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Open Data at the service of the innovation of a local ecosystem: an open and reproducible methodological proposal

Chiara Bergeretti[2], Francesco Carbonero[1], Guglielmo Celata[3], Stefania Delprete[2], Ettore di Cesare[3], Luca Giunti[3], Laura Pippinato[2], Christian Racca[2], Vincenzo Smaldore[3]

[1]CRC Foundation, [2]TOP-IX Consortium, [3]Openpolis Foundation

Abstract. According to the Open Data Maturity Report, Italy is among the "fast-trackers" EU countries. In local administrations, however, the situation is very heterogeneous: the province of Cuneo, similar to other territories, is still in a pre-embryonic phase.

As most of the surveys and indicators that guide public policies take the entire national or regional territory as a unit of analysis, the features and identity of a territory such as the Cuneo area cannot be assessed by the aggregated data of Piedmont, or even worse by data of the entire country. Similarly, the province of Cuneo (fourth in Italy by territorial extension) cannot be reduced to the data of the main town alone.

Our research, promoted by the CRC Foundation in collaboration with the TOP-IX Consortium and the Openpolis foundation as operational partners, implements a more granular awareness of the needs, problems and opportunities related to the data knowledge, usage, management and request

Keywords. open data, territorial data, research, digitalisation, data literacy.

Introduction

The methodology presented aims to explore Open Data and Data Sharing practices within a local ecosystem addressing the needs of different actors (citizens, public and private sectors). The approach described was promoted by the CRC Foundation and implemented by TOP-IX and Openpolis as operational partners.

In particular, the "Open your data" research allows to explore the awareness and Data Maturity in the Cuneo area with a three-phase process: a census to map the data owners and enablers, a questionnaire to monitor the cultural level and the use of Open Data, and finally targeted interviews with administrative/technical managers and representatives of businesses and citizens.

The strengths and weaknesses that emerged were exploited to suggest initiatives for the systemic development of the local community and were translated into an operational action: a series of laboratories, named "Share your data", aimed at offering a shared space to discuss the common issues, present case studies and support new collaborations and synergies.

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This process has been designed to be adopted in other areas, to propose bottom-up territorial development actions, starting from careful listening to citizens and sectoral bodies and involving the main local stakeholders.

1. Research and mapping: "Open your data"

The "Open your data" research, assigned to TOP-IX and the Openpolis Foundation in December 2020 and carried out from January to June 2021, explored the data awareness and maturity in the Province of Cuneo, with particular reference to Open Data, including a census of the available datasets, a questionnaire and key interviews.
In particular, it aimed to:

- define the state of the art on Open Data and select best practices at the national/ international level,
- identify the owners or subjects in possession of data related to the territory (Cuneo area),
- cense the available datasets, regarding the thematic area, the territorial granularity and the publication strategy,
- integrate the census through questionnaires and interviews with managers and administrators,
- involve stakeholders of interest for the use of the Open Data,
- understand opportunities and critical issues,
- suggest actions aimed at a synergistic and ecosystemic improvement of the territory.

1.1 Census of subjects and available datasets

The census activity, carried out by Depp/Openpolis, has been developed in three phases:

1. definition of the subjects potentially in possession of relevant information assets;
2. definition of the aspects to survey for each subject;
3. desk analysis of institutional sites and data collection.

Through these steps, 109 entities were identified, meaning those which - by institutional function, location, and sector of activity - could have significant information assets in the territory of Cuneo.
Of these entities, almost 60% have an Open Data portal or, more often, a section where some statistics collected by the institution are presented in variable formats: CSV, Xls, PDF,

