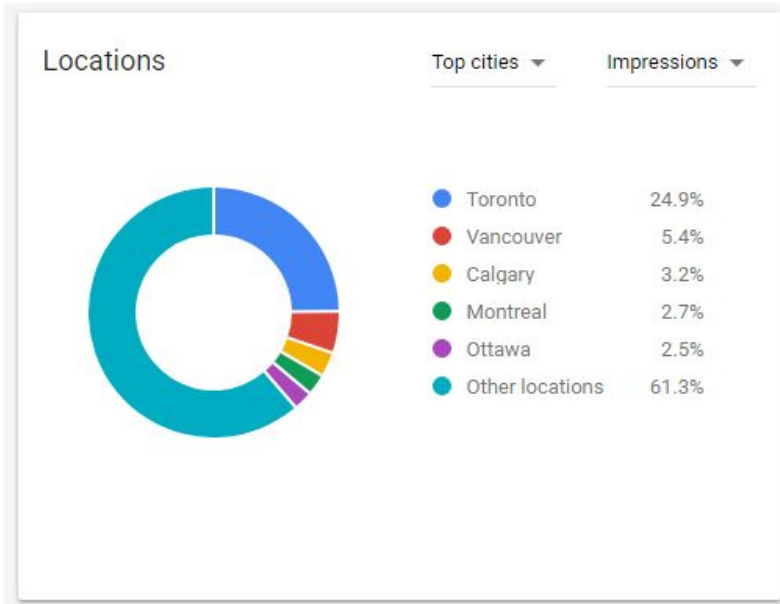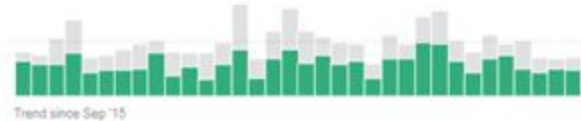

Average Cost Per Click (CPC) for AdWords:
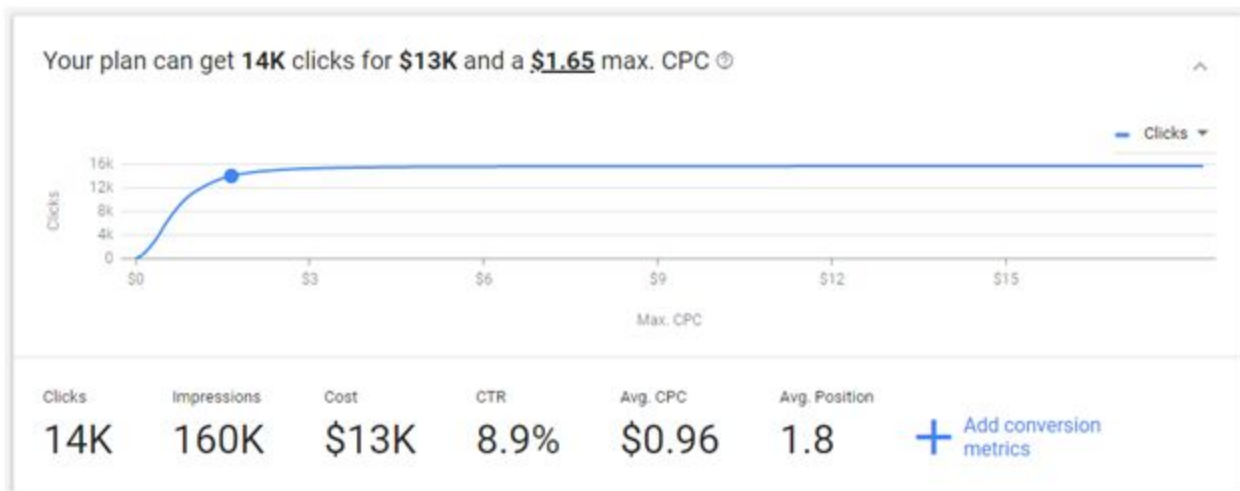
Overall search volume for selected keywords gives about 4800 searches per month in Canada according to Ahrefs, an app used to search keywords.

Search Engine Optimization (SEO) and Search Engine Marketing (SEM)

Using SEO and SEM as a marketing option without having core users already established on the platform would not be successful. Collecting user data to promote preferred content from early adopter customers is key for further SEO spending. User data will inform a comprehensive and structured marketing plan, which is required to achieve goals of the ARTS2U initiative. The project requires a strong, structured SEO and SEM strategy that is based on the behaviour of core users. Once the core group of users is established, the recurring business and behaviour of repeat users will be our key to success. As arts communities adopt the platform, core users can be re-engaged by events that align with their interests.

Keywords searched:

best concert ticket sites	concert tickets	musical tickets
best discount concert tickets	concert tickets for sale	show ticket
best place to buy concert tickets	concert tickets online	stand up comedy tickets
buy concert tickets	concerts near me	theatre shows
buy concert tickets online	discount concert tickets	theatre ticket deals
cheap concert tickets	discount theatre tickets	theatre tickets
Performing arts tickets	event tickets	ticket websites
Theatre performance tickets	last minute concert tickets	upcoming concerts
Theatre shows near me	last minute theatre	upcoming concerts near me
comedy tickets	last minute theatre tickets	where to buy concert tickets
concert ticket sites	music concert	
concert ticket websites	music tickets	

Marketing Strategy and Timing

As the product is developed further, a more comprehensive understanding of the product's requirements needs to be available to the marketing team for further studies, making thorough analysis of the entertainment industry a necessary part of additional market research.. Extensive marketing strategy, including SEO and SEM marketing, should be undertaken once the final branding decisions are made. It would be ineffective to conduct full search engine market research until the ARTS2U brand is finalized.

3.2 Facebook Test Results

Summary	Facebook costs per engagement average over 6 month period
Result types	**Cost**
10 second videos	$ 0.03
Event Responses	$ 1.28
Landing Pages	$ 0.01
Link Clicks	$ 0.50
Post Engagement	$ 0.08
Other, website check out and content	$ 0.66
Average cost per result	**$ 0.12**

See **Appendix 2 - Marketing**

3.3 PROGRAMMATIC ADVERTISING

Programmatic advertising is the automated buying and selling of online advertising. Consolidating digital advertising efforts across the platform makes sense when there is potential to aggregate audiences across arts markets and disciplines. In many markets, there is currently no consistent programmable platform that develops arts audiences. This is especially true for Quebec. Over time, solutions will filter down to smaller audiences that are more regionally specific. Currently, the advertising industry is working to solve major fraud problems in digital ad placement. Despite such issues, the global advertising industry is undergoing a paradigm shift to accommodate digital technologies.

According to Rebecca Steward of *The Drum*:

> *By 2019, 65% of all spend on advertising in digital media will be traded programmatically, despite clients airing ongoing concerns around issues like ad fraud, brand safety and transparency as well as headwinds from GDPR. In line with the shift, Zenith's latest programmatic marketing forecast anticipates that next year advertisers will spend $84bn programmatically, up from $70bn in 2018. The US, where the FBI is currently looking into media buying practices, is the biggest programmatic spender. This year alone brands and their agencies will shell out $40.6bn on automated ads in 2018 – 58% of the total. Relative to its size, China is in second place but with a spend of $7.9bn expected before the year is out it's lagging behind its competitors. For instance, the UK (a much smaller market comparatively) is set to spend $5.6bn in 2018, clocking in at third place.*[3]

Although we have not found a programmable ad solution that can deliver effective results arts audiences, solutions are in development. For the future it is required that additional spending on audience development is undertaken so that potential audiences can aggregated into groups that can be specifically advertise to.

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[3] Rebecca Stewart, "65% of digital media will be programmatic by 2019 despite fraud and misplacement woes", *The Drum* (November 19, 2018).
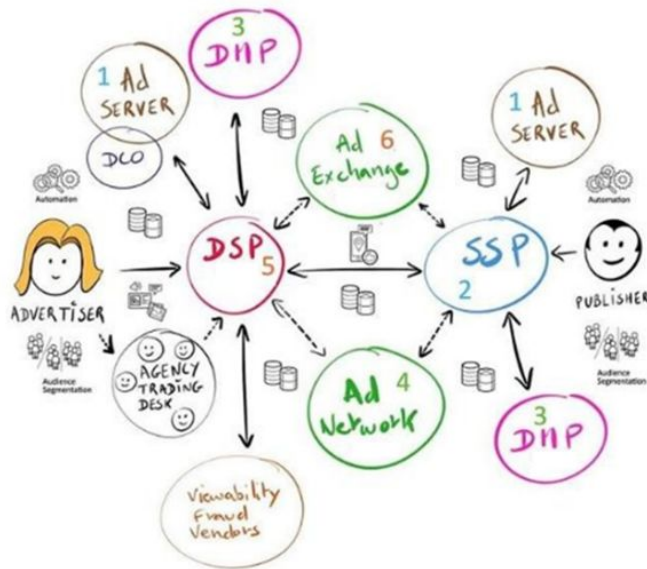
Solutions
Multi-platform

1 Ad Server
2 SSP *Supply-Side*
3 DMP *Data Management*
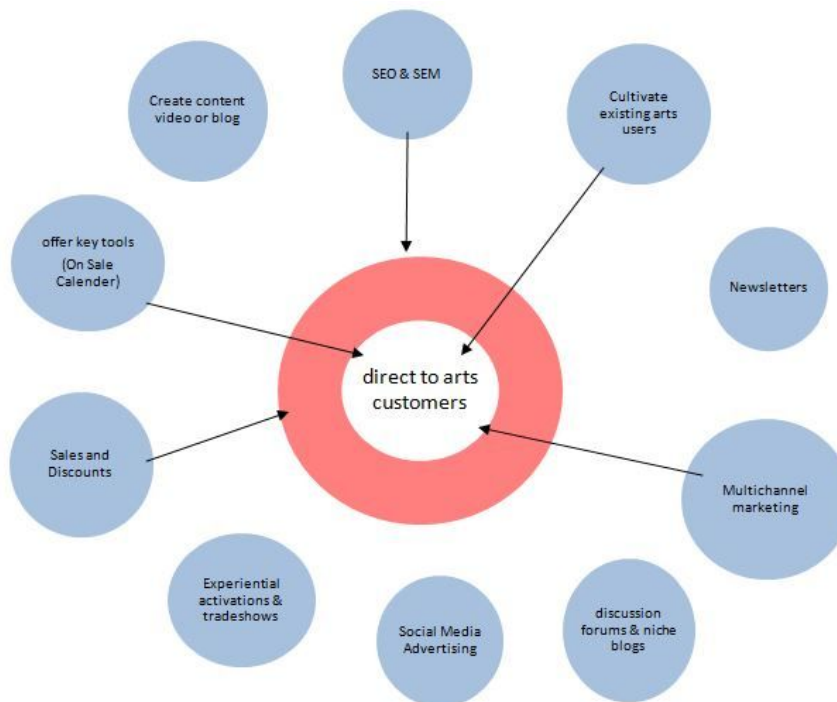4 Ad Network
5 DSP *Demand-Side*
6 Ad Exchange

Solutions are expected to maximize returns and increase ad sales for platforms that have strong user bases.

See **Appendix 4** for Programmable Advertising offering details.

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3.4 Brand Focus Marketing

Based on preliminary market tests of this research, brand focused spending was found to be inefficient so long as the branding is not finalized (ARTS2U is the current working title). The market research strategy was revised in the early phase of the project.

A Bullseye strategy to find ways to reach core users allowed us to identify more targeted methods that can benefit from leveraging our networks:

4.   GLOSSARY

Term	Definition	Context
5 G	5G (from "5th Generation") is the latest generation of cellular mobile communications. It succeeds the 4G (LTE-A, WiMax), 3G (UMTS, LTE) and 2G (GSM) systems. 5G performance targets high data rate, reduced latency, energy saving, cost reduction, higher system capacity, and massive device connectivity.	The transition to 5G will only increase the speed at which artists become reliant on digital distribution. According to Verizon: "....one of the fastest, most robust technologies the world has ever seen. That means quicker downloads, outstanding network reliability..." See **Annex 1 - Streaming Services**
Inline Frame (iframe)	An Inline Frame element (iframe) is an HTML document that is embedded inside another, such as a document on a website, in order to insert a piece of content from another source into a webpage. Iframe can be used when you have relatable, externally-hosted content (an image, embedded video, short instructions, or a decoration), that you wish to have on your page.	In the case of ARTS2U, iframes are used to display content from third parties such as YouTube.
Agnostic Player	Agnostic streaming refers to the possibility of accessing content from multiple sources but within the same window on any device. For example, video or audio content on YouTube could play through an embedded player, like an ARTS2U player on a mobile device.	"In the not-so-distant future, all TVs will be smart TVs. They'll either run their own OS, like LG's WebOS, or they'll run a third-party platform like Roku TV. Either way, the era of the streaming device add-on has an expiration date that is now visible on the horizon." See **Annex 1 - Streaming Services**
AI	Artificial intelligence (AI) is the simulation of human intelligence processes by machines, especially computer systems.	Every sort of machine intelligence that surrounds us today is Narrow AI. Google Assistant, Google Translate, Siri and other natural language processing tools are examples of Narrow AI. For the purposes of this research, AI is meant to mean Narrow AI: See **Annex 1 - AI**

Algorithms	An algorithm is a step by step method of solving a problem. It is commonly used for data processing, calculation and other related computer and mathematical operations. An algorithm is also used to manipulate data in various ways, such as inserting a new data item, searching for a particular item or sorting an item.	Algorithms are used to match users with items based on preference, and to secure and scramble personal information.
API	In computer programming, an application programming interface (API) is a set of subroutine definitions, communication protocols, and tools for building software. In general terms, it is a set of clearly defined methods of communication among various components. A good API makes it easier to develop a computer program by providing all the building blocks, which are then put together by the programmer.	In the case of ARTS2U, an API is used to feed information from the lepointdevente.com ticket network directly into the prototype database.
Biometrics	Biometrics are identity authentication innovations which are rapidly evolving in the financial and retail spaces, and many blockchain developments are implementing Biometric Identity Authentication features. These systems already exist with finger-touch verification of purchase on Google Play, as well as Mastercard's "selfie pay" system.	
Blockchain and hyperledgers	Blockchain technology promises greater security and lower costs than traditional databases. Blockchain is a secure, tamper-proof ledger with time-stamped transactions, distributed among a number of entities. A blockchain technology can replace an intermediary in situations where a trusted third party is required.	Major impacts of blockchain on event tickets are the secure verification of tickets to prevent counterfeit tickets, and control over exorbitant markups from reselling tickets, as well as the ability to purchase tickets without using a bank intermediary (for example: purchasing with Bitcoin, Ethereum or other cryptocurrency). *See **Annex 1 - Blockchain***
Chatbots	Chatbots and chatbox technologies with voice recognition technology are used to provide seamless spoken communication and responsive delivery of services on the Internet. "By integrating Chatbox technology into our new intelligent bots, businesses can further leverage their existing platforms to more comprehensively engage with customers and simplify processes — both for data collection and end-user actions," said Steve Miranda, Executive Vice President, Oracle Applications Product Development. *See **Annex 1 - Chatbots***	Chatbots and virtual assistants have the ability to increase sales and automate user queries, ultimately adding to customer satisfaction if deployed properly. The cost and complexity of developing effective chatbots is beyond the scope of the current prototype, but must be considered in any future development.

Cross selling	See **Multi-Channel Marketing**	
Data	Any information—quantitative or qualitative—is data. For example, the name of a person is a data point or a resource.	
Discoverability	Discoverability is the ability of information to be easily found when specifically searched for (also known as "findability" in the web of data) or to be made readily available and explorable when not specifically searched for. Currently, much information about the performing arts in Canada is not even findable by traditional search engines or by voice-enabled personal assistants.	Currently, much information about the performing arts in Canada is not even findable by traditional search engines or by voice-enabled personal assistants. ARTS2U seeks to improve discoverability and find-ability of artists and arts productions
Graph Database	A graph database is a database that uses graph structures for semantic queries with nodes, edges, and properties to represent and store data. A key concept of the system is the graph (or edge or relationship). The graph relates the data items in the store to a collection of nodes and edges, the edges representing the relationships between the nodes. The relationships allow data in the store to be linked together directly and, in many cases, retrieved with one operation. Graph databases hold the relationships between data as a priority. Querying relationships within a graph database is fast because they are perpetually stored within the database itself. Relationships can be intuitively visualized using graph databases, making them useful for heavily interconnected data. RDF is a standardized format for graph data representation.

