

ANDASA: A Web Environment for Artistic and Cultural Data Representation

Carole Salis, Marie F. Wilson, Fabrizio Murgia, Cristian Lai, Franco Atzori, Giulia M. Orrù

Abstract—ANDASA is a knowledge management platform for the capitalization of knowledge and cultural assets for the artistic and cultural sectors. It was built based on the priorities expressed by the participating artists. Through mapping artistic activities and specificities, it enables to highlight various aspects of the artistic research and production. Such instrument will contribute to create networks and partnerships, as it enables to evidentiare who does what, in what field, using which methodology. The platform is accessible to network participants and to the general public.

Keywords—Cultural promotion, knowledge representation, cultural mapping, ICT.

I. INTRODUCTION

NOW-A-DAYS, there is a growing acknowledgment of the importance of culture, and of the part it can play in facing the global economic crisis [1], [2]. In 2013, the ICOM (International Council of Museums) made an appeal to the European Parliament and Commission, (The Lisbon declaration), to the governments of European countries and to Regional and Local Government to support Culture and Museums to face the global crisis and build the future, in which they stressed the fact that cultural activities and museums are unique resources for the development of economy and society, and presented three priorities to face the crisis and promote the value of museums and heritage [3].

The concerns expressed in this appeal can easily be extended to the world of culture in all its aspects as public and private financial support has drastically decreased. It has become important to give visibility and promote the artistic and cultural production, identify and access funding sources, promote cultural contamination, collaboration and networking [4]. Knowledge capitalization is a challenge, but digitization can offer an opportunity for the storage and dissemination of news, events and culture opportunities [5].

In this paper we describe a platform for artistic and cultural data representation and its experimentation in Sardinia involving SMEs (Small and Medium Enterprise) and associations. ANDASA is a web platform that addresses the problems encountered by cultural operators, through the promotion of cooperation. It offers a single environment in which culture operators, policy-makers, cultural practitioners, artists, patrons, donor, funders, art lovers and the general public can easily find geo-referenced information on the world

of art and culture, in all its aspects. So far, the platform was test bedded mainly in Sardinia, but it can easily be extended to the national and European levels. The remainder of the paper is organized as follows: Section II briefly describes the concept of the project. In Section III we describe the method used to determine the platform functionalities, Section IV describes the platform features and targeted users, Section V describes the experimentation, Section VI mentions other cultural platforms and conclusions can be found in Section VII.

II. THE PROJECT

The project started a year and a half ago and is now at the monitoring phase and presentation of the experiment results. Fifty nine different cultural entities are now participating to the project. Our platform was built in collaboration with a number of representatives of the artistic industry (SMEs, associations, etc.), taking into consideration the needs and priorities expressed by the participants during brainstorming activities.

III. PARTICIPATORY PLANNING

During four brainstorming sessions involving both the ANDASA staff and the artistic partners of the project, the needs of operators, their expectations regarding the functionality of the platform were expressed, helping the technical staff to identify needs and evaluate the technical ways to fulfill these needs in the phase of construction of the platform. Such way to proceed permitted to reach consensus on the structure and functions the platform should have.

Some of the concerns expressed by artists and culture operators is that information regarding past, present and future activities, research, exhibits too often need to be duplicated, different standards are used, resulting in repetition of work, lack of semantic interoperability and reliance in different standards [6]. When it comes to finding colleagues with specific skills, they have to fall back on their personal circle of professional acquaintances, which might not be the best way to do it. Donors and investors find it difficult to have an overall view of the artistic and cultural trends, understand the needs of the cultural sector, especially with respect to which branch of culture already receives funding which does not but should. It is difficult to find out what goes on in a specific territory or in a specific artistic field. All these constraints result in wasting time and money and in lacking of new opportunities of development.

C. Salis, M. F. Wilson, F. Murgia, C. Lai, F. Atzori, are with CRS4, Center for Advanced Studies, Research and Development in Sardinia, Pula CA, Italy, (e-mail: carole.salis@crs4.it, fabrizio.murgia@crs4.it, cristian.lai@crs4.it, franco.atzori@crs4.it, marieflorence.wilson@crs4.it).

Giulia Maria Orrù is a CRS4, Pula CA, Italy (e-mail: giulia@crs4.it).

