From Conventional Open Government Data Portals to Storytelling Portals: The StoryOGD Prototype

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ABSTRACT

Governments have utilized Open Government Data (OGD) portals as a means to enhance citizen comprehension of government policies. However, conventional portals are primarily designed for data publication, rather than presentation in a user-friendly manner that facilitates citizen understanding. This limitation is attributable to the lack of time, technical skills, and tools necessary to achieve this objective. Therefore, the purpose of this paper is to address this issue by introducing StoryOGD, a prototype that enables the merging and presentation of data on government portals in a citizen-friendly manner through the use of data storytelling. Further research will investigate the impact of storytelling portals on citizen engagement with open data.

CCS CONCEPTS

• **Applied computing** → E-government; • **Human-centered computing** → Visualization; Visualization systems and tools; Visualization toolkits.

KEYWORDS

Open Government Data, Portals, Data Storytelling, Citizens

1 MOTIVATION & RELEVANCE FOR RESEARCHERS AND PRACTIONNERS AT DG.O

Governments worldwide have been publishing Open Government Data (OGD) primarily on portals with the aim of enabling citizens to better understand government actions. To achieve this objective, citizens must be able to grasp the narratives behind the published data and extract knowledge from them. Data storytelling has emerged as a viable solution for bridging the considerable gap between raw data and comprehensibility that is not addressed by individual visualizations typically used on conventional (i.e., current) portals [1]. Data storytelling can be defined as a process that involves translating data analysis into simple, logical stories comprised of charts that may or may not include analysis, and that can be comprehended by a non-technical audience [2]. Practitioners (e.g., developers, public servants, political representatives) require time, technical expertise, and user-friendly, intuitive tools to create stories from data, which are often lacking [3].

The purpose of this paper is to introduce StoryOGD, a prototype designed to assist practitioners in developing storytelling (i.e., citizen-friendly) portals without the need for coding, thus closing the aforementioned gaps. The prototype is created based on the requirements collected from an exploratory study of websites (https://rb.gy/oqeipl, https://rb.gy/gglgl7) that aggregated open datasets and presented them in a user-friendly manner, as well as the dashboard principles outlined in [1].

StoryOGD is relevant for both practitioners and researchers. Researchers can employ the requirements and prototype to evaluate tools used for building storytelling portals or assess existing storytelling portals. Practitioners can utilize the prototype as a foundation for easily constructing a storytelling portal from any existing conventional portal.

2 SYSTEM DEMONSTRATION: THE STORYOGD PROTOTYPE

The exploratory study of the aforementioned websites enabled us to identify the following requirements: (R1) aggregating data by topic, (R2) creating a dashboard that summarizes the data for each topic following dashboard principles [1], (R3) adding filtering options for each dashboard, (R4) allowing sharing or embedding of the dashboard, (R5) providing information (e.g., data used) on each dashboard, and (R6) allowing the collection of feedback on the dashboard to improve it.

The requirements identified from the exploratory study were incorporated into StoryOGD (available at http://79.143.180.14:7001/home-trans), which comprises a backend and frontend developed using Django, with the former being used to match the dashboards created by the ODE (Open Data Explorer) data storytelling tool [4] with the relevant topics and the latter displaying a list of topics and their respective dashboards, along with various options such as filters, sharing, embedding, and obtaining information.

During the demonstration, the Namur Portal (https://data.namur.be/) will be presented, datasets will be selected to create dashboards, dashboards will be created, the storytelling portal will be set up by
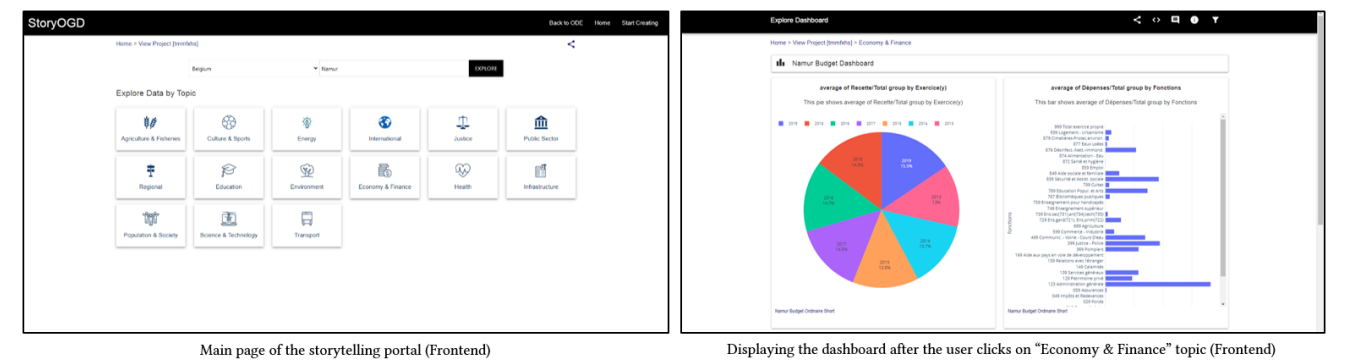
Main page of the storytelling portal (Frontend)

Displaying the dashboard after the user clicks on "Economy & Finance" topic (Frontend)

Figure 1: Frontend screenshots of a storytelling portal example created from data on Namur portal.

linking topics to the created dashboards, and the resulting storytelling portal will be presented; an example of such a portal created using data from the Namur Portal can be seen in Figure 1.

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