*Further see **Annex 1 - Graph Databases*** | The ARTS2U database is a relational database which serves the current requirement to be queried about arts information and to deliver results in a timely manner. As the product develops and volumes of metadata in the system grow, the use of graph databases to respond to queries regarding relationships may be required. To effectively conduct AI and machine learning functions, graph databases will be an essential technology in the ARTS2U system. |
| **Interoperability** | Interoperability is the ability of a system or an application to work (connect, exchange information, make use of information) with other systems or applications, at the current time and in the future. For example, systems that use the same Linked Open Data protocols and vocabularies are, by virtue of their relying on the same data standards, interoperable: they can make use of one another's information without even needing to connect through an intermediary such as an application programming interface (API) or a semantic pathway. | As ARTS2U goes forward it will need to be interoperable with semantic web implementation and database framework updates. ARTS2U seeks to be interoperable across platforms and to connect directly via Linked Open Data enabled technologies.

See **URI's** and **LInked Open Data** |

Knowledge Graph	The Knowledge Graph represents a collection of interlinked descriptions of entities – real-world objects, events, situations or abstract concepts – where: • Descriptions have a formal structure that allows both people and computers to process them in an efficient and unambiguous manner; • Entity descriptions contribute to one another, forming a network, where each entity represents part of the description of entities related to it. Knowledge Graphs combine characteristics of several data management paradigms. The Knowledge Graph can be seen as a specific type of: • Database, because it can be queried via structured queries; • Graph, because it can be analyzed as any other network data structure; • Knowledge base, because the data in it bears formal semantics, which can be used to interpret the data and infer new facts.	By reviewing the Google knowledge graph for each particular producer participant in the study it was simple to ascertain if producers were using structured data. When accurate records of upcoming events were displayed in the knowledge graph it was obvious that the producer website had implemented structured data, i.e. schema protocols, in their web development. Local technology company Culture Creates is making a business out of creating highly accurate knowledge graphs for arts businesses.
Linked Open Data	Linked Open Data (LOD) brings together data and metadata into a resource description, and then interlinks this resource description with other resource descriptions so as to provide more meaningful information and to enable this rich information to be found or stumbled upon. Here's an example: "Joe Ryga" is a person who is the author of *The Ecstasy of Rita Joe*, a play that will be performed on "a given date" and "time" in "Theatre XYZ". The connections between these various data points, and their discoverability, are being made available to machines thanks to LOD.	
Machine Learning	See **AI**	
Marketing Automation	See **Programmable Advertising**	

Metadata	Metadata is information about the data. The most common type of metadata is descriptive metadata: information that helps machines make sense of the data. For example, the series of letters forming the name "Joe Ryga" isn't just a random string of letters; "Joe Ryga" is a data point which represents the name of a person, who happens to be an author. In this particular example, "is the name of an author" is metadata for "Joe Ryga".	
Multichannel Marketing	In the travel sector, when a customer purchases a plane ticket, they may be offered a hotel or rental car as a cross-sell to the purchase. Ticketing companies are doing similar things by selling ticket insurance and parking at the same time that they sell a ticket. This also works in reverse when a ticket network offers an available performance to someone who will be arriving to the city or festival by air. Making inventories available to cross-selling increases sales.	
Natural Language Processing (NLP)	Natural Language Processing (NLP) is a subfield of Artificial Intelligence that is focused on enabling computers to understand and process human languages, to get computers closer to a human-level understanding of language. Computers don't yet have the same intuitive understanding of natural language that humans do. They can't understand what the language is really trying to say, nor can it read between the lines. See **Annex 1 - Natural Language Processing**	Natural Language Processing, combined with Machine Learning, has enabled smart speaker technologies such as Siri, Alexa, and Google Home to become available and to be used as internet search tools.
Preference Centre	The preference centre is a set of additional data fields in a user profile that describe or define a set of tastes or behaviours of the user. Most advanced social media and web applications use preference centres to improve the experience of the myriad of users. With the mantra of trying to be everything to each individual taste, preferences help users avoid clutter and be served with their interests in mind.	The best examples of preference centres have all been created with user friendliness, are minimally invasive and never make clients feel violated by asking for too much information.
Programmable Advertising	Programmatic advertising is the automated buying and selling of online advertising. This automation makes transactions efficient and more effective, streamlining the process and consolidating your digital advertising efforts in one technology platform. See **Annex 1 - Programmable Advertising and Marketing Automation**	Benefits of programmatic advertising include greater efficiencies by using machine learning to increase effectiveness, better targeting across devices, responsiveness to consumer behaviour in real-time and streamlined campaign management.

Schema.org	Schema.org is the result of a collaboration between Google, Bing, Yandex, and Yahoo! to help users provide the information their search engines need to understand user content and provide the best search results possible. Adding Schema markup to HTML improves the way user pages display in search engine results by enhancing the rich snippets that are displayed beneath the page title.	Schema.org conventions are used to structure data in ARTS2U.
Semantic Web	The Semantic Web is an extension of the World Wide Web through standards by the World Wide Web Consortium (W3C). The standards promote common data formats and exchange protocols on the Web, most fundamentally the Resource Description Framework (RDF). According to the W3C, "The Semantic Web provides a common framework that allows data to be shared and reused across application, enterprise, and community boundaries". The Semantic Web is therefore regarded as an integrator across different content, information applications and systems. The term was coined by Tim Berners-Lee for a web of data (or data web) that can be processed by machines. "I have a dream for the Web [in which computers] become capable of analyzing all the data on the Web – the content, links, and transactions between people and computers. A "Semantic Web", which makes this possible, has yet to emerge, but when it does, the day-to-day mechanisms of trade, bureaucracy and our daily lives will be handled by machines talking to machines. According to Tim Berners-Lee, The "intelligent agents" people have touted for ages will finally materialize". See **Annex 1 - Semantic Web**	Currently, performing arts events are difficult to find online as many events are not well organized according to semantic web principles and structured data. If content-producing organizations and artists can structure their information to suit the currently available search engine technology, increased visibility can be achieved. As concepts of the semantic web, which includes structured data and graph databases, are implemented, arts events will become more findable.

Shareability	Shareability is the ability of information to be easily shared over social media with content enrichment (i.e. photo, video clip or hyperlink with content preview) and/or authoritative descriptive information (i.e. tags for persons or places). Non-digital, non-physical resources such as a live performing arts experience may not be easily shared on social media without derived digital contents such as a trailer). While venues can currently be automatically detected and tagged by social media, performing artists and their live performances cannot yet be automatically detected and tagged. For these reasons, live performances suffer from poor shareability and miss out on digital promotional opportunities.	ARTS2U seeks to share producer information as widely as possible to increase visibility of arts productions.
Structured Data	Structured data refers to information with a high degree of organization, where inclusion in a relational database is seamless and readily searchable by simple search engine algorithms or other search operations. Unstructured data is essentially the opposite. The lack of structure makes the task of compiling information time and energy consuming.	Structuring of data in the ARTS2U platform is done as producers input information and when information is scraped, or comes via API from external sources.
Uniform Resource Identifier (URI)	A Uniform Resource Identifier (URI) is a string of characters that unambiguously identifies a particular resource. To guarantee uniformity, all URIs follow a predefined set of syntax rules, but also maintain extensibility through a separately defined hierarchical naming scheme (e.g. http://). Such identification enables interaction with representations of the resource over a network, typically the World Wide Web, using specific protocols. Schemes specifying a concrete syntax and associated protocols define each URI. The most common form of URI is the Uniform Resource Locator (URL), frequently referred to informally as a web address. More rarely seen in usage is the Uniform Resource Name (URN), which was designed to complement URLs by providing a mechanism for the identification of resources in particular namespaces. See **Annex 1 - URI's**	The identifier used in the ARTS2U prototype is currently a serial number in the ARTS2U database, which is assigned to events as they are created. A more sophisticated approach and the adoption of a URI scheme will enable interoperability with other platforms such as Musicbrainz and international arts identification initiatives.

Tokenization, Token Economy	A token economy is a management system that reinforces target behaviour and has been widely used as a methodology to change the behaviours of students and patients. It is assumed to induce desirable behaviours by providing tokens, which can be converted into other items or privileges. The possibility of building a model with programmable incentives lies at the core of the token economy. More importantly, the terms for providing and exchanging a token should be clear. In other words, the designer of the system should define "desirable behaviours" and provide fair rewards for each behaviour, while also presenting what participants can do with the token. If designed well, desirable behaviours will then be reinforced. See **Annex 1 - Tokenization & Rewards**	Tokenization takes action performed by the users of a system and gives the activity a value. These activities, such as sharing, purchasing or writing a text ,can be of value to assist with sales of artist products. It is an application of game mechanisms to a non-gaming context. By organizing activities to resemble a game, marketers can engage consumers with the brand, drive specific behaviours and motivate customers to do things that require a certain amount of effort and time. There can be activities that a brand will pay another service to do, as many producers do when we advertise with Facebook. This logic is based on reward and recognition. Players are rewarded with points and badges, or elements such as points or levels, that can be redeemed directly through the platform.
Value Gap	This term signifies the disparity between the value of creative content that is accessed and enjoyed by consumers, and the revenues returned to the people and businesses who create it. *(The Value Gap, Music Canada, YEAR).* For full report, see PDF in **Annex 1 - Value Gap**.	The value gap in the arts is widening with the proliferation of streaming services. Several strategies are working toward resolving the problem legally and technologically, though it is a persisting problem due to the scarcity of digital copying.
Voice Recognition & Voice Search	Voice recognition and Voice Search have become the domain of recently popularized commercial products. "A smart speaker is a wireless and smart audio playback device that uses several types of connectivity for additional functions. Smart speakers have special features to enhance ease of use, connect to multiple types of audio sources and provide additional functionality. The original purpose of smart speakers was the wireless delivery of audio content from a user's media library, which may be on different platforms, and from online music services. Like any type of electronic product, smart speakers vary widely in features, design and quality. Some smart speakers feature voice-activated digital assistants and can operate as home automation hubs." See **Annex 1 - Voice Recognition**	With the advent and distribution of Alexa, Siri, Cortana, and Hey Google, voice recognition devices will be the primary means of searching at home and in vehicles. As these machines get smarter by means of narrow AI and machine learning, we are clearly leaving the era of touch-sensitive communication. This also increases the imperative for information to be findable on the Internet by means of natural language processing, which requires structuring of data.

Web 3.0	Web 3.0 has started to emerge as a movement away from the centralisation of services like search, social media and chat applications that are dependent on a single organisation to function.	In the current Web 2.0, users can interact with websites that have predetermined behaviours according to user input. Users can search for information using search engines that generally provide satisfactory results if there is enough information regarding the search. However, that search is only for keywords and brings in the most popular information available, without understanding the context of the search. So if a user searches for an insect called a camaro using only that word, then about 90 percent of the search results are for the Chevy Camaro model of car and not the insect because the car is the most popular search result and has the most prolific information. However, Web 3.0 will be able to get the context from the user; it be able to provide the user with the most useful information about the camaro insect, such as its habitat, and even where to find it as a delicacy. Web 3.0 can be likened to an artificial intelligence assistant that understands its user and personalizes everything.
White Label Ticketing	White label ticket solutions are integrated software packages that can be licensed to companies wishing to use their own brand. White label tickets save on research and development while still offering full features and services of established ticketing platforms.	Many companies use white label software to promote their own brands including TIXZA, the Bell Centre, the Phi Centre, and Theatre Fairmount. Ticketing platforms offering white label solutions are Outbox, Lepointdevente.com, and Vivendi. Customers can generally tell that a brand is using white label tickets by the subtle branding of the white label software solution (i.e., "Powered by Outbox Technologies"), that appears somewhere in the purchasing process.

5.   RESEARCH ACTIVITIES

5.1   PRODUCER INFORMATION SESSIONS

One-on-one producer information sessions were conducted to inform producers of the project. Digital literacy and explanations of technologies used in the prototype were communicated. The information sessions were critical to achieve producer understanding of what was being undertaken with the prototype development. Prior to being invited for focus groups it was essential that all producers had been informed of the project in the one-on-one meetings.

5.2   PRODUCER FOCUS GROUP SESSIONS

Three producer focus groups were held in November and December 2018 at ELAN headquarters. The focus group consisted of a presentation of the project, with a group discussion regarding the operation of the system on the mechanics and producer side, followed by a general discussion.

Focus group questions included:

1.   Are there any questions regarding the login process?
2.   Were all your events present in the system?
3.   Was all the information on your events in the system correct?
4.   Were you able to add any events?
5.   Approximately how much time did you spend on creating an event?
6.   Are the instructions for inputting event information clear?
7.   Do you understand clearly the process of naming a show by the Artist and using the name of a show in the artist field?
8.   Do you understand clearly the event name and event url fields?
9.   Are there any suggestions you have to add to the Producer user manual?
10. Are there fields that you think should be added to describe the events?
11. Do you have questions regarding uploading images?
12. Do you feel that the rendering of the feed has the basic information required to inform media?
13. Are there any features not present in the prototype that you would like to see prior to launch?
14. Are there any features that you think are not necessary in the current model?
15. Do you use a system of rewards to incentivise repeat customers?
16. Do you use a preference center to manage your email or customer lists?

See **Appendix 3. Producer focus groups**

5. 3   PRODUCER SURVEYS

Surveys were given to producers after focus groups were conducted. The surveys were meant to inform marketing concerns and to capture an updated state of producers' concerns regarding the distribution of their events.

See **Appendix 3. Producer focus groups** and **Annex 3.1 Resulting iterative update of Producer User Guide**

5. 4   MEDIA SURVEYS AND DISCUSSIONS

The media survey was done with individual media representatives in January and February 2019.

Questions to media representatives included:

1. Do you have dedicated web pages to cover the arts?
2. Is there local decision making on arts programming?
3. Do you currently publish listings?
4. Do you consider externally generated placement of arts listings on your site to be feasible? If no, is there a scenario where you would consider arts listings placed on your site?
5. With what frequency do you think listings information should be offered to your website visitors?
6. With whom do we speak about technical implementation of our feed so that it will render live on your website in the way that TV listings do?
7. Do you have comments on the events feed?
8. Do you have additional comments?

See **Appendix 4. Media**

5. 5   MULTIPLE ACTORS FOCUS GROUP

The multiple actors focus group seated three different types of users of the prototype platform in one discussion. Producer, media and public users were assembled to discuss the communication of information as it flowed across the system. Producers reviewed event information they had inputted into the system and saw how it was rendered in the media and public user interfaces. Media reviewed information in the system and initiated search functions according to date, venue, producers, and event type. Public users searched the system for events according to date, genre, event type. Public users also set preferences for event type and genre.

5.6   MULTI USER QUESTIONNAIRE

1. Producer events
- Log in
- Do we have events in the system and are they correct?
- Make a change to an event live
- Questions regarding look and feel, intuitiveness?
- Check the scan of events
- Approximately how much time did you spend on creating an event?

2. Media interface review
- Log in
- Can you see events from both producers?
- Comments on the display?

3. Public user view
- Log in
- Can you find the events?
- Were you able to confirm your profile?
- Was it intuitive?

General Questions

1. Are there any general questions regarding the login process?
2. Are the instructions for input event information clear? Are there any suggestions you have regarding a user manual?
3. Are there fields that you think should be added to describe the events?
4. Do you have any questions regarding images?
5. Do you think the feed has enough information inform media outlets with regard to shows?
6. Are there any features not present in the prototype that you would like to see prior to launch?
7. Are there any features that you think are not necessary in the current model?