IV. THE PLATFORM

Our web platform enables registered users to insert contents and search the site. The platform collects artistic production, research, skills, market needs. The inputted information is structured by type, subject, geographical area, date, search strategies, modes of production, financial support. It is possible to link the contents according to logical criteria (people to projects, projects to location, etc.). Searches are not limited to keywords, but can be done based on a geographical localization, within a certain range. The result of the search could be a list or a geographical map, accompanied by a brief description, but if needed, the whole record can be accessed by selecting it on the list or on the map. All this favours contacts between all actors of the cultural sector.

A. Targeted Users

Three types of users are provided for: professional's users, the general public, and project financiers both public and private.

Professional users such as artists, directors, producers, museums, theaters, etc. introduce their data, artistic production, arts programming. They will be able to evidenciate their networks of partners, and use the platform as a single web tool to promote their competencies, artistic production, search for funding opportunities. The tool is useful in the case of partner research because individual artists, arts and cultural SMEs and associations, working methods, artistical research activities, artistic output, are mapped in the system and because it allows users to select based on their needs, the platform makes it possible to identify a prospective partner with specific characteristics. All this result in the creation of a cultural database, promote interdisciplinary production and facilitate contamination between artistic genres.

The platform gives web visibility to creators and artists, and is an economical way for young artists to promote themselves inside and beyond their geographical area. The ANDASA platform gives visibility to cultural operators and helps them promote cultural on going activities at a local, national or European levels. One of the positive outcomes will be to overcome geographical distances and time constraints for end-users.

Such characteristics are expected to have a positive effect on artists and art production, international mobility and facilitate international networking. The platform can also be used as a depository of past and future production. Keeping all the information in one single place, semantic interoperability is guaranteed, whereas duplication of work and waste of time is avoided.

The general public will use the platform as information tool to know what goes on and where, get information about one specific artist's career, be informed on what the artistic offer is in a specific geographical area or time range. The platform is accessible through a web interface and the tool offers simple and easy-to-use access to information. This is expected to generate and stimulate cultural participation. In a digital context, national borders are no longer a limit: the platform acts as a virtual centre for culture dissemination.

Project financiers such as public and private bodies willing to finance the artistic and cultural industry can use the platform as a web marketing planner, and the establishment can use it as a policy orientation tool: having an easy way to find out the financed activities, they can plan their action on the basis of previous funds granted. The tool will help them realize nation-wide or European-wide programming of cultural and artistical activities, understand the cultural market, its trends and its needs.

Our platform offers many of the characteristics that the artistic community, living in a global and digital world, requires and facilitates the development of trans-national networks, and cross-sectorial activities and collaborations [7]. We believe that the cross-cutting aspects developed by the platform will contribute to the consolidation of a European cultural identity.

V. THE EXPERIMENTATION

Before the beginning of the experimentation phase in which partners are to insert contents into the platform, a questionnaire was submitted to find out if all had the necessary basic knowledge of already existing tools, embedded in the ANDASA platform, such as the You Tube video-sharing web site, the Vimeo image and video hosting website, Pinterest or Flickr (photo sharing websites), or Eventbrite, the event management platform. The latter was known by only 23% of the respondents. Only 13% had never uploaded any kind of information (text, photographs, or videos), and 30% did not know what stands behind the concept of "embedding" and did not know how to extract the code of a file existing in one of the above mentioned platforms to place where needed. It was therefore decided to organize workshops in three different places, in order not to penalize those whose activities are not in the Regional capital of the island, in which the artistical partners of the project could have the opportunity to becoming familiar with such activities before having to do them on the platform. This two-days training period was followed by the experimentation phase of our project.

A. Questionnaire Results in a Nutshell

Twenty-five questionnaires were completed and analyzed. A number of partners started to insert their data on the platform before the formal experimentation starting date, because the credentials were sent to all ANDASA members beforehand. 80% of the responses claim to have entered information regarding the nature and characteristics of their SME / Association (see Fig. 1).

Those who did not (5 answers) gave no reason for doing so. The loading speed data on the platform is considered satisfactory by 80% of the subjects who returned the questionnaire. It is significant because the number of registered users has doubled in few months (the project was open to new culture operators, it was not restricted to those who started from the beginning). To improve the storage capacity, the server was substituted with a more powerful one.