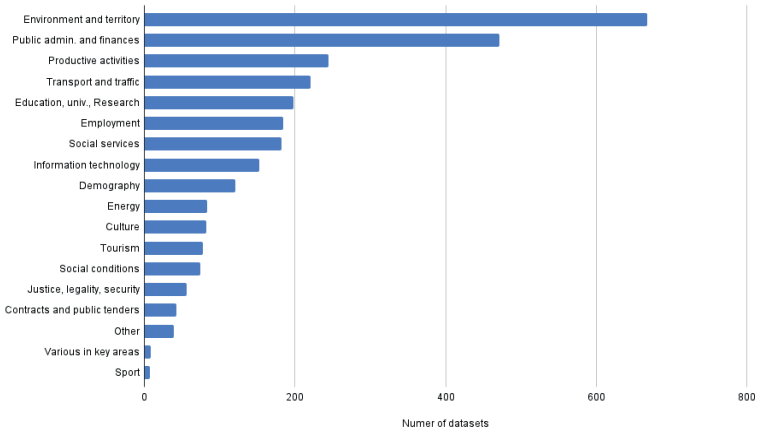

Fig. 1
Number of datasets by theme

images etc. This first screening shows that 40% of surveyed subjects don't offer any public view of the collected information, or at least a catalogue of the available datasets (Fig. 1). For the most part (90% of cases) these are local subjects (eg. municipalities) whose small size and functions probably limit the need to translate information into data, much less in Open Data.
However, these subjects are exposed to information that is often very relevant to the territory (eg. that on territorial bargaining collected by local trade unions).

1.2 Field survey via questionnaire

For the analysis, TOP-IX prepared a questionnaire for citizens, entities and organisations. The questionnaire, designed anonymously, open to citizens, public and private entities (companies, institutions and organisations) of the Cuneo area, was built to obtain a view of the perception and the use of Open Data. Anonymous collection was chosen to ensure maximum openness, despite the greater difficulty of validating the representativeness of the answers obtained (e.g. real belonging to the territory).
The questionnaire started with questions aimed at allowing knowledge of the project and then entering into the focus of the research. In particular, citizens were asked if they had downloaded/used at least one dataset, their perception of the main advantages of publishing and using Open Data (Fig. 2), and their level of knowledge of Open Data and related local initiatives, while for organisations the main focus was on the use and the release of Open Data, internal processes, objectives and needs.

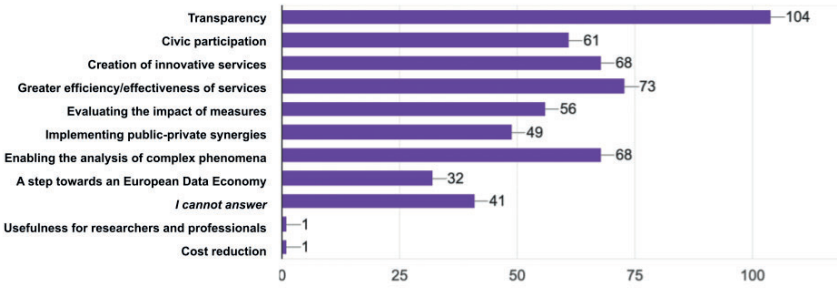

Fig. 2
Main advantages deriving from the release of Open Data

In the period between March 15 and May 31, 2021, 371 responses were collected, of which 218 were from private citizens and 153 from organisations, bodies or companies.

1.3 Interviews with organisations from different sectors

The results were deepened through 20 interviews managed by TOP-IX with a selection of the most relevant stakeholders. The recipients were selected taking into account the census concluded by Openpolis and chosen to include several areas of expertise to obtain a transversal and complete vision of the territory's needs.
In particular, stakeholders belonging to the following areas of expertise were selected:

- public sector,
- university sector,
- representative organisations,
- tourism sector,
- production sector,
- social-health sector,
- regional and national bodies.

1.4 Modelling of the current state, critical issues, proposals

The information extracted from the survey and the interviews have been grouped by sector and topic. Both criticalies and proposals have been taken into account to show the current situation.

Furthermore, three main macro categories emerged to better understand and clarify a viable course of action to tackle the most critical issues (Fig. 3), and upon this analysis, a possible action plan has been designed on a local, regional, national and international level (Fig, 4).