See transcript in **Appendix 3.2 Multi User Focus Group** *&* **Annex 3.3 Public User Survey**

5.7   DESCRIPTION OF PARTICIPANTS

Producers

With the purpose of discovering the necessary inputs to create a show listing that would suit multiple arts disciplines, producer participants were chosen from a range of disciplines including theatre, literature, music, visual arts, and interdisciplinary venues. Producers taking part in the research could be either independent or solo artists, or they could represent larger production companies who promote and market the shows of many artists. For the purpose of diversity and for a wide discovery of producer behaviour, the participants could be anyone from a solo folk artist to someone who works for a large event venue. For the prototype we originally sought ten to twelve participants and achieved thirteen interviewed participants.

List of Producers

Name	Affiliation	Description
Amy Blackmore	MainLine Theatre	Theatre and festival producer
Andy McClelland	L'il Andy	Representing a group of independent music artists
Claudia Guerra	Phi Centre	Multidisciplinary venue and gallery
Eloi Savoie	Centaur Theatre	Major English theatre institution
Harm Duznik	O Patro Vys	Independent venue and gallery
Laura Marais	Greenland	Independent concert producer
Laurie Schubert	Quebec Writers' Federation (QWF)	Literary organization
Malik Toure	Ausgang Plaza	Independent multidisciplinary venue
Marc St-Laurent	Cafe Campus	Independent event venue
Mark Louch	Theatre Sainte-Catherine	Independent event venue
Pat Sandrin	evenko	Large event producer and venue owner
Simon Anthony Abou-Fadel	Infinitheatre	Independent theatre company
Yannick Cimon-Mattar	LePointdevente	Ticket Selling Platform

Media

Media persons participating in the survey and in review of the prototype are chosen from a range of Montreal media outlets who publish or broadcast in English. Participants ranged from online blogs and online arts reviews, to national syndicated news outlets including radio and television. Fourteen important local media outlets responded to participate in the research.

List of Media

Name	Affiliation	Description
Debbie Hynes	CBC	National radio, television, and internet broadcaster
Lorraine Carpenter	CULT MONTREAL	Independent arts online magazine
Rachel Levine	Montreal RAMPAGE	Independent arts online magazine
Brendan Kelly	Montreal Gazette	Major market newspaper and website
Gabe Sigler	Bad Feeling Magazine	Independent arts online magazine
Colin Hendry	Spot Ev	Independent arts online platform
Leo Calcagno	Culture Cible	Independent online publishing network
Richard Burnett	MTL.ORG	Tourism website
Boris Shedov	McGill Tribune	University newspaper
Louise Burns	CKUT	University radio and website
Miriam Lafontaine	Concordia The Link	University newspaper
Christine Long	CTV website	Network television station
Chris Bury	CJAD	Radio station and website

Technology developers and system operators

Robert Brockie

Robert Brockie is a software engineer with a Bachelor of Science from Memorial University. His 14 years of experience in software development have positively impacted sales and marketing systems for Greenland Production and TIXZA. His innovative work to integrate social media and analyse data derived from social media sites has added value to several companies including Flight Hub, Wajam and Nexalogy Environics.

Daniel Webster

A 30 year veteran of the music industry Dan has led projects in digital distribution, sales and marketing, ticketing, artist development, and festival development. Dan is currently managing ELAN's (English Language Arts Network, Quebec) research on Digital Solutions, and managing the ELAN's ARTS2U prototype development. In 2019 Dan will lead a Canada Council – DSF funded project that develop connections and collaborations among digital initiatives. In 2018, the music company Dan founded 'Greenland Productions' celebrated 25 years in business. In 2014 Dan created TIXZA, a ticket solution for small venues. Dan is co-founder of Osheaga Music Festival and the creator of the Green Stage at Osheaga. Dan's early work in co-creating the peer to peer file sharing technology FLIPR in 1999 was his first foray into offering a solution for artists to self-distribute music in the internet age.

Public Users

Public users participated in testing of the user interface and interaction with the content of the prototype listing platform. Those chosen to participate were generally experienced with using online social platforms and apps to find arts events online. A range of ages and a range of interests were represented in the participants group. The original scope of the research had estimated user participants at 100 to 200. Due to limitations of resources, the scope of the user testing was reduced to twenty users.

5. 8   PUBLIC USER JOURNEY - TOP LEVEL
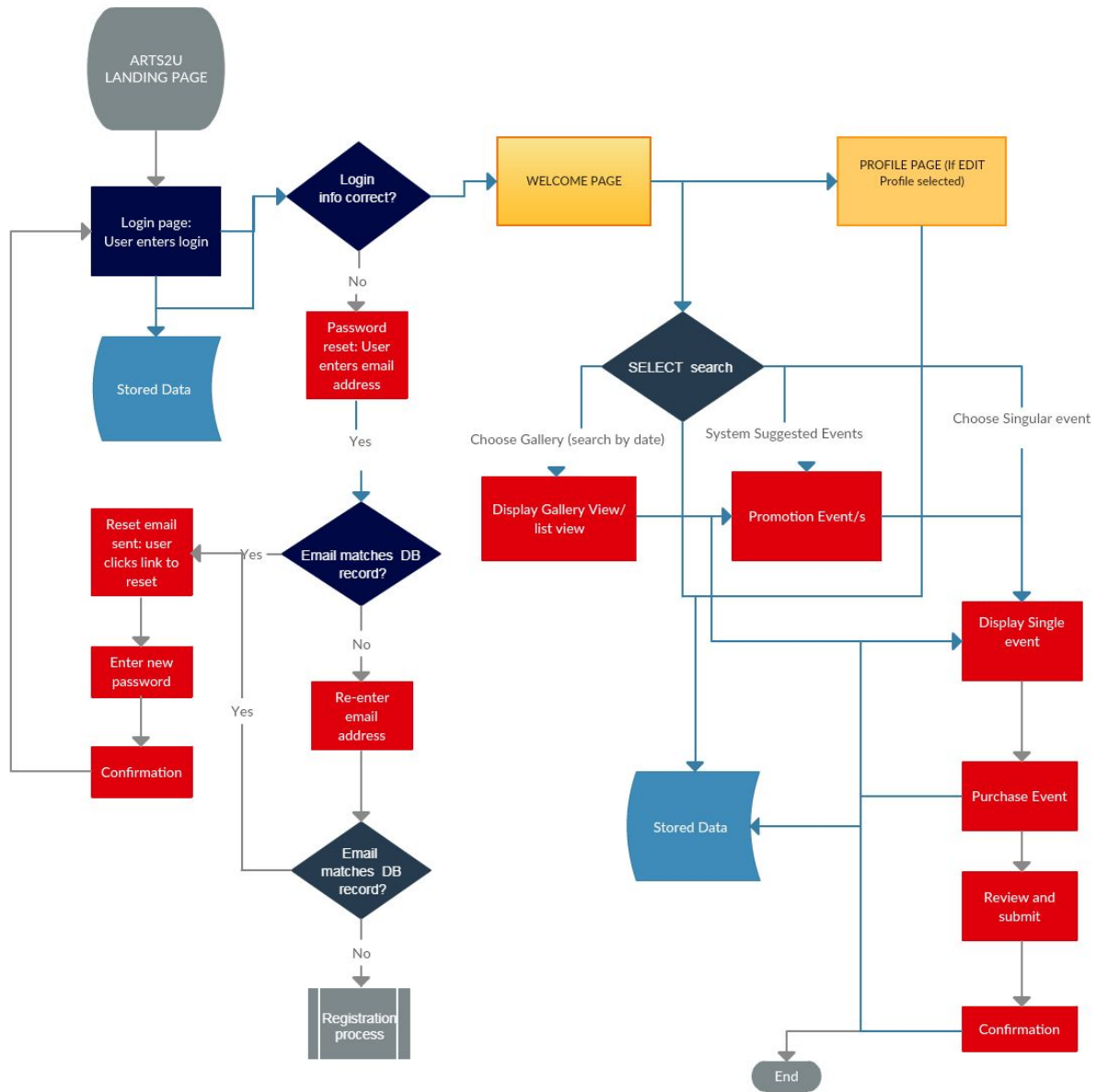
5. 9   VENUES (COMPLETE) SCREEN SHOT

6. ANALYSIS OF PROTOTYPE MODEL

6.1   TECHNICAL OVERVIEW OF OPERATING TECHNOLOGIES

Web based systems were built on PHP and MySQL.

The media and user applications are running PHP7 and use Slim as their framework, and Eloquent to handle database communication. The front end are Twig templates that utilize jQuery for user interface. The applications are hosted on DigitalOcean containers.

The Admin application is built on PHP5.7 and MySQL, using CodeIgniter as its base framework with raw HTML templates supported by Bootstrap. This application is hosted via Dreamhost.

The logins are protected via HTTPS and all communication across the applications is encrypted. Passwords are generated using the latest encryption libraries. The data itself has a daily backup that is stored for up to two months.

None of these applications handle credit card data since all ticket purchases are handled via third party sites.

6.2   DEMANDS OF THE SECTOR AND VARIOUS PLATFORM USERS

The prototype integrates three interfaces to register, acquire content, distribute to media, and acquire user preferences. Each of the user interfaces can query the database according to their prescribed user requirements. A query-able feed is rendered to the various users and made available in real-time. There is also a component scraping system and external API to automate the acquisition of arts event content from external websites. The three interfaces—the API and scraping components, and the relational database which stores all interactions—together constitute the ARTS2U platform.
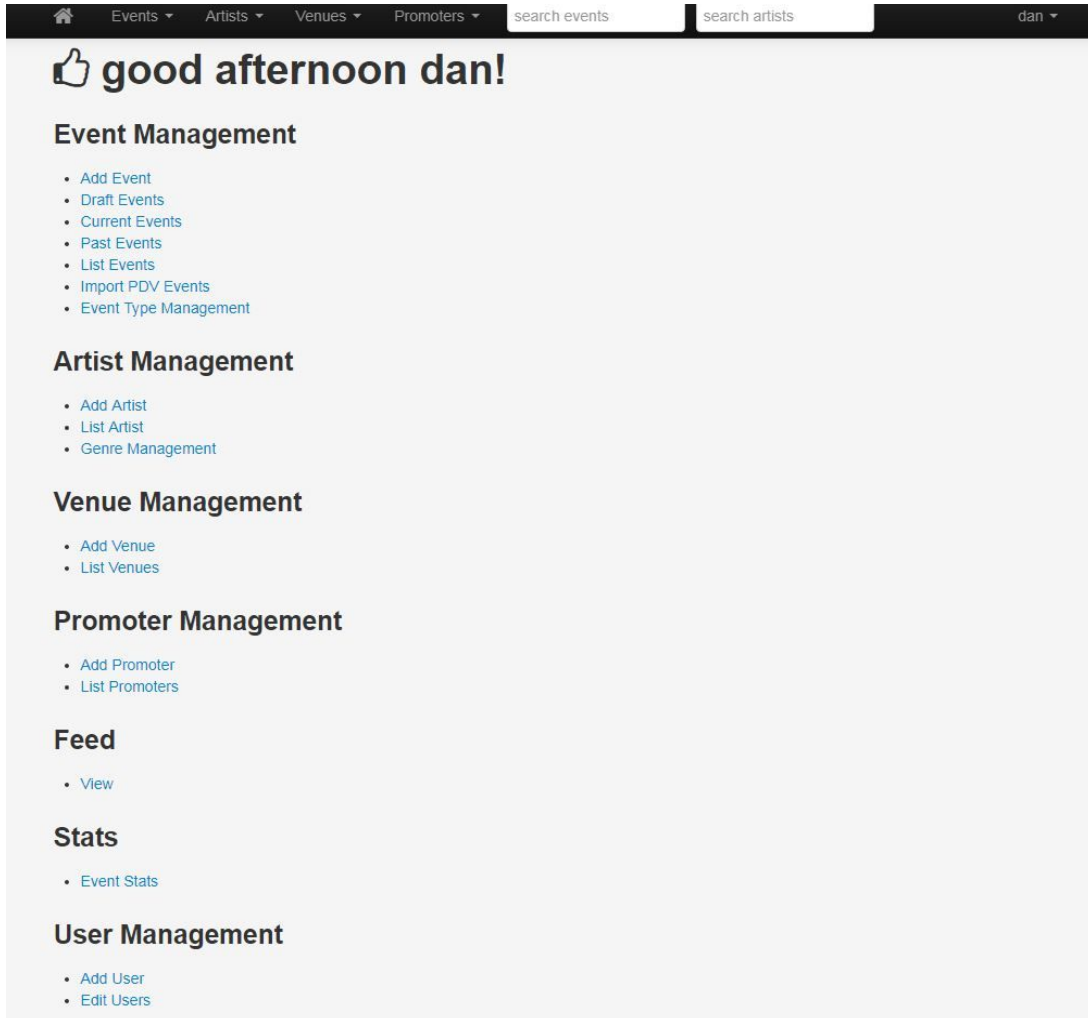
6.2.1   Producer interface

An iterative process was used to guarantee the comfort of producers whom we engaged to use the system.

There were three scheduled releases of the prototype system:

1. Operating producer input system with basic functions, including a permission system for Administrator and Content Administrator. This was delivered early on in the project after reviews of previous research. This release was presented to producers prior to focus group meetings. In one-on-one meetings, questions concerning usability and relevant data were noted.

2. The second release was made prior to focus group meetings. Several improvements were made to accommodate comments from producers of various disciplines.
3. Updates were made following the focus group meetings, and are released with current version as the final prototype.

6.2.2   Media interface

The media interface was developed to address key findings in the previous research, which made it clear that a turnkey solution was required to deliver arts events to all relevant media in real-time. As media requirements are different from those of public users, the platform addresses the media using findings from producer interviews and specific statements created out of ELAN's Digital Solutions research conducted in 2018.

6.2.3 Public User Interface

The public user interface is designed to compile user preferences so that arts producers can more completely understand their customers. Ultimately, user acquisition will make or break a successful platform. User experience and the quality of the user interface are paramount. For the purposes of this prototype, the user experience addresses only the minimum functional requirements for public users to input their basic preferences into the system in order to receive listings in rudimentary display windows. To ensure rapid user growth and scalability, user interface design will need to be optimized in post-prototype development and any future minimum viable product.

Desktop view:

The platform is designed to be responsive to all display options and self formats to all devices including desktop, tablet and mobile phone.

