

OpenAgenda: Trento bets on the Open Data

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Abstract – *The work intends to investigate the pattern that Trento Smart City is following in terms of Open Data and Open Government. Among the several projects dealing with such subject, we consider OpenAgenda an ambitious project aiming at the digitization and integration of all relevant information about the cultural and events agenda spread all over the provincial soil. This specific program is to ascribe to the macro-frame of Trento Smart City, as an example of the city’s ongoing technological commitment. OpenAgenda represents an example of how the Province of Trento is betting on technological improvement and advancement by developing and boosting synergies with local partners and surrounding municipalities.*

Keywords: *Trento smart city, open data, open government, ICT, digital agenda, community innovation.*

I. INTRODUCTION

Nowadays the digital support for the integration and share of data has reached the primary importance as far as government and governance patterns are concerned. In fact, the implementation of new technologies can improve the way the local community access the information and data as well as the way the local government bodies run their own assignments. This discourse happens to fit particularly well all those “minor” municipalities where a change in perspective has already been made: Trento is an example of those realities. In fact, Italy counts a total number of 8.000 municipalities spread all over the Nation, very different one another. This peculiar heterogeneity constitutes a complex issue to be handled by the public administration, hence the friendly usability and real-time response that feature the new technologies make them the apt supports for the simplification of all processes. At National scale some achievements have been already reached.

In the public administration, the Open Data discourse – referred to the information collected, produced or paid for by the public bodies and made freely available for re-use for any purpose - and digitization process have already gained some legislative attainments, such as the Elisa Program issued by the *Dipartimento per gli Affari Regionali e le Autonomie* [1].

In this aggregative scenario, more and more municipalities have been sharing resources and possible solutions. In particular, the ComunWeb project, developed by the *Consorzio dei Comuni Trentini* (Trentino Municipalities Consortium), has developed a systematic approach that has been acknowledged as a remarkable step towards the implementation of Open Data technologies [2].

The following of the paper is organized as follows. Section II describes the current legislative background in terms of Open Data and Open Government respectively in Europe,

Italy and Trentino. Section III illustrates the main digital initiatives that the Province of Trento has carried out so far. In particular, ViviAla, ComunWeb, and OpenAgenda projects are described. Section IV investigates the consequent advantages and challenges deriving from such innovative digital turnover and points out the main rising opportunities. Finally, some conclusions are drawn.

II. THE NATIONAL AND THE LOCAL CONTEXTS

The Smart City initiative, based on the use of technology for the improvement of the life-quality standards, is framed and included in the 2020 European innovation strategies regarding the “smart” development of urban contexts in for a sustainable economic and occupational growth. The main goals to achieve are related to five macro intervention areas [3]:

- Occupation
- Research and Development
- Climate change and Energy
- Education
- Social inclusion

The European Commission unrolls a coordinated action plan involving several EU departments, such as the Communication and Network, Content and Technology (DG CONNECT) one, the General Department of Energy (DG ENER), the General Department for Innovation and Research (DG RTD), and the General Department of Transports (DG MOVE) in order to show the best practices that the EU countries should follow and imitate. In this frame, the need of participative platforms and Open Data - or Open Government - represents one of the main initiatives and projects dealing with a smart city. The European Data Portal is the main tool for monitoring the developing of Open Data initiatives all over Europe, as it “*harvests the metadata of Public Sector Information available on public data portals across European countries*” [4].

Furthermore, the European commitment in terms of Open Data regulation is also reflected and described in the 2003/98/CE directive, later on updated through the 2013/37/UE one, which constrains all public government bodies to the implementation of Open Data systems [5].

In line with the European guidelines, Italy has developed its own Italian Digital Agenda – *Agenda Digitale Italiana* – founded in 2012, in order to come up with some national action plans and strategies linked with the Europe 2020 program. It insists on the cooperation at the regional and national scales through the Partnership Agreement (*Accordo di Partenariato*) 2014-2020 issued by the *Presidenza del Consiglio dei Ministri* and the *Ministero dello Sviluppo Economico*.

In this perspective, the DL 179/2012 national decree defines a governance pattern and a set of practical actions for the definition of Smart Cities standards and policies dealing with the Open Data and Open Government initiatives. They

aim to guarantee transparency and accessibility in the public administration database. The specific scope of Open Data used within the European Data Portal is to dispose of a set of data published by public administrations or on their behalf.

In the same direction, in 2012 the Province of Trento issued the n.16 provincial law which acknowledges Open Data as a strategic driver for the improvement of the public information system, regulated through the 2449/2015 provincial approval [6].

In fact, its guidelines are essential for the ongoing digitization process which will produce some important advantages, such as: the limitation of costs in the administration, a better information transparency, the convergence of data produced by the Province research institutes and a consequent innovation-oriented development, the design of innovative applications to the citizens' needs of new smart services, the rise of new potential markets enabled by the ICTs for the local enterprises and start-ups and so on and so forth [7].