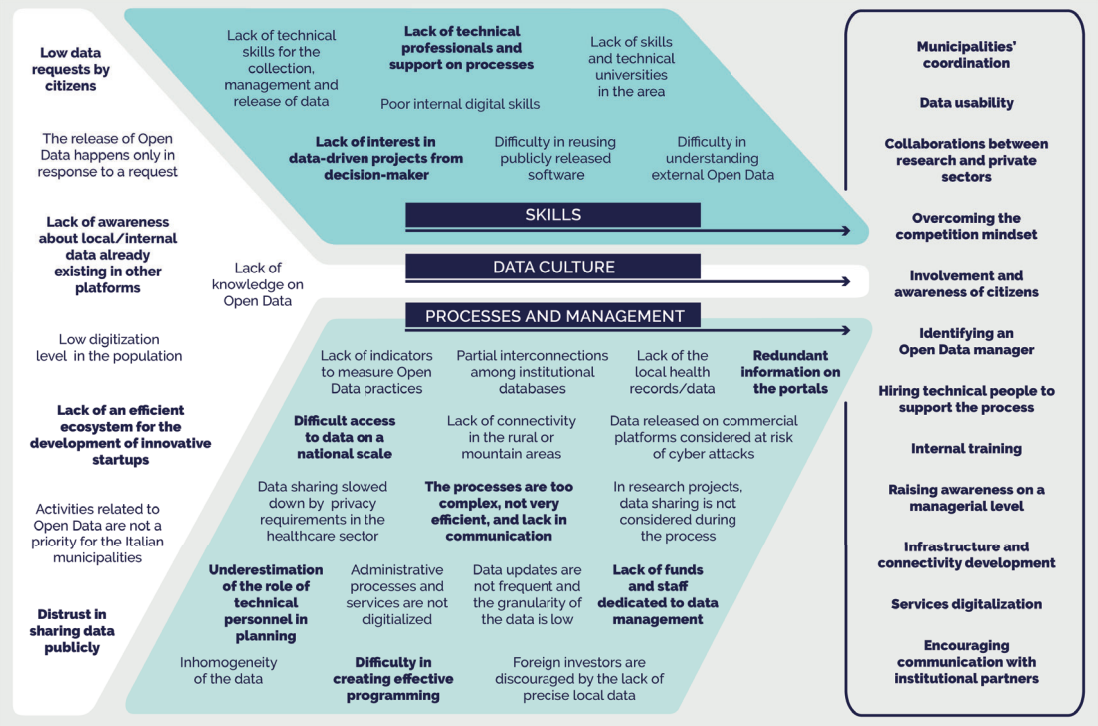

Fig. 3
Representation of critical issues and consequent operational interventions

Fig. 4
Summary of the operational vademecum

2 "Share your data": sectoral and multidisciplinary laboratories

The research "Open your data" was followed by a series of innovation laboratories (called "Share your data"). The purpose of the events was to:

- increase awareness and digital culture in the field of data,
- bring concrete case studies to support the theoretical concepts,
- provide basic skills regarding the use/exploitation of data,
- qualify the demand for (Open) Data and stimulate the offer,
- create a connection between the local plan and the evolution of data-driven paradigms on a national, European and international scale (i.e. Digital Innovation Hubs, Data Space, Gaia-X).

The first three meetings were dedicated to specific sectors: NGOs, public administrations, and companies. They include an introduction, a panel with field experts, an inspirational keynote, and an open discussion with the attendees.
The fourth and final event was a collaborative and multidisciplinary session, where participants from different sectors were guided to find common problems and possible solutions. At the end of the day, the outputs were presented and discussed together.

3. Conclusions

The described initiative proposes bottom-up territorial actions, starting by carefully listening to citizens and organisations in the private and public sectors and involving philanthropic foundations and regional institutions to launch initiatives according to the needs that emerged.
The adaptability of this model allows the scheme to be potentially replicated in other territories, the methodology can be periodically repeated as longitudinal analysis and reproduced based on the same research method to extend the survey and the actions linked to the analysed topic.