Android view:

![elan - english language arts network]
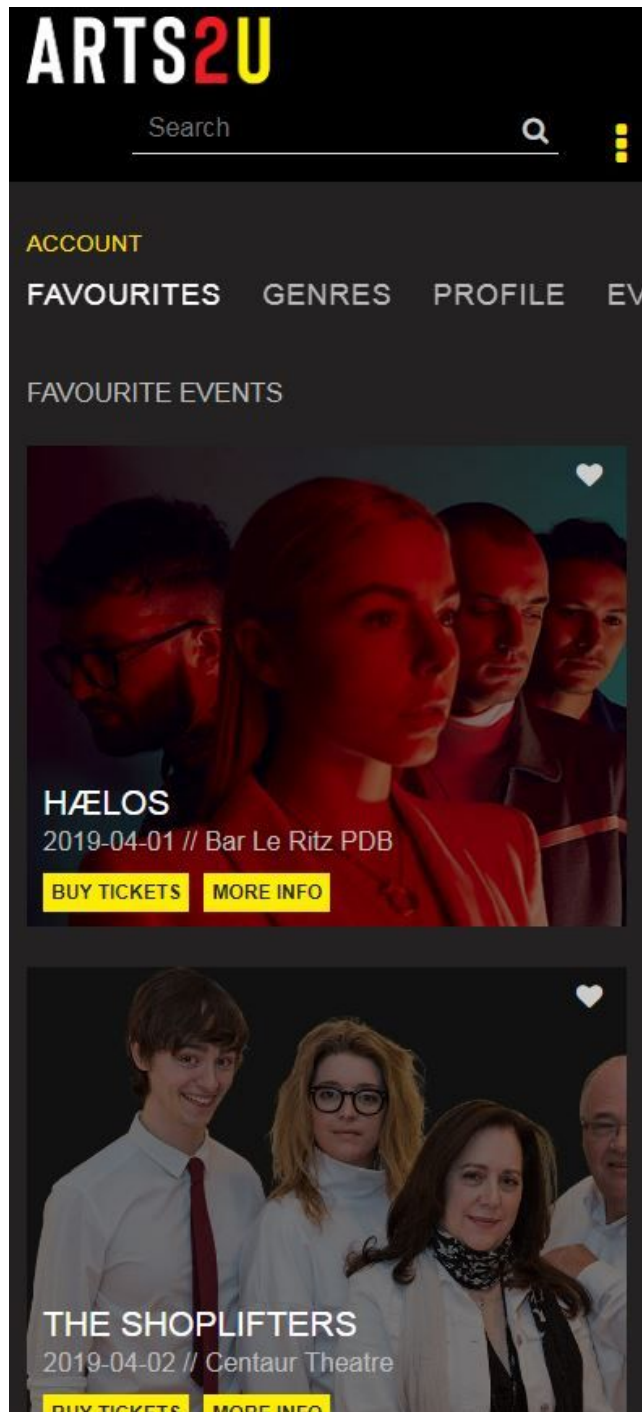
6.2.4   Scraping component

A process to capture, instantly read and store data so that it could be rendered on the ARTS2U platform was essential to solving a key problem for producers who were using the platform. Producers have stated strongly that they do not have time to upload information to multiple event listing sites. Using structured data protocols, we had data scrapers built on five specific sites of various disciplines. The data was organized in the ARTS2U database so it could be rendered by the feed.
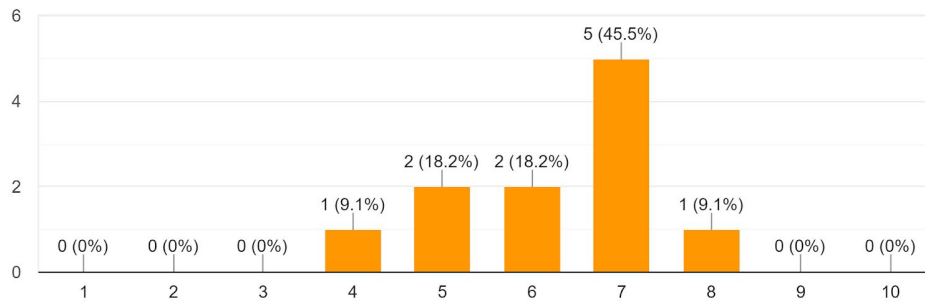
Scraped events from Cafe Campus in the feed:
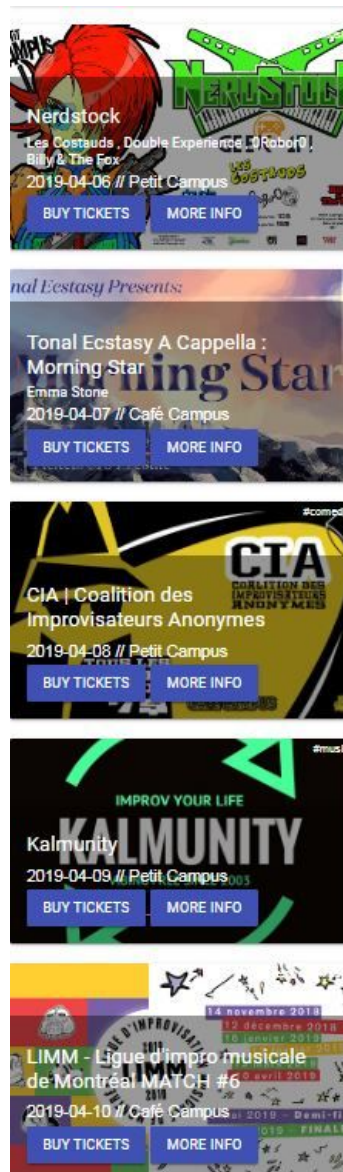
7. SURVEY ANALYSIS

7.1 PRODUCER SURVEY DISCUSSION

1. On a scale of 1 to 10 how would you rate your achieved media placement for events you promote to the web and traditional media?
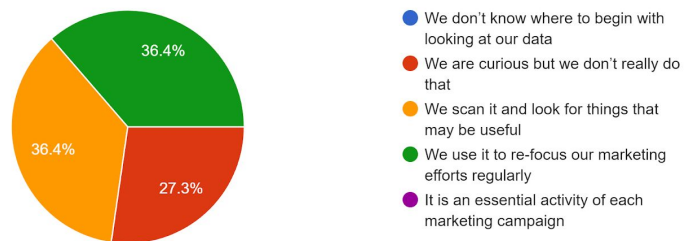11 responses

Most producers are able to successfully place their events online and in traditional media. The results are not consistent with results of similar questions when producers are asked about general visibility of the events in the group meetings.

2. To what degree do you currently use the data that is created by your event/s?
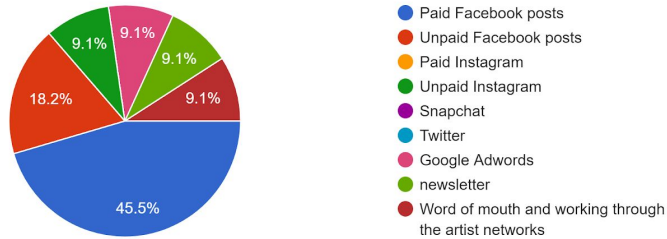11 responses

- We don't know where to begin with looking at our data
- We are curious but we don't really do that
- We scan it and look for things that may be useful
- We use it to re-focus our marketing efforts regularly
- It is an essential activity of each marketing campaign

Responses indicate that most producers are curious and interested, and beyond 'not knowing where to begin with looking at their data'. More than one third have been able to put their data to use in order to re-focus marketing efforts.

3. What social media promotional tool is most effective for you?
11 responses

- Paid Facebook posts
- Unpaid Facebook posts
- Paid Instagram
- Unpaid Instagram
- Snapchat
- Twitter
- Google Adwords
- newsletter
- Word of mouth and working through the artist networks

.

Paid Facebook posts are the most effective means of social media promotion. With an additional 27% using other Facebook-controlled free posts on Facebook and Instagram, close to 75% of producers find the Facebook offering to be most effective.

4. What do you see as the most important information to know about your customers. Please rank from 1 to 5.
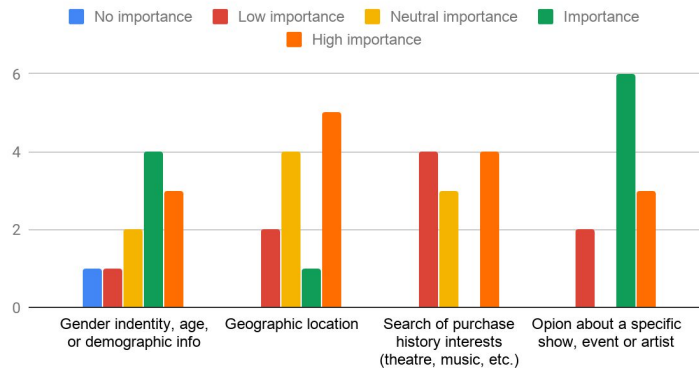
There is a diverse range of information about events that is important to producers. Fully half of respondents see "opinion or reviews about a specific artist, show, or event" as important. Geographic location of the event is seen as very important by almost half of producer respondents.

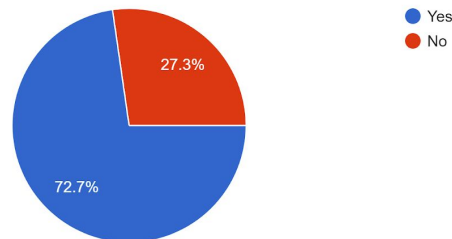**5. Would knowing the preferences of your customers be helpful to you in marketing of future events?**

11 responses
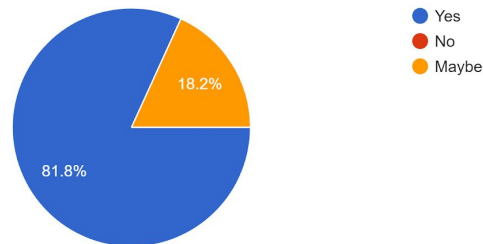
Over 80% of producers believe that know customer preferences will be helpful to marketing events.

6. Have you had positive experiences with advertising online?

11 responses

Producer Feedback:

- We get ads for free with Google now and then, because we are a charity. We find buying Facebook ads a waste of cash.
- Paid web ads turn into sales!
- Strategically placed ads on a limited budget have increased audience attendance.
- Haven't tried it in this capacity.
- We noticed more traffic to our website and sales.
- Yes overall, it's an increasingly essential part of our marketing strategy.
- We have never paid for advertising.
- It helps getting the word out only when enough traction is made for the event.
- Increase in sales after conducting some online ad campaigns.

Most producers have had positive experiences with online advertising. There are a range of comments that mostly relate to producers having measurable results from advertising. Some surveyed producers do not have the resources to pay for online advertising.

7. Did you find it easy to measure the value or success of your online marketing spending?

11 responses
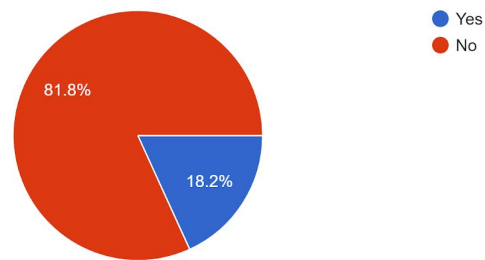
Producer Feedback:

- The analytics available are not detailed enough.
- You never can tell what made someone buy a record!
- We've seen an increase in audience attendance but we don't know exactly from which outlet.
- We don't have time to analyse all the data that we have been gathering.
- For the projects I work on, we are able to track conversions so in addition to a variety of insights, I'm able to calculate ROI in real-time (daily updates) including "offline purchase" (conversions later down the line after interactions with one of our digital campaigns that doesn't result in an immediate purchase).
- This is not applicable to O Patro Vys.
- I don't know if I can trust the data I'm getting from Facebook.
- Depends which online marketing tool I use to market my product.

80% of producers say they have trouble measuring the success of online advertising. There are a range of comments which are related to a lack of resources to understand the tools, or that the results are not presented as trustworthy.

8. To what extent does of the following statements resound with your experience in producing and promoting arts events?
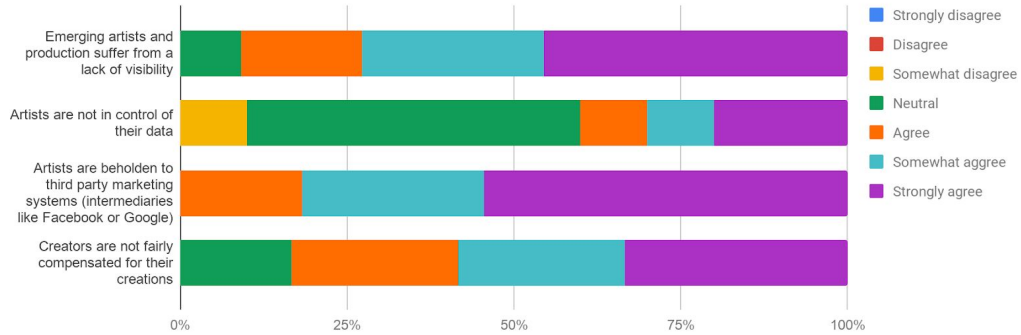

Producers do not disagree or strongly disagree with any of the statements. They were most neutral about "Artists are not in control of their data". More than 50% strongly agree that artists are dependent on Facebook or Google.

9. Please rate each of the strategies below according to their effectiveness to increase connection to more customers on a scale of 1 to 10:

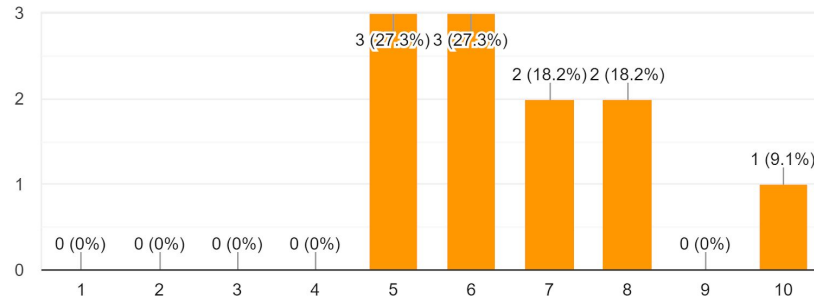a) SEM (Search Engine Marketing) and SEO (Search Engine Optimization)

11 responses
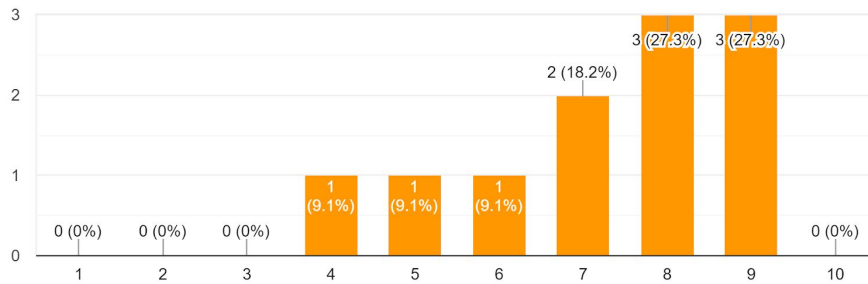
Most producers believe in search engine optimization and search engine marketing to increase connection to their audiences.

b) Multi-channel marketing – Placement of listings on multiple websites
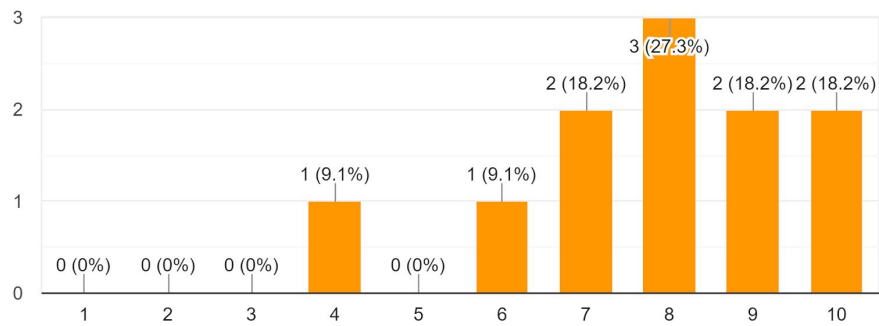
11 responses

Most producers believe that multi-channel marketing and listing placement on multiple websites is an effective strategy to reach their audiences.

c) Social Media Advertising

11 responses

Most producers rate social media advertising as effective for reaching their audiences.

d) Offer Key Tools – Such as calendars of on sale announcements to help inform customers
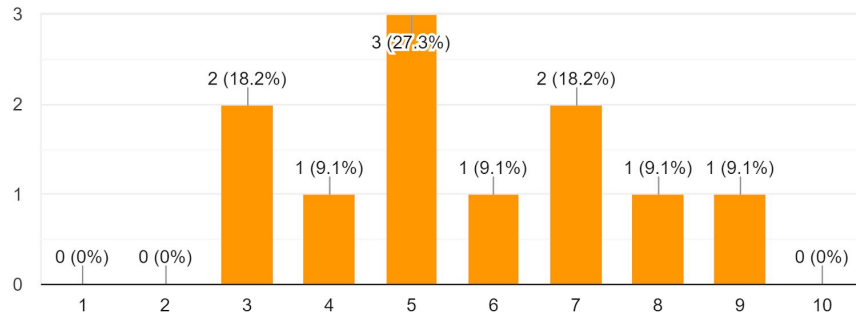
11 responses

Producers have divided opinions on tools such as on-sale calendars to help inform customers.

e) Offer to chat, chat-bot or assistance to help inform customers

11 responses

Producers do not currently consider chatbots an important technology to help inform customers.