Trentino has therefore bet on the spread of the so-called "data culture" as a common good for the community in order to endow the provincial territory with a further added-value.

III. STATE OF THE ART OF OPEN DATA PROJECTS IN THE TRENTO PROVINCE

This section retraces back the path that has led to the design of OpenAgenda, and illustrates the preconditions to its potential development in the future.

A. *ViviAla and the experimental project*

Some innovative initiatives at a municipal scale have been designed in order to ignite the Open Data engine in the provincial area of Trento. It was especially Ala, a small town in the southern Adige valley, which has developed a project named *ViviAla* which implements an institutional digital platform for the promotion and communication of the local cultural agenda and events.

Launched in January 2017, this portal has been created through the cooperation and support of 93 local associations (cultural, sport, social, etc.) and it enables a more efficient and practical way for the creation and communication of events in the area. In fact, the *ViviAla* application, co-created in collaboration with the *Consorzio dei Comuni Trentini*, represents an authentic digital revolution in the field of event management, as the associations themselves will be the co-authors of the event agenda, which will be handled and coordinated exclusively by the Tourism and Culture municipal department. Through their own account, everyone will be able to automatically book their initiatives in the digital agenda and produce the information through the use of a geo-referenced map and a QR-code system. The standardization of all the contents about each event will prevent from the risk of unexpected overlaps and misunderstandings with other already-scheduled local initiatives.

The peculiar innovative features of this project are also reflected in the way the users can access the information provided. Thanks to some filters that the user can set while

surfing the platform, the application will automatically produce a personalized pdf file on a weekly/monthly-basis according to the user's interests. Moreover, the digital platform displays a social network-oriented layout where the users can share comments and information.

So, *ViviAla* represents an example of standardization in the way the information is produced and spread in the web; an aggregative, open source and multi-channel system that can better grasp the private initiatives spread all over the provincial area, thus promoting the overall territorial economic development. It represents an accurate and reliable communication and information asset, of high relevance to reach the Trentino visitors, attracted also by the provincial cultural agenda [8].

As a matter of fact, *ViviAla* has paved the way to the creation of an integrated system within the provincial area, that could potentially be adopted by other municipalities in Trentino. In fact, born as an experimental project realized thanks to the investments that are being made in the digitization process, *ViviAla* inspired the creation of *ViviAmo* Bolzano, *Eventi Mori* and *ViviAvio* share actually the same visual and contents formula.

B. *ComunWeb*

The *ViViAla* initiative is strictly linked to an action plan of the *Consorzio dei Comuni Trentini* named *ComunWeb*. Born in 2012, it mainly consists of a technological facility made available to all the local institutions interested in the development of a shared and uniform digital platform. The main inspiring principle is the "participated democracy", an active real-time participation of both the citizens and the institutions on the urban issues and initiatives.

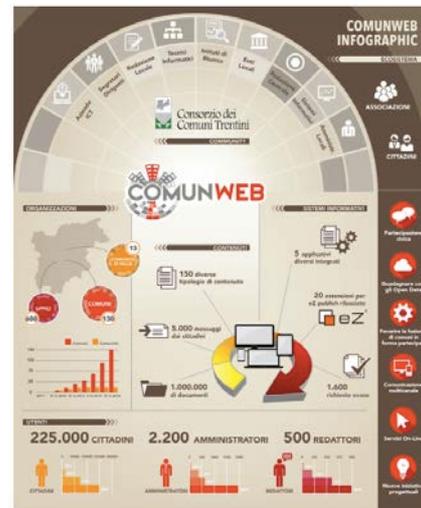


Fig.1. *ComunWeb infographic* [9]

The Consortium has therefore developed an Open Data system from which users can extract the information of interest. A standard interface to be replicated by other municipalities within the territory as a common useful tool enabling inter-institutional cooperation. Active citizenship is the main inspiring principle for the definition of territorial development strategies, as opposed to a centralized

bureaucratic management of public resources. Hence, a shift from government perspective to a governance ecosystem.

ComunWeb brings innovation, know-how and experience within the provincial area of Trento; amongst its main features we can find a better “architecture of information”, as the data production and interpretation processes are facilitated through the new business intelligence, the chance to handle and manage the big amount of available data (Big Data) in a more efficient way, a more direct way to release it to the audience through open services (Open Data) and finally the chance update data in real-time (Fast Data) [9].

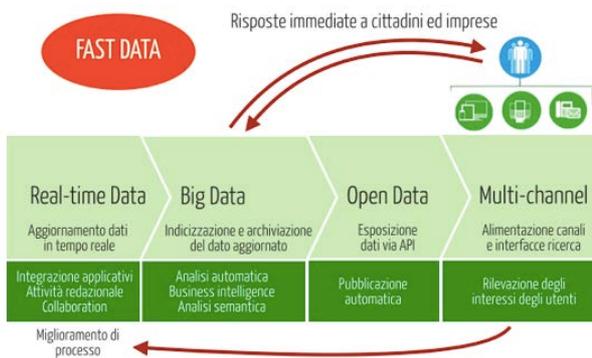


Fig. 2. *ComunWeb Data Model* [9]

So far the ComunWeb interface has been adopted by 14 valley communities and 150 municipalities, counting an overall number of 600 departments that actively use the platform. Generally, ComunWeb handles a 2.000 dataset based on the 5-star Open Data standard.