Did you insert your association/sme data?

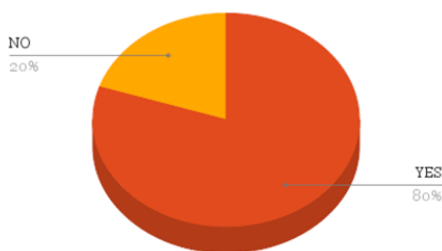


Fig. 1 Data entry into the platform

The navigation appears easy (72%) and the vocabulary used helps the implementation of activities (76%). 44% of those who returned the questionnaire claim to have found some links that did not work properly. The continuously on going development of the platform functionalities has had an impact on its the usability. The forms to be filled were considered useful and the information to be inputted comprehensive. An interesting piece of information emerged from the questionnaire: 95% of those who returned the questionnaire felt that the platform acts as a showcase in which past activities, past cultural portfolio, and the characteristics of their work, are highlighted. This is a crucial point to keep in mind for future developments; it is a positive indicator that allows us to say that the platform is responding to the operators' expectations (Fig. 2).

Does the created platform correspond to how you imagined it to be?

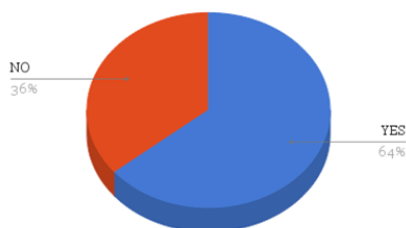


Fig. 2 Platform correspondence to operators expectation

The last question, through which we wanted to know if the platform corresponded to the mental image that the operators may have worked out, presents a lower percentage (30%) with respect of the former one. They did not specify the reason. 64% of them said that the platform corresponds to what they imagine it to be. In the meantime, the user interface was modified based on the bugs reported by users and appropriately completed.

The experimentation phase of our project started in December 2014 and will be concluded at the end of August 2015. We can present the partial results for the period December 2014 through May 2015. It began at the end of the 2-days training period, done in three different locations of our territory (Cagliari in the south, Mamoiada in the centre of Island and Aggius in the north of Sardinia island). From that moment on, every action performed in the ANDASA platform has been recorded and labeled according to the data structured

inputted by registered members (see Fig. 3). Members input data related to:

- Entity Person
- Entity Organization
- Concluded Project
- Project Idea
- Project in Progress
- Location (sites and spaces where an artistic event is organized)

Types of records (data entry) in

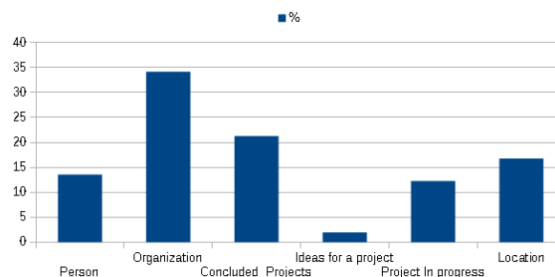


Fig. 3 Types of records

We noted a strong participation in the time span following the training period. During the period of training, many participants began to insert their data under the guidance of our technical staff. 67 entries were recorded. The form that was used most is the one regarding the description of the cultural organization. The largest number of entries occurred two months after the training period, especially for refining the inputted data with 92 accesses.

The most successful forms are those dealing with the description of the cultural entities, the description of past or closed activities, and those dealing with activities in progress. These data are interesting as they reflect the concerns expressed during the brainstorming: the desire to thoroughly describe the nature and characteristics of the cultural organizations and projects in progress too.

Indeed, describing a project in progress through a web platform visited by peers is a positive strategy to share ideas and to find out possible solutions (human and material resources, funds, stakeholders, spaces to perform...).

The sites in which activities take place are greatly considered by cultural operators. There is a clear tendency to want to specify the characteristics, location, and the nature of the place in which an event, a performance or a simple cultural event is organized.

May and June are a period of intense cultural programming in Sardinia, this can explain why participant's data input diminished around that time, as cultural operators are focused on the summer season programming (see Fig. 4).

So far, we have 155 data entries into the platform, 33 of which are related to past activities. We can notice a behavioral tendency that seems to favor the presentation of him/her as organizational entity to ensure the creation of new knowledge.

