Open Data Developments, Opportunities and Challenges in Europe

Lessons learned from Open Data best practices in 2022

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OPEN DATA DEVELOPMENTS, OPPORTUNITIES AND CHALLENGES IN EUROPE: LESSONS LEARNED FROM OPEN DATA BEST PRACTICES IN 2022

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1. Introduction to site visits as part of Capacity Building

As part of the Twinning Open Data Operational (TODO) Project, a series of virtual and physical site visits were organized in 2021 and 2022 as part of the Capacity Building Work Package. The goal of the site visits was to increase the knowledge of the TODO Consortium partners and to expand their understanding of the real-life implementation of open data policies, technologies, and initiatives in different domains. The institutions that participated in the site visits are considered to be among open data best practices in Europe. These organizations included public organizations at different administrative levels (EU, national, regional, local), businesses, research institutions and non-profit organizations. The aim of the site visits was to gain insight in policies and day-to-day practices of open data organizations and in the main challenges they are facing. This paper describes the outcomes of these site visits, and which open data developments, challenges and opportunities are currently going on for open data organisations.

In the original planning, two rounds of site visits for research staff of the University of Zagreb (UNIZG) were planned, with the first round in 2020 and the second round in 2021. However, due to COVID-19 travel restrictions, the first round of site visits was initially postponed from 2020 to 2021. When it appeared that the travel restrictions would not be lifted in the short term in 2021, we decided to organise virtual site visits as online events instead of the first round of physical site visits. Although online meetings have their drawbacks, it was deemed preferable to postponing the site visits yet again, especially as other Work Packages of the TODO project relied on these capacity building events. The virtual site visits also had some advantages. Firstly, more people were able to attend the events. The virtual site visits were open to all interested TODO partners, Early-Stage Researcher (ESRs) and other stakeholders. Secondly, we were able to invite more speakers from organisations that would not have been able to host a group of visitors.

2. Details of the site visits

The first series of two online sessions were held in the last week of June and first week of July 2021. The second series of four online knowledge exchange sessions were held in the last quarter of 2021. The online sessions were organized per domain/topic, or per country. These sessions allowed TODO partners to learn about the latest developments in open data policies and implementation, and to exchange experiences. The invited Open Data speakers presented their experiences and in an open discussion talked about not only the positive effects but also which barriers they have encountered, or which challenges are still to be addressed. The first online session was held as a hybrid event with MSc students at Delft University of Technology (TU Delft) with UNIZG staff attending online. All other sessions were held as online only events. The online sessions were attended by an average of 25 attendees, which was roughly double the number of intended participants of the original physical site visit.

As travel restrictions were eased during February 2022, we were able to organise a physical site visit. The site visit was held between 22 and 24 February 2022 in Brussels. Brussels was chosen as most of the actors and organizations active in the different phases of the open data life cycle either have an office in Brussels or were able to travel to Brussels due to its central position in Europe. Unfortunately, due to illnesses and some restrictions still in place, we were not able to visit all the scheduled open data actors and organisations. **Table 1** provides an overview of the dates of the sessions, the focus of the meeting and the participating organisations.

Table 1. Details of the virtual and physical site visits

Date	Focus	Participating organisations	Comments
29 June 2021	Managing (High-Value) Open Data Platforms for geodata and statistical data	• Netherlands' Cadastre, Land Registry and Mapping Agency (Kadaster); • Statistics Netherlands (CBS)	Hybrid event at TU Delft with MSc. students, TODO Consortium members and ESRs
6 July 2021	Balancing public sector open data and private sector non-open data	• NDW – Netherlands National Road Traffic Data Portal; • Open State Foundation (Dutch NGO advocating open data)	Online event attended by TODO Consortium members and ESRs
15 Nov. 2021	Legal aspects of open (research) data and balancing data protection	• Dr. Alexandra Giannopoulou, Institute for Information Law (IViR), University of Amsterdam; • Dr. Lorenzo Della Corte, University of Tilburg	Online event attended by TODO Consortium members and ESRs
22 Nov. 2021	Data Spaces and Urban Data Platforms	• Renata Ávila of the Open Knowledge Foundation Network (OKF);	Online event attended by TODO Consortium members and ESRs