Bibliographical references

Daphne van Hesteren, Laura van Knippenberg (2021), "Open Data Maturity Report 2021", Publications Office of the European Union, Luxembourg
https://data.europa.eu/en/news/open-data-maturity-report-2021-out
I. Ballatore, C. Bergeretti, E. Bottasso, L. Camiciotti, F. Carbonero, G. Celata, S. Delprete, E. di Cesare, L. Giunti, C. Olivieri, L. Pippinato, C. Racca, A. Selva, V. Smaldore (2020), "Open your data, l'importanza dei dati territoriali nelle strategie di innovazione", Fondazione CRC, Cuneo: https://bit.ly/openyourdata
C. Bergeretti, F. Carbonero, G. Celata, S. Delprete, E. di Cesare, L. Giunti, L. Pippinato, C. Racca, V. Smaldore (2021), "Share your data, Laboratori di innovazione" , Fondazione CRC, Cuneo: https://bit.ly/shareyourdatalab.

Authors
Chiara Bergeretti chiara.bergeretti@top-ix.org

Chiara Bergeretti is a Project Manager at TOP-IX. Graduated in International Affairs from the University of Turin. She has been involved in many EU-funded projects, taking care of the project management, networking as well as of financial and audit management. Moreover, she has been working on different Report and Feasibility Studies on Data.

Francesco Carbonero francesco.carbonero@fondazionecrc.it
Francesco Carbonero is an applied economist at Fondazione CRC (Italy) and contract professor of economics at the University of Turin (Italy). He works as consultant for the International Labour Office in Geneva and Bangkok, as well as with the ITCILO in Turin. His research interests cover macro-labour economics, the impact of digitization on employment and trade, job creation and the search models.

Guglielmo Celata guglielmo@openpolis.it
Guglielmo Celata is technology manager at Depp srl and founder promoter of Openpolis. Among his main activities are those of Software Developer, System Architecture Designer and System Administrator. He oversaw the technological development of the Openpolis magazine and data opening platforms such as OpenParlamento, OpenCoesione, OpenPolitici, OpenBilanci, OpenMunicipio.

Stefania Delprete astrastefania@gmail.com
Stefania Delprete is a data scientist and tech tutor and co-organized the BIG DIVE data training by TOP-IX and the Impact Deal acceleration program.
She currently leads the Italian chapter of Effective Altruism, she is the Italian representative for Mozilla and the Common Voice project, NumFOCUS ambassador.
Stefania graduated in Physics with a major in quantum mechanics and algebraic topology, and she is now pursuing a master's degree in Physics of complex systems in the field of neuroscience.

Ettore di Cesare ettore@openpolis.it
Ettore di Cesare is project manager at Depp srl and founder promoter of Openpolis. Its main activities include Project management in the technological implementation of the Openpolis magazine and platforms such as OpenParlamento, OpenCoesione, OpenPoliti-ci, OpenBilanci, OpenMunicipio.

Luca Giunti luca@openpolis.it
Luca Giunti is a data analyst at the Openpolis Foundation where he mainly deals with territorial data. From the start, as an analyst, he has followed the Educational Poverty Observatory, in collaboration with the social enterprise Con i Bambini.

Laura Pippinato laura.pippinato@top-ix.org
Laura Pippinato is a Project assistant and communication designer at TOP-IX Consortium. She is involved with the creation of UI/UX for start-ups and digital innovation projects. She co-organised courses that aim to increase the culture of data and where she participates as a teacher in the field of Data Visualisation. From 2013 to 2018 Laura collaborated with the Regional Council of Piedmont for the organisation of the Piemonte Visual Contest, an

annual contest that rewards digital projects based on regional open data.

Christian Racca christian.racca@top-ix.org

Christian Racca is senior engineer and program manager at TOP-IX. He is in charge of BIG DIVE and Impact Deal programs and leads various innovation projects in the fields of Civic Technologies, data and startup acceleration.

Vincenzo Smaldore vincenzo@openpolis.it

Vincenzo Smaldore is editorial manager at Depp srl and founder promoter of Openpolis. His main activities include management and planning in the production of editorial content and data analysis. He takes care of the editorial programming of the contents of the magazine, of the information projects of the Foundation and of the Openpolis observatories. These include the Educational Poverty Observatory, in collaboration with the social enterprise Con i Bambini.