10. Please rank the following priorities in order of importance for the future of your business?

■ No importance ■ Low importance ■ Neutral importance ■ Importance ■ High importance
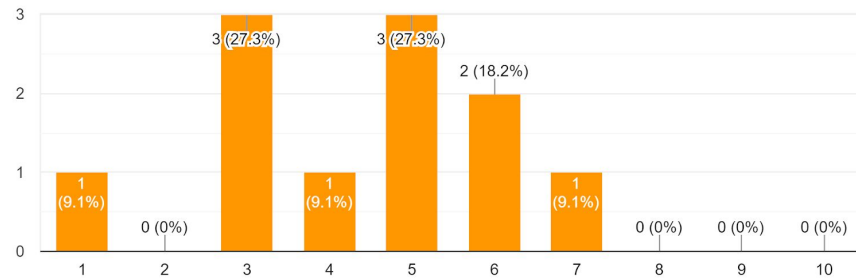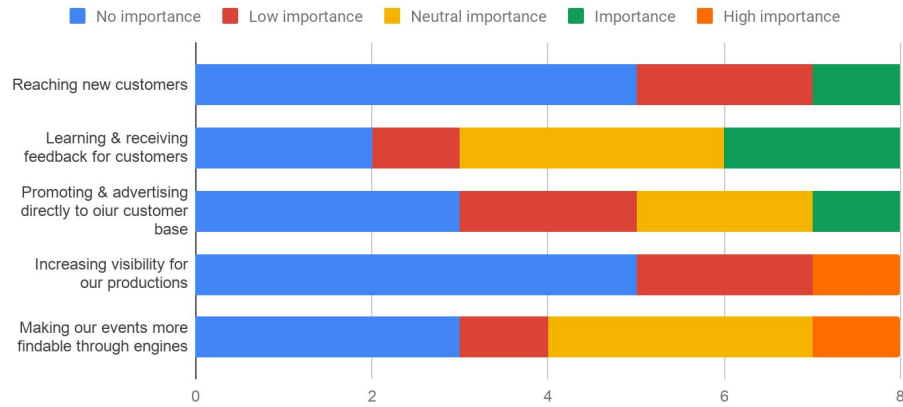

Producers are not united about priorities. All listed priorities have value to some producers, but there is not much uniform agreement about important priorities. It is possible that priorities which have not been stated, such as financing or human resources, have more importance.

11. Does the ARTS2U system as presented offer value for your organization?

11 responses

● Yes
● No
● Maybe

27.3%

72.7%
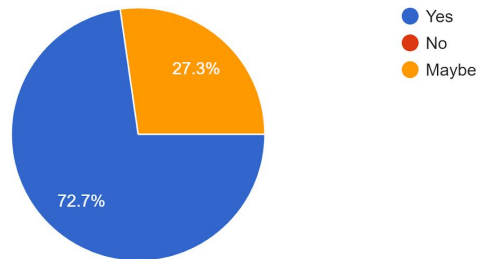
The ARTS2U system, as it was presented, offers value to producers. There are 0 respondents who state that ARTS2U has no value.

12. What line item in your marketing budget will see the largest increase in 2019?

11 responses

Legend:
- ● Internal content creation including blogging and videos
- ● Email marketing
- ● SEM (Search Engine Marketing) including SEO (Search Engin…
- ● Social media ads including Fa…
- ● PR and Influencer Marketing
- ● Your Website
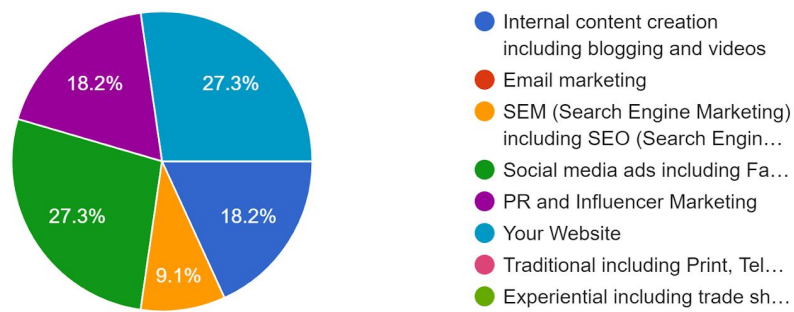- ● Traditional including Print, Tel…
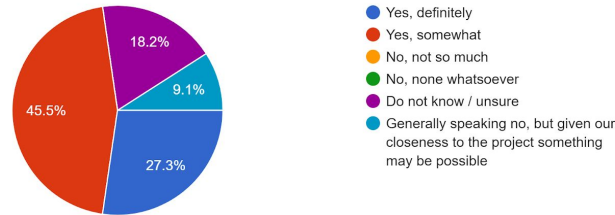- ● Experiential including trade sh…

Producer Feedback:

- Our website is quite old and we have a hard time keeping up with changing tech on it. Our budget is quite small and we can't afford to keep up.
- Social media has often turned into sales and show attendance.
- Epic production next year and attempting to reach a national audience.
- Our demographic mainly gets their info off Facebook and other socials.
- Investing in new website for the first time in 13 years.
- We have had some success in the last year and we want to pursue.
- Of course major milestone announcements generate the bulk of our sales, but original content has proven to be very well received, keeping our brands alive and particularly relevant throughout our campaigns, and has actually proven to convert to sales more efficiently vs traditional ads with a general call to action (tickets on sale now!) during our sustain campaigns.
- Using the artists as influencers is our marketing strategy.
- Our strength is our content, that's what we need to focus on.

Websites and media campaigns are the items that see the highest budget increases for more than 54% of producers in 2019. There is, however, a range of marketing budget priorities, as described by producers.

13. What is your comfort level of using your opt in mailing list to do a joint email with ARTS2U?

11 responses

- ● Yes, definitely
- ● Yes, somewhat
- ● No, not so much
- ● No, none whatsoever
- ● Do not know / unsure
- ● Generally speaking no, but given our closeness to the project something may be possible

Close to 75% of producers are comfortable with using their mailing list with ARTS2U to do joint emailing. There is some uncertainty for producers who responded "don't know", but not a sizable negative response.

7.2   MEDIA SURVEY ANALYSIS

See **Annex 2 - Media Survey**. For the **Media Interview/Survey Grid** see **Annex 3.2**.

Media surveys were done over the phone, and in some cases by reviewing the media outlet's websites for answers to questions in the survey with follow-up conversations when possible.

Survey Questions and Results Summary:

1. Do you have dedicated web pages to cover the arts?

Thirteen of the fourteen media outlets surveyed have dedicated web pages to cover the arts. The difference with each outlet ranges from sporadic mentions to daily updates. Most media do not have a set strategy to cover a set number of events, but have periodic updates.

2. Is there local decision making on arts programming?

Thirteen of the fourteen media outlets reported that decisions are made locally to include arts programming as part of their offering.

3. Do you currently publish listings?

Half of the media outlets surveyed publish regular listings.

4. **Do you consider externally generated placement of arts listings on your site to be feasible?**

Roughly 50% of media outlets reported that they would consider have listings generated by an external source on their website.

If no, is there a scenario where you would consider arts listings placed on your site?

Major outlets like CBC, Postmedia and CJAD (which is owned by Bell Media), were concerned about the reliability of an external source and its ability to regularly supply consistent content. CBC also commented that redirecting readers from their website to a third party site would be counter to their broadcasting and advertising goals, which are to keep the eyeballs on site.

5. **With what frequency do you think listings information should be offered to your website visitors?**

Most outlets would prefer daily updates, with the exception of more periodic (monthly or weekly) publications.

6. **With whom do we speak about technical implementation of our feed so that it will render live on your website in the way that TV listings do?**

See media survey results in Appendix for outlet contacts.

7. **Do you have comments on the events feed?**

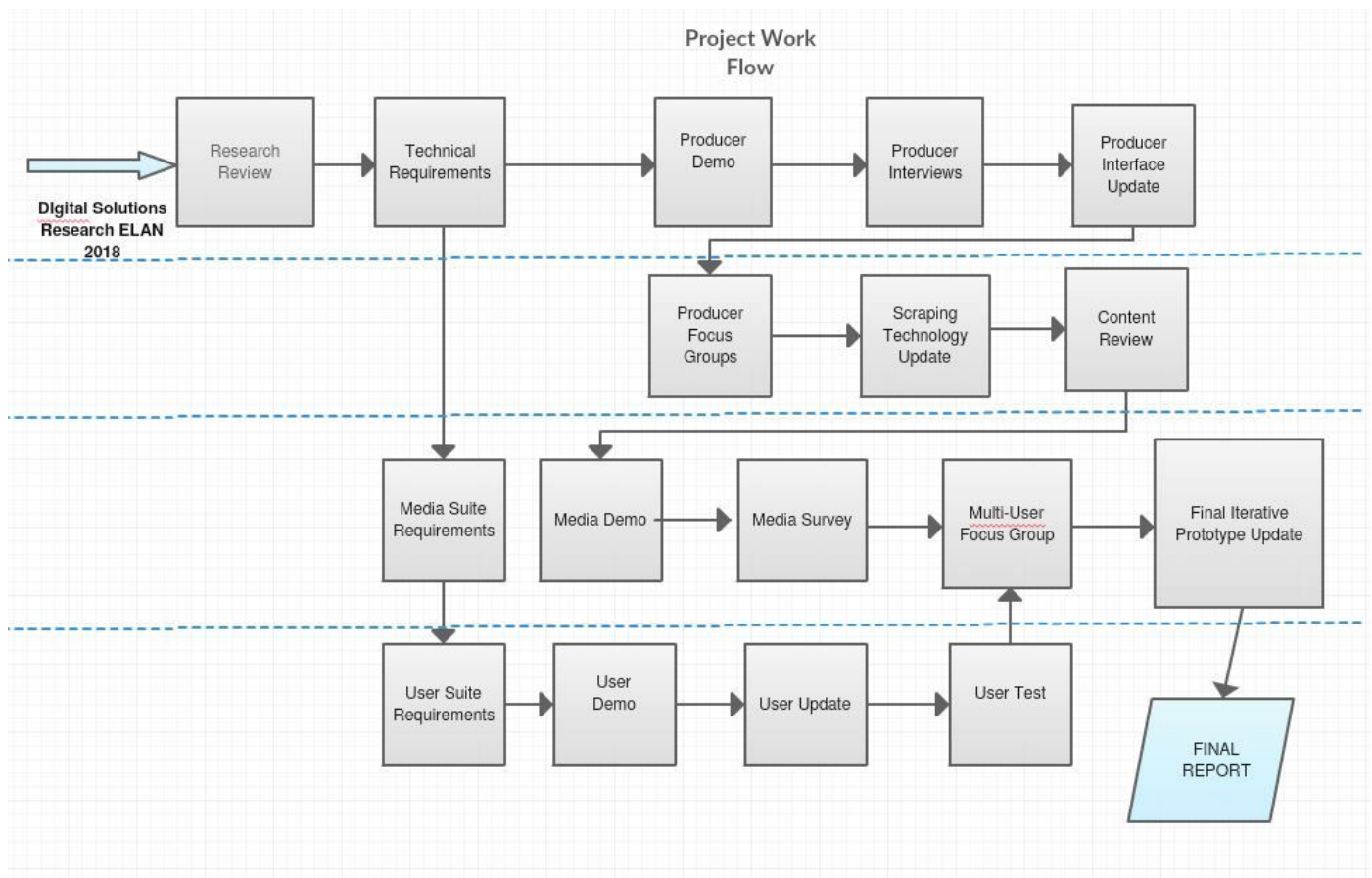Comments are generally positive and media outlets are taking a wait-and-see approach.

7.3   MULTI USER WORKING GROUP

*See **Annex 3.3***

8. FINDINGS

8.1 PROJECT WORKFLOW

Project workflow differed from the order of tasks that were listed in the research proposal application. The actual workflow is represented below, based on an iterative process with participants.

Project Work Flow

Digital Solutions Research ELAN 2018

Research Review → Technical Requirements → Producer Demo → Producer Interviews → Producer Interface Update

Producer Focus Groups → Scraping Technology Update → Content Review

Media Suite Requirements → Media Demo → Media Survey → Multi-User Focus Group → Final Iterative Prototype Update

User Suite Requirements → User Demo → User Update → User Test

FINAL REPORT

8. 2 PRODUCER REQUIREMENTS

Very early in the process, producers clearly told us that they did not have time to input information on all events into the system as it was first designed. We decided to develop website scraping tools to save time for producers. We researched several available technologies to achieve website scraping and selected five producer websites that could be scraped within the prototype project. Cost and time prohibited the development of more scrapers in the prototype.

Input process	Advantages	Disadvantages
Manual	• No cost to ARTS2U if done by Producer • Some extra customization is possible.	• Labour intensive for data entry to ARTS2U if producer does not update • Subject to human error • Must be reviewed constantly to address updates • Producers cannot be relied on as they don't have time
API	• Complete and comprehensive information directly forward by Producer • No updating required by ARTS2U	• High cost of development by software programming. • Time it takes to build API is a constraint • Needs permission of Producer to accept and access to share data • Not possible for small Producers
Scrape	• Permission not required from producers as data is public domain • Updated direct from Producer website • Cost goes down as more scrapers are developed and processes are optimized • Increases Data in the system very rapidly	• Medium initial costs • May not be cost effective for small producers • All sites are different so scraping of some site can be somewhat more labour intensive.

8.2.1 Database development

Discussion with producers regarding the specification of the minimum requirements for their particular interface yielded an acceptable and adaptable solution to include relevant fields in the database.

Revised database:
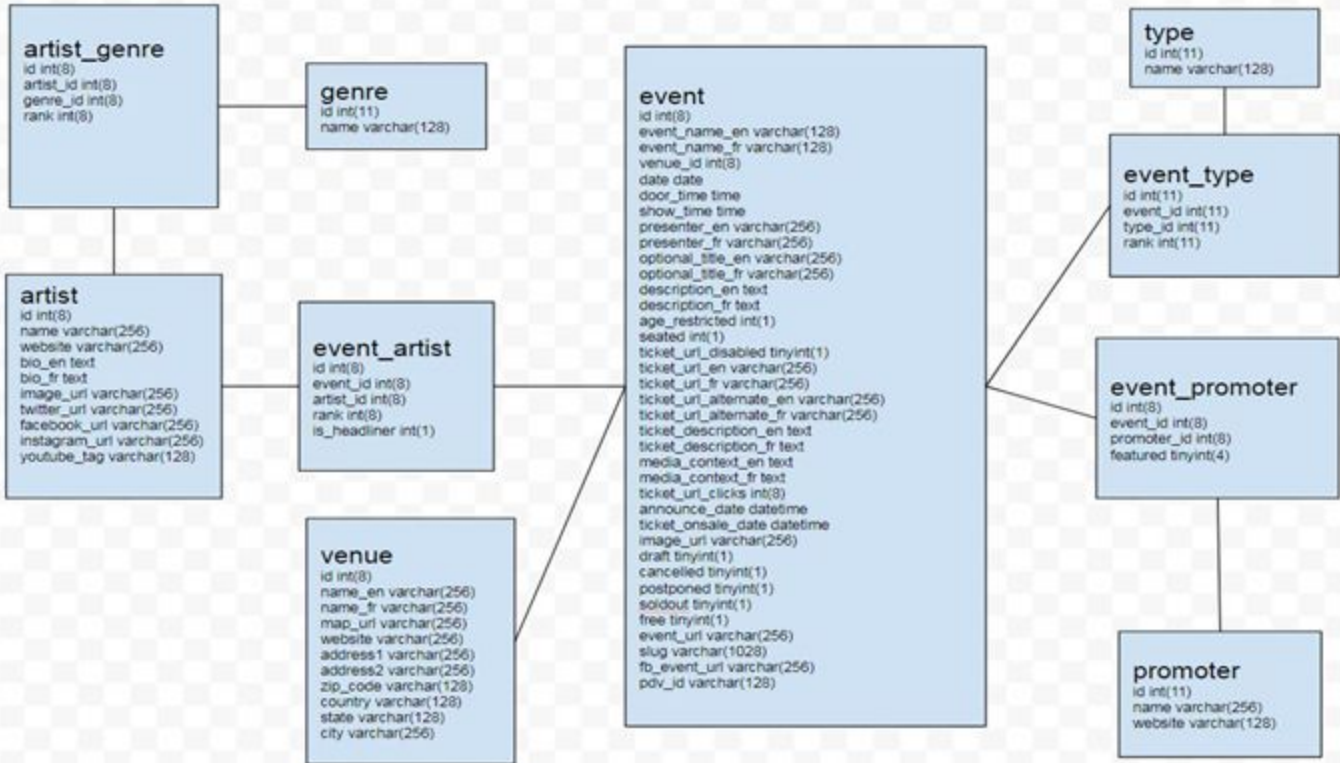
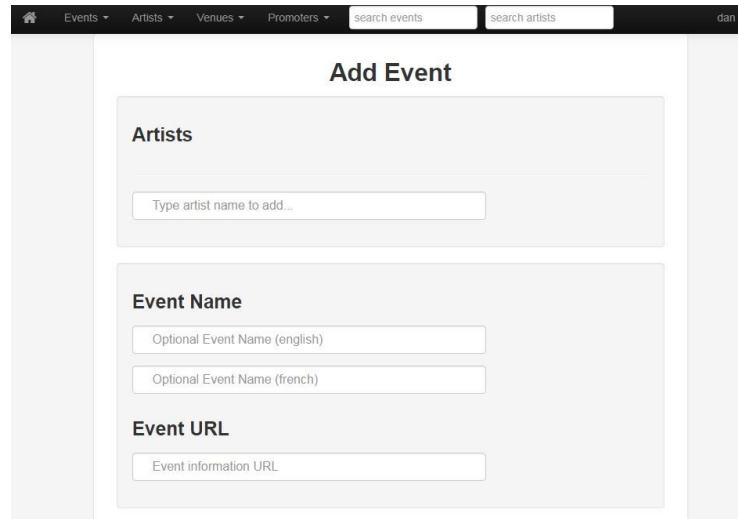