		• Dr. Marcel van Oosterhout of Rotterdam School of Business	
29 Nov. 2021	Implementing a National Data Strategy in the United Kingdom	• UK Department for Digital, Culture, Media & Sport (DCMS); • Transparency & Data Ethics Team, Central Digital and Data Office, Cabinet Office; • Open Data Institute UK	Online event attended by TODO Consortium members and ESRs
6 Dec. 2021	Open Data in Estonia	• Prof. Robert Krimmer, Tartu University; • Government CIO Office, Estonia; • Dr. Tomislav Vracić, Microsoft	Online event attended by TODO Consortium members and ESRs
8 Feb. 2022	European Data Protection – present and future	• Dr. Stefano Leucci, European Data Protection Supervisor	Online event attended by TODO Consortium members and ESRs
23 Feb. 2022	Open Geodata – opportunities and challenges	• National Geographe Institut (NGI); • EuroGeographics • PSI Alliance	Physical meeting at Royal Military School attended by TODO consortium members and ESRs
24 Feb. 2022	Open Data Implementation in Flanders	• Informatie Vlaanderen; • Open Knowledge Belgium	Physical meeting at the Government of Flanders building, attended by TODO Consortium members and ESRs

3. Main lessons learned from the site visits

From all the sessions, it emerged that although many steps have already been taken to improve accessibility of government open data in many European countries, there are still challenges to be tackled, even by the open data leaders, such as the United Kingdom, The Netherlands and Estonia.

For open data providers one of the main challenges is how to get in touch with open data (re)users in an open data ecosystem. It is important that data providers and data users are in contact to ensure that their specific open data needs are met, such as which data formats and with which specifications. Many open data portals do not require user registration, therefore, there is no way to engage directly with (re)users. Open data providers need to explore other ways to stay in contact with open data users.

Another challenge that was often reflected upon, is the lack of resources in terms of human resources, and financial resources. Both data providers and open data users need more technically skilled personnel to keep up with emerging technologies and ensuing issues, such as data ethics and personal data protection. Open data portals and platform managers need an ongoing financial

commitment to keep the services running, especially if there is an ambition or a necessity to provide a data platform with interactive services and 24/7 APIs, rather than just providing static data catalogue services. With a rapid increase in the amount of data, storage capacity requires more resources, especially for storing historical datasets and older versions after the periodical update. Such datasets can be particularly useful for trend analyses. However, is it within the mandate of the public sector to keep these datasets available as open data, especially if the public sector body concerned is a self-funding agency, responsible for generating income to recover a substantial part of their operating costs?

Trust in general was mentioned in almost all sessions. Trust of citizens and companies in the public sector to provide data in a findable way; trust in the veracity of the data, trust in the way decisions are made; especially when new technologies such as algorithms and artificial intelligence (AI) are employed; and trust that processes are transparent and accountable. And vice versa, trust of the public sector in the private sector that data are reused for beneficial purposes and not misused. And finally, both citizens and the public sector need trust in companies participating in public-private projects, such as Smart City projects. One option for sharing data between the different stakeholders is via data spaces. This concept needs to be researched further.

A lack of digital skills both within the public sector as well as within society is viewed as another major challenge. With rapid technological changes, such as AI, and an increasing use of algorithms, it becomes harder for citizens to understand in which way governments and companies deal with data. But it also becomes harder for the public sector to be able to cope with the ever-increasing amount of data and having to develop new e-services to comply with digital transition strategies. Low levels of digital maturity prove to be a major barrier to building public trust. And without public trust, an open data ecosystem cannot exist, especially considering upcoming developments such as the European Commission's proposals for the Data Act and the Data Governance Act, and digital transformation strategies. Estonia shows that teaching digital skills should start at kindergarten level to ensure a sufficient level of digital maturity. However, keeping digitally skilled citizens in the country is another challenge, as many skilled people migrate to another country with more opportunities.

Finally, recent innovative technologies, such as AI, create new challenges, such as data ethics and (re)assessment of how to deal with the balance between open data and protection of personal data.

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