C. OpenAgenda

Along the territorial technological evolution, advancement and commitment described so far, the OpenAgenda project is the most recent one. It was designed to make a further step forward by promoting the interaction between different production activities, not only those involved in the cultural sphere. In particular, it was decided to reproduce the same aggregative data management in order to feed the local socio-economic fabric, so promoting economic development. The business opportunities deriving from the use of technologies are well known, but it is above all the cultural sector, along with the tourism industry, that is thought to be a strategic driver for the provincial economic spring.

So, in order to create an authentic cultural ecosystem in Trentino, the Consortium launched OpenAgenda, a digital tool dedicated to the regional events, activities and data, updated directly by the actors who animate the cultural life of the local communities.

The project was discussed and illustrated during the conference held on the 26th of May 2017 and promoted by the Innovation department of the *Consorzio dei Comuni Trentini*. As reported by the European Data Portal, “[...]

This new opportunity by Open Government aims at strengthening the relationship between local government and citizens, and is among the first of its kind in Europe. The Open Agenda Platform aims to present events created by associations, libraries and museums that can be updated in real-time and that are translated into the official EU languages. With this, the region of Trentino targets to exploit the opportunities provided by Open Data, and to promote transparency and the participation of citizens and businesses in local Government, as well as to boost the region’s economic growth” [10].

It provides an open-source platform to create a convergence about events and initiatives, which can also be linked to other business sectors so to develop economies of scale. The digital agenda will be therefore available and adjustable not only by the cultural services producers, but also by other stakeholders, such as those who are interested in developing their own applications for events or who are interested in expanding their business.

In fact, another interesting characteristic of this digital platform is the chance to create a network of local actors, where the managers’ and associations’ profiles are visible to any user.

Furthermore, as briefly mentioned above, the OpenAgenda interface, equipped with a geo-referenced map, is equally reproduced onto different digital devices, such as computer monitors and smartphones. Moreover, it can also produce a printable version of the agenda as an output, as shown in Fig. 3. The platform is therefore adaptable and exportable according to the users’ needs. Finally, the provincial cultural portal, Trentino Cultura, is the main institutional virtual space from which the digital agenda can be consulted by whosoever.



Fig. 3. *Open Agenda interface* [11].

Ultimately, OpenAgenda’s main beneficiaries are supposed to be the citizens themselves, as it is primarily to whom that the events and initiatives are addressed, as well as the 3.500 associations located in Trentino and the 5.1 million visitors who chose Trentino as their touristic destination on holidays [11].

IV. CHALLENGES AND OPPORTUNITIES

The synergies deriving from the digital systematic integrated approach adopted in Trentino will undoubtedly generate some positive externalities in the provincial area. As stated above, by boosting the set-up of the “participative culture”, the local community will be encouraged to actively participate and cooperate with the government bodies at the cultural and social agenda. Moreover, the patterns followed so far show the importance of the digital asset for the improvement of the life-quality standards as well as the institutional commitment of the Province of Trento in Trento Smart City initiative.

Its “smartness” traits described so far are also reflected in the opportunity that such projects – especially OpenAgenda – generate, among which providing and spreading whosoever accurate, punctual and real-time information. The users will be therefore more prone to attend the events that will take place and to actively participate in the events design.

The main advantage deriving from the availability of accurate information is also the identification of possible common business interests and ventures.

Once more, it is by now licit to ponder over the potential that culture and its displays have as strategic drivers for the spring of entrepreneurial actions and social inclusion.

Finally, the implementation of a digital platform such as OpenAgenda also promotes Trento as a tourist destination. In fact, it would no longer position itself only as an Alpine destination, but also as a culture-based location offering a rich and appealing agenda of events and initiatives.

As far as the future scenarios are concerned, at the moment it is not possible to state when exactly the actual launch of the OpenAgenda platform will take place. However, it has been estimated that, the OpenData market can potentially grow up to 36,9% by 2020 as compared to 2016. As a consequence, it could improve the employment rate by creating around 100.000 more jobs by 2020. Furthermore, in the same range of time it may favour a cost cut in the public sphere of around 1,7 million euros [12].

V. CONCLUSIONS

In conclusion, it is possible to claim that the Province of Trento is bringing about some remarkable examples of technological advancement and digitization process. In fact, it is at the cutting edge in the field of OpenData at national scale, also in terms of collaboration between both private and public bodies, such as the local associations and the Consortium of Municipalities. Additionally, the Province of Trento can be considered a worthy example of the efforts made by the European Commission to encourage the adoption of concrete measures for the Open Government mission. As a matter of fact, it has created some excellent preconditions to the expected digital revolution that over time will interest more and more realities committed in the improvement of the local community’s well-being.

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