Graph database versus relational database

See **Glossary - Graph Database**

The graph database and the movement toward NoSQL provide alternatives to the traditional relational databases. Relational databases are still important, but in the context of the semantic web, graph databases are gaining importance. New systems will have to implement graph databases to be competitive and achieve the AI goals of today's burgeoning platforms.
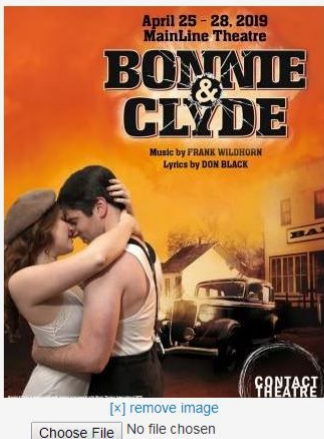
See **Annex 1 - Graph Database**

Producer focus group findings

Key fields in the interface were adjusted to accommodate the different types of events in the database and as a result in the feed. A Production Event Name field was added after the discussion with the producers, to be adaptable to theatre productions.

A Multiple date management feature was added for multiple show runs, addressing the problem of displaying single dates versus multiple dates in the feed.

Best practices for defining genres to describe shows were investigated, as producers were allowed to add genres to each of their events. The number of identifying descriptors for genres that were added grew into the hundreds. These identifiers will be eventually be used by public users to develop individual profiles. For example, genres for hip hop music include *'Trap'* and '*Old School'*, or '*Improv'* for theatre. Further investigation into the structuring of genres will be required.
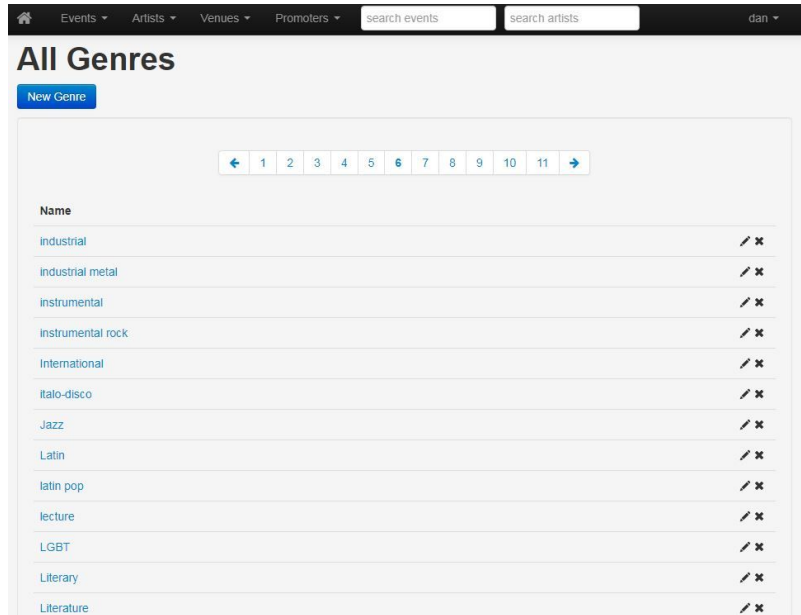
8.3.   PUBLIC USER INTERFACE

Time and resource constraints

WIthin the software development process, public user interface development tasks needed to be scheduled in the last phase. As the software build of the platform lagged—due to prioritising the completion of the producer interface,—some functions of the public user interface were not yet complete and operational in the prototype. Public user profiles do not currently have the option to search by city, though all venues in the system are located in Quebec. To adequately accommodate users from multiple cities where there may be two venues with the same name, this will need to be addressed in revised versions.

Due to time and resource constraints, the following texts are yet to be implemented:

About | Program your Arts Events | Terms & Conditions | Contact Us | Contact Support | Privacy Policy.

8.3.1   PUBLIC USER DEVELOPMENT
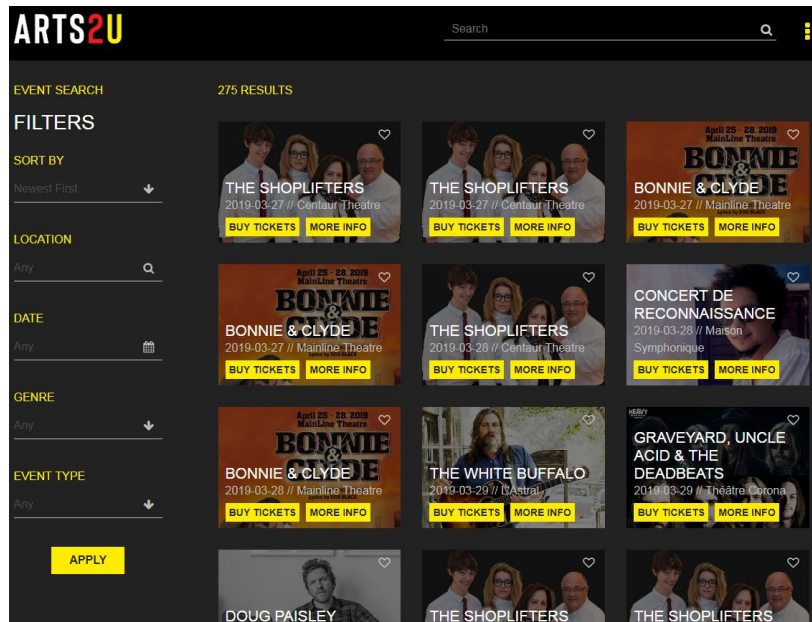
Public users are key to growing the platform. Based on discussion with companies who have large inventories, the best way forward for the purpose of negotiating better deals is to acquire users.

Researching contractual agreements with ticket suppliers

In discussion with content partners and advertising sales specialists, we learned that user acquisition is paramount to be able to leverage better pricing for everything from discounted tickets, to advertising placement on third party websites. If you have users, you have potential buyers. If inventories are not purchased, sellers of the inventory need to find buyers in other ways. Potential revenue from ticket sales, affiliate sales, revenue sharing or referral commissions depends on the size of the network that can be leveraged. User development strategies are therefore included as an essential aspect of the project.

See **9.2 - Growth strategies**

8.4   MEDIA INTERFACE FINDINGS

In conversations with media, a request was made to include media contacts for arts events within the interface, as well as a context about why a particular arts event is newsworthy. Media Contact and Media Context fields were added to the database.

Aspects of the public user model that should be included in the media interface:

- **Genre specification** is very important, as many of the media outlets are specific to genres or event types. For example, a LGBTQ blog will want to find events targeted to LGBTQ audiences, and as LGBTQ is not an Event Type there is no way in the current system to identify these events other than by the Artist or Production Name.
- **Favourites**, which can make and retain the front page status of an event, should be added to the media interface, as media users like event reminders in the same way public users do.
- A **calendar view** needs to be added to the media interface as journalists are used to working with calendar views.

8.5   SCRAPER DEVELOPMENT

Scrapers effectively gather data and save time for producers and content editors. If a scraper could be developed for each producer's website, many hours of human resources would be saved. Data scraping also saves time for the media who spend a lot of time acquiring content, but cut and paste data from multiple websites to complete listings in their own publications. Based on discussions with media in the Digital Solutions research (2018), we have limited scraper data to include. Key elements that need to be collected:
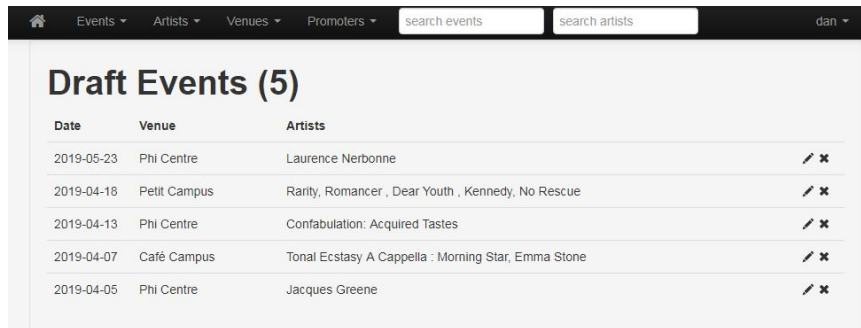
- Name of show
- Headline and supporting Artist
- Date and times
- Venue
- Event type (theatre, music, festival, etc.)
- More info url
- Ticket url
- Graphic image

Cost of scraper development has three factors:

1. How organized is the website that is to be scraped? If the site is organized according to structured data and Web 3.0 standards, scraper development is less costly.
2. The size and complexity of a website, including security. The larger and more complex the website, the more time it takes to program the scraper.
3. The number of fields scraped to constitute adequate information to display in the ARTS2U event feed impacts the time that is required to write the scraper. The more complex the requirement of the feed, the more costly the scraper.

Results of scraped data

We have kept a moderating step in the process so that the producer can authenticate scraped data *before it is published*. This allows producers to control and assure accuracy of information, while still saving them time. Events appear as drafts until they are approved by the producer.

8.6   SECTORAL DEVELOPMENTS

ARTS2U in its prototype phase is a working title. Before embarking on extensive marketing of the platform there are key activities to be undertaken to develop the precise branding. Discreet market tests are needed to develop the marketing face of the platform.

## 8.7 FEATURES, FUNCTIONS, BENEFITS, OUTCOMES: PROTOTYPE VS. MVP

FEATURE	FUNCTION in FUTURE PLATFORM VISION	OUTCOME	BENEFIT	FUNCTION IN PROTOTYPE
BLOG & NEWS	Feature News window - Daily updated new event (feature story) - New announcements - Top new announces - Advertised news story	This will give visibility options and will be dynamic pending the user preferences.	Platform will become a go to for arts news. Platform look will be continually refreshed with each new event or story added.	News and detailed description by Links only -listings included images -live video links
PREFERENCE CENTER	Favourites Disciplines - dance - theatre - music Artists or events - genres News Festivals -Choose as your home screen -Search log and analysis tools	Ability for the user to customize their own version of the interface that presents what they describe as personal interests. If one is not shown, interest in Music events one is not served music events. An experience can be versioned to show only a narrow selection of content (i.e. Literary events in the West Island of Montreal)	High volumes of user data for analysis can be called open by producers/artists. Special interest and user trends can be gleaned. Enhanced user experience. The platform can serve a diversity of interests. The platform will not be an unreadable mosaic.	Favourites Disciplines - dance - theatre - music Artists or events - genres News Festivals
AGNOSTIC TICKET & Product PLATFORMS	Links to sales platforms for tickets & products - Eventbrite - Ticketmaster - Indie Websites - Etsy. - API's to glean referral fees - Direct Scraping of selected producer websites	The platform will be able to connect producer/artist information to the sales site of the producers choice(i.e. direct link to theater website, indie website, major ticket outlet or special discount site link.) Secondary ticketing revenues for platform	The producer artist will have flexibility to direct user to the end sale destination of their choice.	Links to sales platforms for tickets & products - Eventbrite - Ticketmaster - Indie Websites - Etsy. API's input from selected ticket outlet Direct Scraping of 5 producer websites
MULTIDISCIPLINARY	Menu Headers for Disciplines Calendar listings for major interest areas - Arts - Theatre - Dance - Music - Festivals - Literary - Attractions & events	Will be a dynamic solution that becomes the go to for all news organizations & the general public when they are looking to find what's going on in the arts in Quebec	Will provide visibility to the diverse array of artistic interests and offerings emerging from Quebec Anglophone artists.	Menu Headers for Disciplines Calendar listings for major interest areas - Arts - Theatre - Dance - Music - Festivals - Literary - Attractions & events
ADVERTISING CAPABILITY	Rate card of Ad formats - Banners - Native ads - Push notifications - Target marketing parameters - Cross Sell to tourism websites	- Revenue generation for the platform - Increase interaction and data generated from users - New streams of revenue to larger pool of customers	Increased visibility should result in more profitability for events, producers, artists and the platform in general.	Not established in Prototype - Research only - Provisions established for programmable advertizing
SOCIAL MEDIA SHARING	Direct feed to media outlets - Enter platform or blog or outlet name - Facebook - Twitter	- Increased visibility through social media audiences - Increased sales conversion to larger audiences - Increased engagement with audience	For Producers and Artists -Larger audiences for events, -Larger subscriptions bases - Increased market research and analytics For the system – Outreach to bolster REAN (REACH, ENGAGE, ACTIVATE, NUTURE) and grow user base	Direct feed to selected media outlets. Links added to Social media outlets

*For a larger version of the above, see **Annex 3**.*

9.   MARKETING OVERVIEW

Using the working title of ARTS2U, we developed marketing tools for prototype presentation purposes. Developments in the marketing sector may have a bearing on what determines the platform's eventual branding. Key marketing initiatives or user growth strategies listed below have been developed with the intention of achieving growth across the arts sector.

ARTS2U PowerPoint slide 1:
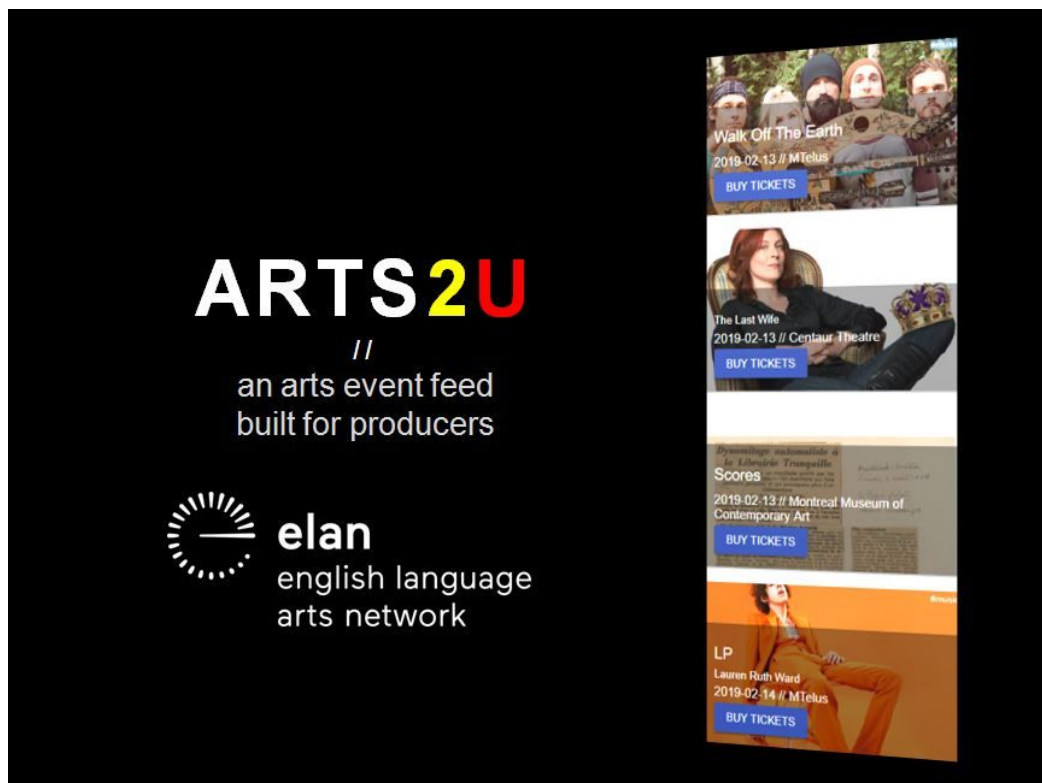
See **Annex 4 - Marketing Material**.