At this point of the experimentation, the ANDASA staff can suggest cultural operators to adopt a sharing strategy that will promote possible cooperation. We want to point out that our

platform in conceived as a growing, expanding inter-cultural space for the benefit of visitors, politicians, to put in the state of cultural highlights.

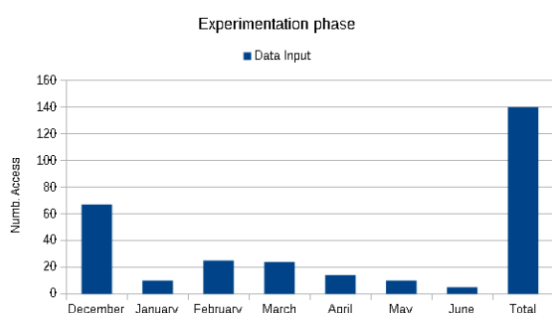


Fig. 4 Data entry after the experimentation phase

VI. RELATED EXPERIENCES

There are other web platforms and websites dedicated to the world of culture, but they generally do not address all the problems. An interesting example is the "IZOLYATSIA platform for cultural initiatives" [8]. This cultural platform only deals with projects, whereas ours deals with a variety of figures: single artists, organizations, SMEs, museums, and so on. Each contributing body, registered in ANDASA can use widgets that best describe their activity.

In both ANDASA and IZOLYATSIA platforms it is possible to embed videos and photos, but in ANDASA it is also possible to embed slideshare, steramago, instagram, etc. Both platforms make use of a merry-go-round of photographs, and have external links, but unlike ANDASA, the data in IZOLYATSIA is not geo-referenced, therefore geographical searches are impossible, only searches by key-words are possible.

Another platform experiment is the Culture-exp whose objective is to favour cross-border exchange of culture by providing an innovative, multilingual online IT platform, based on available open source social platform solutions and adapted for culture producers (artists), culture operators (museums, festivals, etc.) and other actors of the culture market. All entities related to the culture will be able to advertise, discuss and organize cultural assets and events in the Black Sea region [9].

VII. CONCLUSION

In this paper we illustrated the features of the ANDASA platform, which to our opinion, can be an asset to the cultural world. Our platform offers many of the characteristics that the artistic community living in a global and digital world requires and facilitates the development of trans-national networks, and cross-sectorial activities and collaborations. From the very beginning, the project received a high level of attention from cultural practitioners. It must be pointed out that the socio-political context in which artists from the Sardinia Region have been operating in the past years is particularly difficult. Funding fell sharply and the amount of money allocated to culture is not delivered in time. This situation does not leave

time for operators to properly engage in activities that are not strictly related to search for funding and/or for the design of cultural events. Most SMEs/ associations do not have more than 2 people in their staff. Being short of staff, inputting into the database is felt as a time consuming activity. In view of this real problem, and in view of the fact that at the end of the project CRS4 will no longer manage the platform, we suggest that the sector should receive an appropriate political support, financial and also regarding the management and the marketing aspects of dealing with the platform.

CRS4 is planning to further develop the ANDASA platform at European level. This will allow registered members to highlight their partnership networks in Europe, to honor the extra value of regional cultural events born in Sardinia and to export their work through digital media in order to the present the cultural content more responsive to our digital time.

ACKNOWLEDGMENT

The ANDASA project is funded by "Sardegna Ricerche" within the "Top-Down Cluster Programme" (POR Sardegna FESR 2007/2013). The authors thank all ANDASA members:

Comune di Cagliari, Agios Soc.Coop.Sociale, Teatro Laboratorio Alkestis, Antarias- Società Cooperativa, Cada Die Teatro, Camù (Consorzio Centri d'Arte e Musei), Cultour-Soc. Coop Sociale Onlus, Coptur-Cooperativa, Viseras- Soc. Coop., Sardegna Teatro, Is Mascareddas, CooltourGallura, Coop. Teatro e/o Musica, Amuni, ArteVideo-Soc.Coop., Art Kontakt, AutonomeForme, DBM (Danza Bacino Mediterraneo, Noarte Paese Museo, Carovana S.M.I (Suono Movimento Immagine), Chourmo, Confcooperative/ Federcultura, Dipartimento di Architettura -Università degli studi di Cagliari, Indisciplinate SRL, Spazio Musica, Teatro del Sale, Teatro Impossibile, Mediterranea Online, TRW- Associazione Culturale, Fortepiano, L'Aquilone di Viviana, Cooperativa Teatro Fueddu e Gestu, Suoni e Pause, Suoni in Tempesta, Spaziodanza, Cisp Sardegna (Comitato Internazionale per lo Sviluppo dei Popoli), Ecomuseo dell'Alto Flumendosa, Escola Municipal de Danza de Celrá, Progetto Contemporaneo-Associazione promozione sociale, Theandric- TeatroNon violento, Compagnia B, Micro Fratture Teatro, Time in Jazz, Malik, Millepiedi-Cooperativa Sociale Onlus, Motus Musica e Danza, Officina Creativa Olbia, Cherimus, Museo d'arte Moderna e contemporanea Antonio Ortiz Echagüe, ContiamoCi-Associazione turistico-culturale, Gruppo Folk Aggius, Coro Galletto di Gallura, Stazzi e Cussoghghj, Accademia Tradizioni Popolari Città di Tempio, Màs Que Nada -Cooperativa, Laboratorio Tessile Prof. Cannas, Coro Gabriel, ProLoco Mamoiada.

REFERENCES

- [1] P. Howson, J. Dubber, "Culture Matters. Why culture should be at the heart of future public policy" in *The British Council*, August 2014. Available from: <http://www.britishcouncil.org/sites/britishcouncil.uk2/files/culture-matters-report.pdf>.
- [2] The Warwick Commission, "Enriching Britain: Culture, Creativity and Growth. The 2015 Report by the Warwick Commission on the Future of Cultural Value", *The University of Warwick*, 2015. Available

- from: http://www2.warwick.ac.uk/research/warwickcommission/futureculture/finalreport/warwick_commission_report_2015.pdf
- [3] http://icom.museum/fileadmin/user_upload/pdf/Statements/ENG/Lisbon_Declaration_ENG.pdf.
- [4] M. François et Al., "Open method of coordination (OMC) working group of EU Member States' experts on better access to and wider participation in culture", in *European Agenda for Culture. Work plan for Culture 2011-2014*, October 2012. Available from: http://ec.europa.eu/culture/policy/strategic-framework/documents/omc-report-access-to-culture_en.pdf.
- [5] M-I. Sanchez-Segura, A. Mora-Soto, F. Medina-Dominguez, A. Amescua, "Organizational Knowledge Capitalization Based on Product Patterns and Web 2.0 Technology", *Organizational, Business, and Technological Aspects of the Knowledge Society, Communications in Computer and Information Science*, Springer, Vol. 112, 2010, pp 371-380.
- [6] C. Lai, C. Salis, F. Murgia, F. Atzori, M.F. Wilson, "ANDASA, a web platform for enhancing network of knowledge and innovation", in *Proceedings of Innovation and knowledge intensive approaches for computer supported cooperative work in design, special track of the 19th International conference on computer supported cooperative work in design (IEEE/SMC CSCWD 2015)*.
- [7] N. B. Ellison, C. Steinfield, C. Lampe, "The Benefits of Facebook 'Friends:' Social Capital and College Students' Use of Online Social Network Sites", in *Journal of Computer-Mediated Communication*, 12, 2007, Available from: <http://onlinelibrary.wiley.com/doi/10.1111/j.1083-01.2007.00367.x/pdf>. H. Agafonova O. Yefimova, V. Ivanova, L. Michailova, O. Chervonik, "Izolyatsia 2012 - Artist-in-Residency Art Projects Educational Events Creative Village International Cooperation END of year results". *Izolyatsia. Platform for Cultural Initiatives 2013*. Page 13. Editors: Agafonova, Ivanova, Chervonik. Available from: http://www.izolyatsia.org/media/uploads/reports/izo2012_en.pdf
- [8] The Izolyatsia. Platform for Cultural Initiatives projects is available from: <http://www.izolyatsia.org/en/>
- [9] The CULTURE EXchange Platform (CULTUR-EXP) project. Available from: http://www.cenet.org/publications/CULTUREXP_press_release.pdf.