9.1   GROWTH STRATEGY: AGGREGATE USERS

This strategy involves aggregating users from existing email lists and social media lists of participants, including arts companies in all disciplines. The estimated total of aggregated opt-in mailing lists is approximately 50,000 when all lists from various ELAN members are compiled. Additional lists from external ticketing companies, and other commercial arts enterprises, may be added to jumpstart users' growth. Close attention must be paid to privacy laws and anti-spam legislation so as not to offend potential platform users.
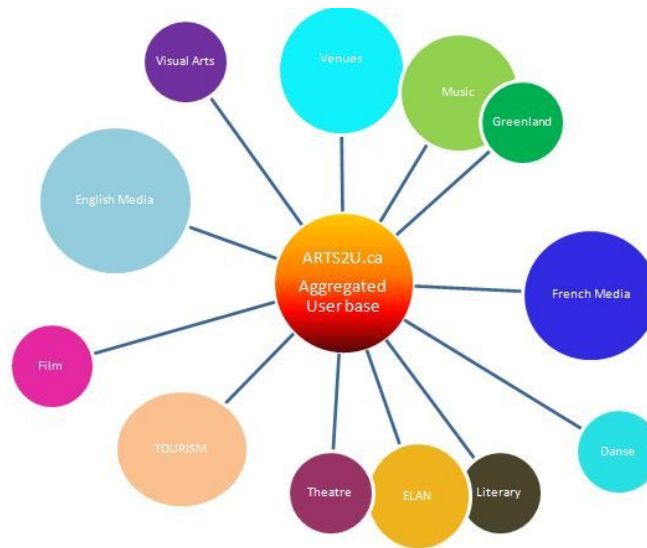
9. 2 CALENDAR TOOLS

This involves targeting core users by offering a key tool to give them an early advantage in acquiring the best purchase opportunities for events:
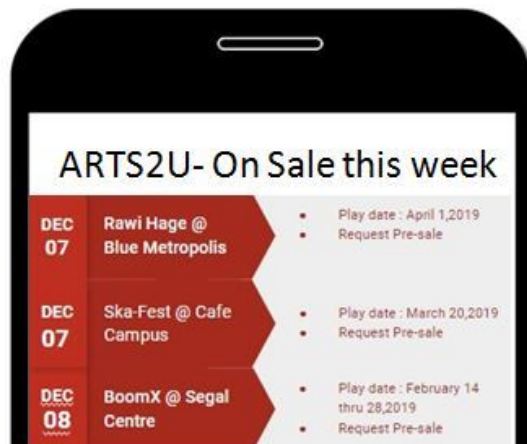
9.3   MULTI CHANNEL MARKETING THROUGH ESTABLISHED MEDIA WITH A FREE LISTINGS WIDGET

ARTS2U will offer a feed of arts events to existing and established media channels, including news sites and blogs used to promote the arts. This strategy is currently used by TV listings to achieve visibility. Media outlets appreciate receiving the free content with no work required to collect the information.
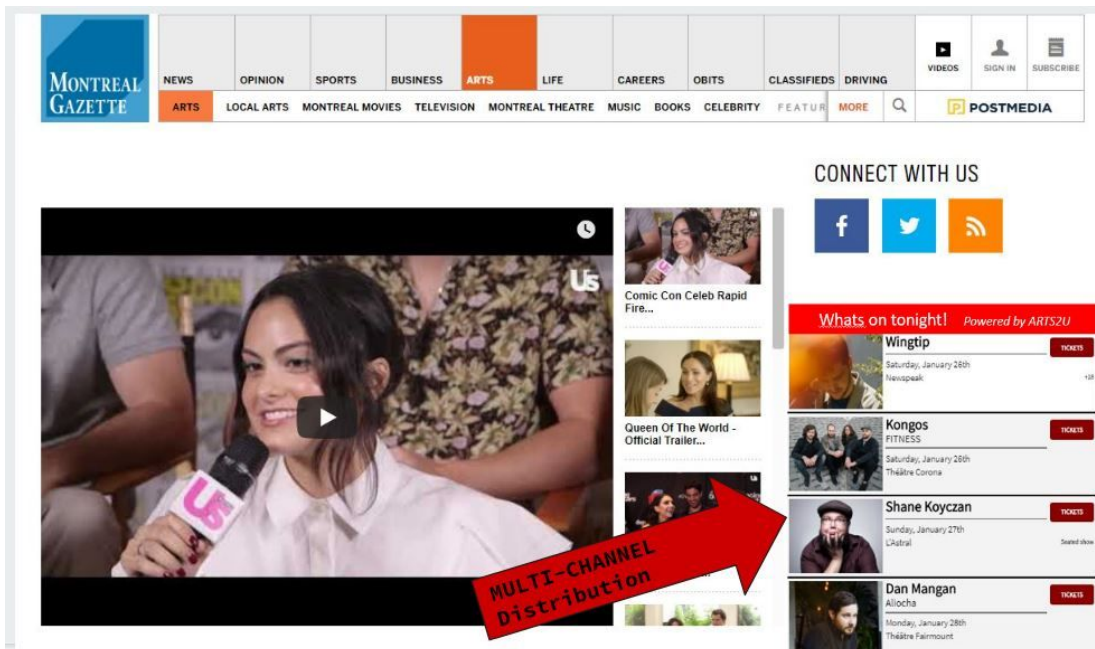
ARTS2U can offer microdata in Schema.org to redistribute content in a manner similar to Accuweather and the Weather Channel.

10. MINIMUM VIABLE PRODUCT (MVP) DEVELOPMENT

10.1   ROADMAP
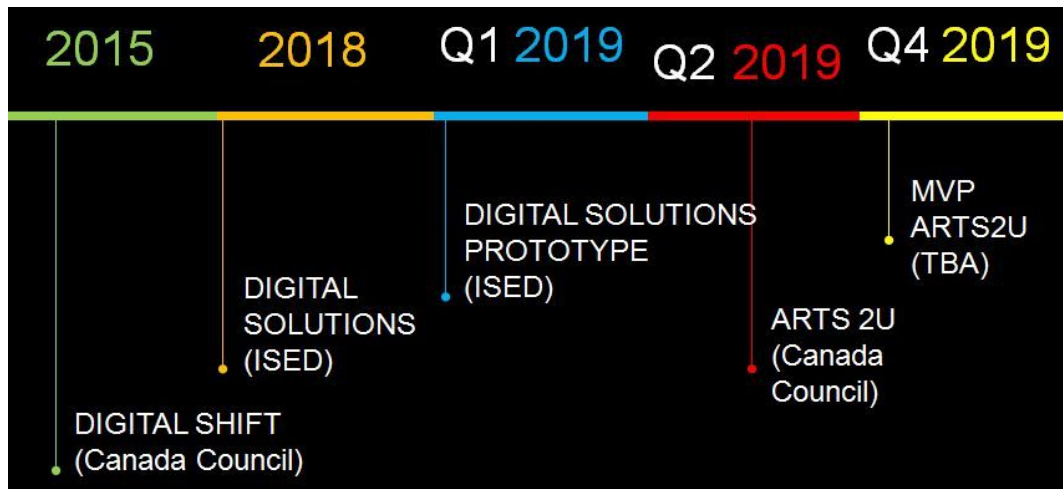
10.2   TECHNICAL DEVELOPMENT TO BE SCHEDULED

See **Annex 5 - Technical**

10.3   SECTORAL DEVELOPMENT AND CONSTRAINTS

Ongoing developments in the performing arts and entertainment sector—including projects that involve major cultural organizations in Canada—may play an important part in the role out of digital strategies national. The establishment of collaborative tools to organize and structure data and metadata in the arts is the focus of several projects. ARTS2U will be closely monitoring several projects in particular, so that commonalities, lessons learned and possibilities of collaboration can be achieved. These projects include CAPACOA's Linked Digital Future Initiative (a multi-component digital literacy and transformation initiative for the performing arts sector) and Artspond's Artse United (an innovative digital arts management co-operative that provides open source and open data project management and business intelligence tools for small creators and producers in arts and culture) among others. The speed at which the projects of linked data standards emerge may have an impact on the pace at which structured data can be used to support platforms such as ARTS2U.

10.4   EVOLVING TECHNOLOGIES

A number of important technologies are evolving across the span of the ARTS2U Roadmap that may impact development schedules and long term planning.

5G and the growth of streaming technologies

The arrival of 5G is expected to accelerate the growth of digital distribution of content platforms. For the arts this accentuates the importance for organizations to focus on metadata strategies data sets and structures to be visible across enhanced networks. "5G will bring tremendous growth to the media and entertainment industry in the coming years. 5G will grow the global mobile media market from $170bn in 2018 to $420bn in 2028 ($124bn in the US), a CAGR of 9.8% over 10 years."[4]

> *"PwC attributes the growth in data consumption to consumers' growing appetite for video content, which will account for 85.6% of total data consumption in 2022. 5G, as mentioned above, will contribute to this boost."*[5]

Blockchain

Blockchain is a rapidly developing technology that has the potential to cause disruptive change across the arts industry. Research tells us that the impacts may have positive effect on digital file distribution and advertising. There is, however, strong resistance and scepticism about the potential of blockchain, as growth and adoption has slowed dramatically due to volatile cryptocurrency valuations, well-publicised underperformance, and failed Blockchain and Cryptocurrency start-ups.

Programmable advertising

Programmable advertising is an important revenue stream to be developed in the ARTS2U model. The audience model has not been fully developed by Programmable Advertising product developers for the arts marketplace. With developments in the advertising sector that address accurate targeting and lowering the instances of fraud, programmable advertising will become viable for arts producers and may create a potential revenue stream for arts distribution platforms. Proposals have been presented to inform ARTS2U about building an internal programmable advertising skillset to exploit opportunities.

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[4] *How 5G Will Transform the Business of Media & Entertainment, Ovum, Intel Newsroom.*
[5] *PwC CMO Giselle Abramovitch - SEE Annex 1 - Streaming Services Growth.*

The cost to begin a small-scale ad programming team—and the cost to build specific reach and audiences so that the process is sustainable—involve investment beyond the prototype's available resources. At a minimum, there is a 6 month time investment, and spending in excess of $12,000 on a services retainer and ad placements, to do a complete test program. It is foreseeable that this development could happen in the MVP segment of ARTS2U.

11.   RECOMMENDATIONS

R 1.   ELAN constituency learning initiatives
ELAN should devise a Digital Literacy program to develop skills among its membership and extended community, and to inform them of sectoral developments related to organizing and publishing arts events in the Web 3.0 universe. ELAN should continue research into funding sources for programs to address digital literacy gaps among members and partner organizations.

R 2.   Specific digital engagement initiatives
ELAN is well placed to engage with youth and young digital developer talents by hosting hackathon-style events. Events can be imagined to engage youth in creating systems that increase value for artists and products, for example through gamification and rewards systems. Engaging with youth, and including young artists and arts patrons, will encourage them to become early adopters of the ARTS2U platform. Learning activities such as question-and-answer workshops about digital privacy concerns, publishing and sharing digital versions of artwork, and working towards adoption of guidelines for posting art online are possible areas of discussion.

R 3.   Leadership in minority language communities & inclusion across disciplines
ELAN represents artists and organizations from all disciplines and backgrounds. Many are from marginalized communities. The impact of the ARTS2U platform on inclusion and representation of all art forms and communities was raised as a topic in producer meetings. As an open platform, ARTS2U has potential to be explored and developed in future work in these areas, with the goal of developing models that can be shared for other platforms and regions.

R 4.   Leadership and national participation
ELAN should continue to collaborate with Quebec-based and national initiatives that are working toward the standardization of linked and open data sets for events. This work has already started through ELAN's participation in the Digital Arts Symposium (Toronto, March 2019) and through sharing project outcomes as part of ELAN's *Developing connections & collaborations among digital initiatives* project, recently approved for funding by the Canada Council for the Arts' Digital Strategy Fund.

R 5. **Platform Development Recommendations**

The ARTS2U prototype has been developed utilizing a core of community assets, including producers, media and technology experts to demonstrate behaviour and potential that can increase value for English-language artists in Quebec. Scaling the prototype to work as a feasible solution on a larger scale is essential before building a minimum viable product. Investigating the core set of components and participants to launch a working and sustainable public release of the system will require a revised scope and further resources. ELAN should seek further resources for technical and marketing development in key areas including:

1.8. A detailed user growth study to verify and test growth strategies.

1.9. Technical development of automated content aggregation tools, as an increased volume of content will drive user growth. Scraper development, and management of the suite of scrapers as a prime means to acquire key content, must be further developed beyond the limited scope of the five scrapers that were developed as part of the prototype. Use of Uniform Resource Identifiers (URI), and schema microdata need to be implemented in the system to achieve interoperability with other platforms.

1.10. Further study and prototyping of user interface and wider user testing to achieve rapid user growth capability. This would include user experience tests and profile development to determine frictionless paths to access the desired content.

1.11. Testing of the ARTS2U feed with media outlets. For example, testing sessions of content delivery to external websites.

1.12. Programmable advertising tests with working advertising publishers to determine wider audiences for arts events.

1.13. Tokenization and value creation. Loyalty programs and customer points systems are a key feature of most major digital retail operations. The arts sector lacks strong loyalty programs, and loyalty schemes require additional research and implementation testing beyond the scope of the ARTS2U prototype.

1.14. Brand and image development through testing a short list of brand names for the ARTS2U service prior to launching an MVP. Public facing interfaces need to be rigorously tested and a full graphic review should be conducted.

Conclusion

ELAN has made important strides to test assumptions, understand digital arts marketing, and inform its community of challenges and solutions in the Web 3.0 era. A revised scope for an MVP has been achieved through the ARTS2U prototype development. ELAN has gained insights and experience, and has shared knowledge with many community members, particularly with a core group of arts producers involved in the prototype development process. ELAN is continuing its work in representing Quebec's English-language artists and participating in sectoral developments in the digital space, including the initiation of a collaborative open data structuring project.

These results move ELAN's community toward the adoption of technologies that have the potential to expand arts audiences and create meaningful consumer relationships. The implementation of the technologies will allow producers and media to receive and re-distribute arts data more efficiently. A clear path has been identified to reach public users and arts audiences who will have direct access to arts event information through the ARTS2U feed. A further MVP development is expected to bridge the value gap between the energy put forward by the arts community and the return of resources back to the community.

In two specific ways, ARTS2U is expected to deliver additional value for the arts sector:

1. Increased visibility through multichannel distribution of arts event listings.
2. With a turkey solution to structure data at no cost to producers a higher quality of metadata resource is available to arts producers upon participation in ARTS2U.

12. ANNEXES

Annex 1.   Further Reading

AI
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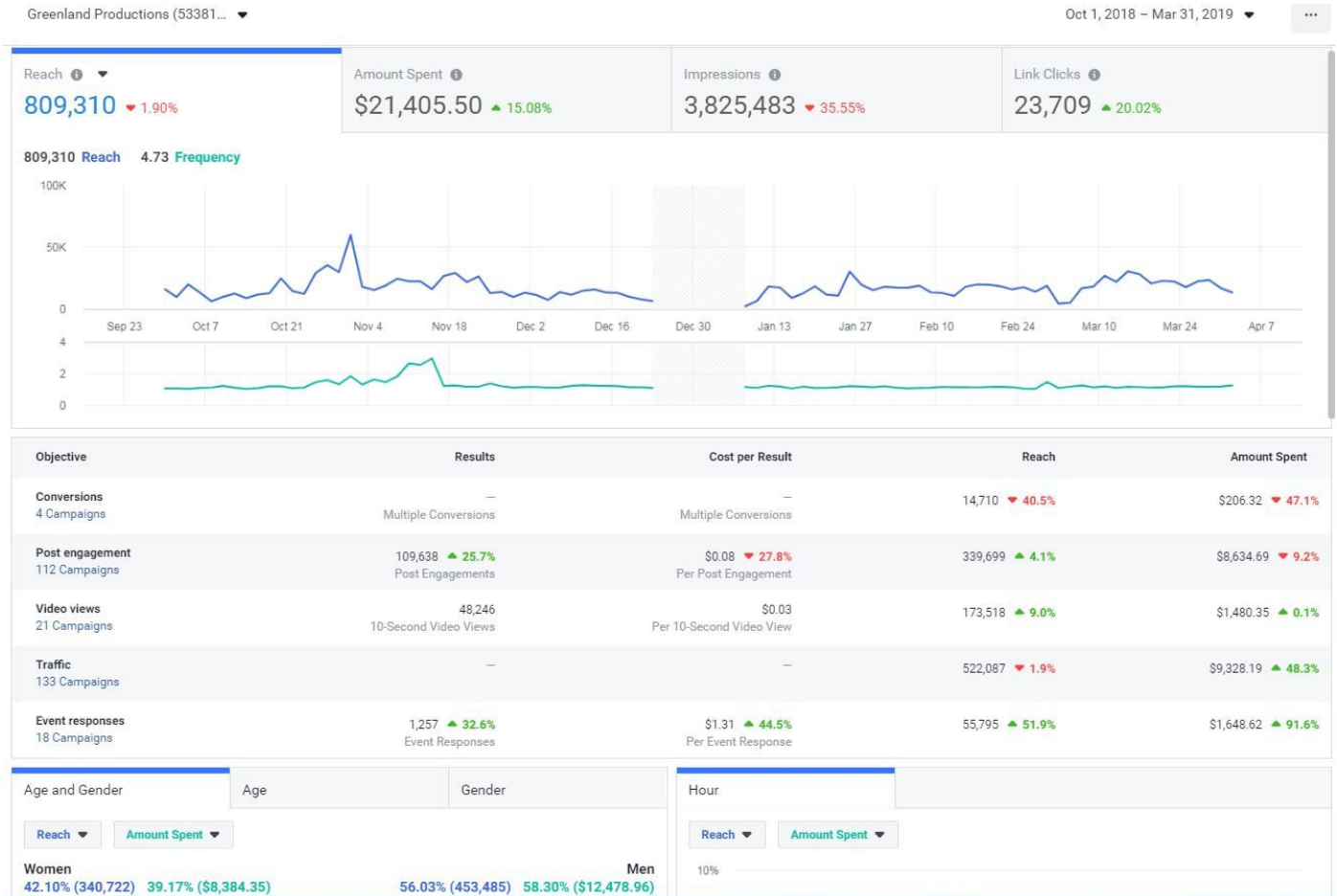— Schema, MusicBrainz Database

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ANNEX 2.   MARKETING

Facebook Summary data:

Greenland Productions (53381... ▾   Oct 1, 2018 – Mar 31, 2019 ▾   •••

Reach ⓘ ▾	Amount Spent ⓘ	Impressions ⓘ	Link Clicks ⓘ
809,310 ▾ 1.90%	**$21,405.50** ▲ 15.08%	**3,825,483** ▾ 35.55%	**23,709** ▲ 20.02%

809,310 Reach   4.73 Frequency

Objective	Results	Cost per Result	Reach	Amount Spent
Conversions 4 Campaigns	— Multiple Conversions	— Multiple Conversions	14,710 ▾ 40.5%	$206.32 ▾ 47.1%
Post engagement 112 Campaigns	109,638 ▲ 25.7% Post Engagements	$0.08 ▾ 27.8% Per Post Engagement	339,699 ▲ 4.1%	$8,634.69 ▾ 9.2%
Video views 21 Campaigns	48,246 10-Second Video Views	$0.03 Per 10-Second Video View	173,518 ▲ 9.0%	$1,480.35 ▲ 0.1%
Traffic 133 Campaigns	—	—	522,087 ▾ 1.9%	$9,328.19 ▲ 48.3%
Event responses 18 Campaigns	1,257 ▲ 32.6% Event Responses	$1.31 ▲ 44.5% Per Event Response	55,795 ▲ 51.9%	$1,648.62 ▲ 91.6%

Age and Gender	Age	Gender		Hour

Reach ▾   Amount Spent ▾   Reach ▾   Amount Spent ▾

Women   **Men**
42.10% (340,722) 39.17% ($8,384.35)   56.03% (453,485) 58.30% ($12,478.96)   10%

Greenland Productions (53381... ▼   Jan 1, 2018 – Dec 31, 2018 ▼   ...
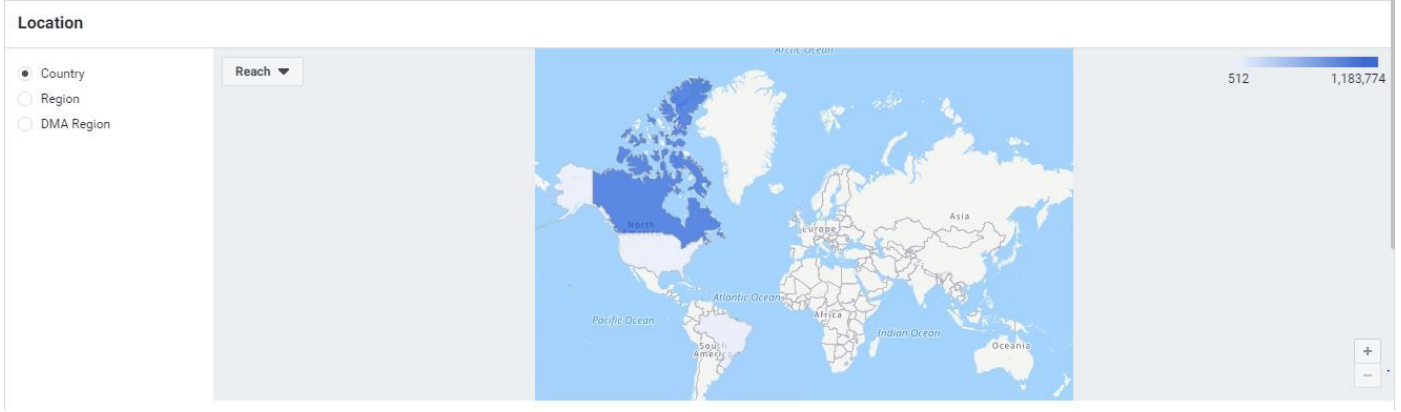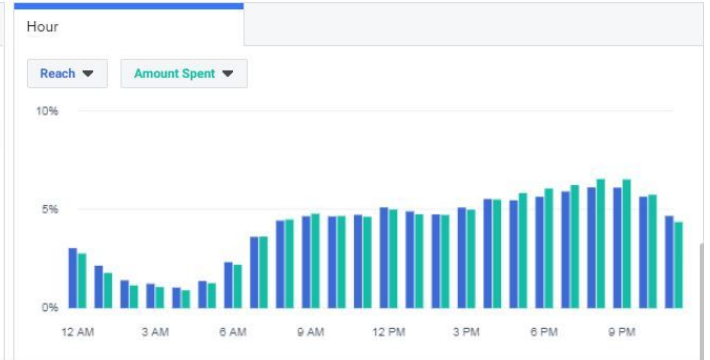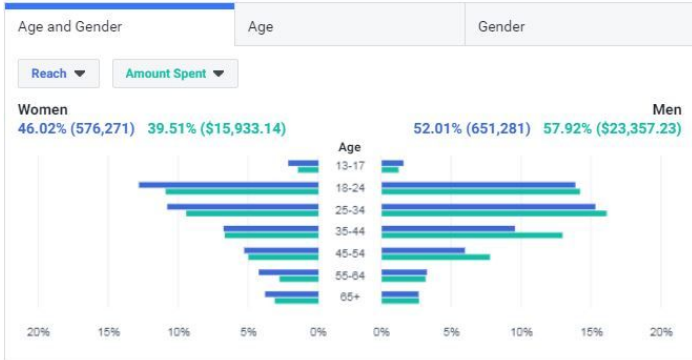
Reach ⓘ ▼	Amount Spent ⓘ	Impressions ⓘ	Link Clicks ⓘ
1,252,128 ▲ 49.86%	$40,327.84 ▲ 32.33%	11,592,488 ▲ 52.06%	44,108 ▲ 29.65%

1,252,128 Reach   9.26 Frequency

Objective	Results	Cost per Result	Reach	Amount Spent
Video views 46 Campaigns	— Multiple Conversions	— Multiple Conversions	264,072 ▲ 71.5%	$2,758.94 ▲ 129.5%
Conversions 6 Campaigns	— Multiple Conversions	— Multiple Conversions	24,706 ▼ 28.4%	$390.00 ▲ 9.9%
Reach 1 Campaign	10,159 Reach	$3.45 Per 1,000 People Reached	10,159	$35.00
Event responses 31 Campaigns	1,973 ▼ 32.8% Event Responses	$1.02 ▲ 20.5% Per Event Response	65,182 ▼ 12.2%	$2,020.26 ▼ 19.1%
Post engagement 294 Campaigns	188,019 ▲ 49.0% Post Engagements	$0.11 ▼ 24.9% Per Post Engagement	533,029 ▲ 3.6%	$20,846.51 ▲ 11.9%
Traffic 162 Campaigns	—	—	857,803 ▲ 99.8%	$14,246.95 ▲ 84.5%

Greenland Productions (53381... ▼   Jan 1, 2018 – Dec 31, 2018 ▼   ...

Traffic					
162 Campaigns	—	—	857,803 ▲ 99.8%		$14,246.95 ▲ 84.5%

| Age and Gender | Age | Gender | | Hour | |

Reach ▼   **Amount Spent** ▼

Women
46.02% (576,271)   39.51% ($15,933.14)

Men
52.01% (651,281)   57.92% ($23,357.23)

Age
13-17
18-24
25-34
35-44
45-54
55-64
65+

20%   15%   10%   5%   0%   0%   5%   10%   15%   20%

Reach ▼   **Amount Spent** ▼

10%

5%

0%
12 AM   3 AM   6 AM   9 AM   12 PM   3 PM   6 PM   9 PM

Location

○ Country
○ Region
○ DMA Region

Reach ▼

512   1,183,774

Facebook Campaign Sample Summaries:

	Post Engagements	4,860	10	$40.00
	Tickets for Allman Brown, May 12 at Le Ministèr... Promoted by Laura Titwazo Marais on Mar 15, ... Completed	People Reached	Landing Page Views	Spent of $40.00 **View Results**
	Post Engagements	4,748	46	$40.00
	Danielle Aykroyd aka Vera Sola, who opened fo... Promoted by Laura Titwazo Marais on Mar 14, ... Completed	People Reached	Landing Page Views	Spent of $40.00 **View Results**
	Post Engagements	15,620	89	$150.00
	With her new album out to critical acclaim and j... Promoted by Laura Titwazo Marais on Mar 11, 2... Completed	People Reached	Landing Page Views	Spent of $150.00 **View Results**
	Video Views	18,225	3,906	$170.00
	TEN FÉ's North America Tour starts this month! ... Promoted by Nancy Ross on Mar 10, 2019 Completed	People Reached	10-Second Video V...	Spent of $170.00 **View Results**
	Post Engagements	3,396	100	$40.00
	Tickets for The Mystery Lights • Future Punx // L... Promoted by Laura Titwazo Marais on Mar 8, 2... Completed	People Reached	Post Engagement	Spent of $40.00 **View Results**
	Post Engagements	9,271	123	$80.00
	The Dillinger Escape Plan leader Greg Puciato, ... Promoted by Laura Titwazo Marais on Mar 6, 2... Completed	People Reached	Landing Page Views	Spent of $80.00 **View Results**
	Event Responses	7,945	48	$70.00
	Scott Helman • Ralph // L'Astral Promoted by Nancy Ross on Feb 22, 2019 Completed	People Reached	Event Responses	Spent of $70.00 **View Results**
	Post Engagements	8,319	41	$80.00
	Tickets for Ziggy Alberts on July 11th are now O... Promoted by Laura Titwazo Marais on Feb 22, ... Completed	People Reached	Landing Page Views	Spent of $80.00 **View Results**

Facebook Event and Types Data: Click here to download spreadsheet.

ANNEX 3.   FOCUS GROUPS

3.1   Producer Focus group results: Transcript 1 (November 28, 2018), Transcript 2 (December 4, 2018), Transcript 3 (December 11, 2018)

3.2   Media Interview/Survey Grid: Click here to view online.

3.3   Multi User Focus Group: Click here to view online.

ANNEX 4.   PROGRAMMATIC ADVERTISING: Click here to view online.

ANNEX 5. Technical Annex

Annex 5 .1 Technical Development

	TASKS: Future version	Post-prototype task descriptions, prior to mass onboard initiatives	Team Participants	Projected Completion Date
13	Canada Council DSF	DCCADI - DCCADI - Developing connections & collaborations among digital initiatives. Market research and technical evaluation of potential collaborative projects and competitors	Marketing & Technical + partner organizations LATICCE, Culture Creates	July 30, 2019
14	Marketing Focus			
14.1	Marketing Focus	A full user growth study to verify and test growth strategies through agile methods	Marketing & Technical	pending funding
14.2		Brand and image development through testing a short list of brand names for the ARTS2U service prior to launching an MVP. Public facing interfaces need to be rigorously tested and a full graphic review should be conducted.	Marketing	Sept. 2019
14.3		Website public announce and test acquisition platform for 3 types of users	Marketing & Technical	Sept. 2019
14.4	Legal Focus	Legal framework terms and conditions	Marketing & Technical & Admin	July 2019
15	**Technical Updates**			
15.1		URI development, for interoperable LOD capability	Technical	July 2019
15.1.1		create a schema microdata output	Technical	July 2019
15.2		Change Log/ Monitor process for venue and artist updates	Technical	pending funding
15.2.1		Grouping of events to include a date range for multiple shows ie Bonnie & Clyde	Technical	pending funding
15.2.2		Create master show so that change can be made to all grouped events at once	Technical	pending funding
15.2.3		Build of producer suite Artist field- to label type of artist & disambiguation	Technical & Marketing	pending funding

15.3	User interface	study and prototyping of user interface and wider user testing to achieve rapid user growth capability, including user experience tests and profile development to determine seamless and frictionless paths to access desired content.-include chunking and progress status of event upload	Marketing & Technical	pending funding
15.3.1	Public user search parameter	categorize location and expand search by quartier or neighbourhood	Technical	pending funding
15.3.2		Verify User via email login	Technical	pending funding
15.3.3		Ad parent genres	Technical	pending funding
15.4		Testing of the ARTS2U feed , placement in Iframe feeds with media outlets, AB testing sessions of content delivery to external websites.	Marketing & Technical	pending funding
15.5	Automated content acquisition	Technical development of automated content aggregation tools, as volume of content will drive user growth. Scraper development and management of the suite of scrapers as a prime means to acquire key content must be further developed beyond the limited scope of five scrapers developed as part of the prototype.	Marketing & Technical	pending funding
15.5		Programmable advertising tests with working advertising publishers to determine wider audiences for arts events.	Marketing & Technical	pending funding
16	**Rewards System/ Loyalty program developement**			
17	**Dashboard Dev**	Tokenization and value creation: loyalty schemes require additional research and implementation testing beyond the scope of ARTS2U prototype.	Marketing & Technical	pending funding
17.1		click stream log to aggregate use data by users	Technical	pending funding
17.2	Dashboard view config	Produce dashboard showing events , sales, grouping, marketing lists, sort by audience data	Marketing & Technical	pending funding
18	**System Requirements updates**			pending funding
18.1		application load balance in front of application server provided application server is stateless	Technical	pending funding
18.2		scalable database review		

Annex 5.2   **Use Cases:** [Click here to view online.](#)

Annex 5.3   **Producer User Guide:** [Click here to view online](#).