

# From data to data's transparency

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**Abstract.** Decades ago governments, businesses and other actors used to make benefit of generated data in order to manage and monitor their activities. However traditionally data cleaning and analysis have been time consuming and thus used to be kept limited of access. Making the governmental data available and easily accessible and reusable increases the information visibility and decision makers, thus it improves the transparency and efficiency. In this paper we present an ongoing project, which aims to enhance the transparency and efficiency in Swiss public administration, by making use of dashboards communication power.

**Keywords.** Democracy 2.0, transparency, open data, dashboards

## 1. Introduction

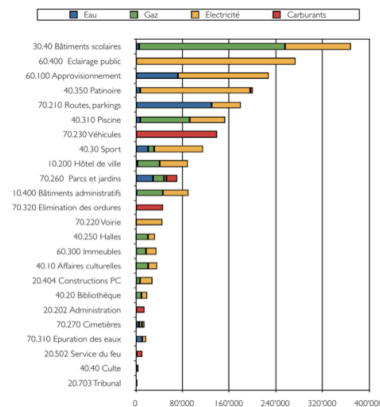
Since 2009, a revolution over the open data approach has gained importance. This revolution is based on the information and communication technology and has been catalyzed by open government directives that have emerged. Making the governmental data available and easily accessible and reusable will increase the information visibility to the citizens and decision makers and thus improve the transparency and efficiency. Nowadays, Swiss public administrations do not make full use of data power in order to enhance their communication services and their strategy of transparency towards the citizens. This paper presents a data transparency based approach conducted over the Swiss public administrations, which aims to enhance the efficiency and decision making in Swiss public administration, by making use of dashboards.

## 2. Approach

In the current structure of a Swiss public administration, the different members of the public body at both strategic and operational levels will hardly share the information. This situation lead to: No transparency, Subjective Vision, Decision-making "feeling-driven", and Inefficiency. We propose to make use of dashboards, which will allow different stakeholders to share the same picture of the situation. This sharing will facilitate the dialogue between the different politics party, and it will help the convergence of objectives. In a first phase these dashboards will be available at public administration to target only the efficiency of internal operations. The actors of these public bodies could then decide to include, for example, these dashboards in the reports presented at the primary assemblies. In a third step, data and dashboards could be

offered to citizens before meetings so that they can take full knowledge and better prepare their questions. In a later stage, the citizens would have the means to contribute to the political implementation by taking advantage of the open data in order to propose open innovation services. In our project we work with a set of public administration, which play the role of pilot administrations. We adopted the following methodology: **(1) Analysis of the current situation:** The analysis of public administration needs is defined through iterative workshops. These workshops include different actors and public bodies in order to make a list of potential needs of public bodies. **(2) Data aggregation:** The collection of data necessary to dashboards is primarily with external partners. Then we format the data for integration, processing and sharing. **(3) Data analysis:** A phase of validation and clustering of data is required depending on the chosen dashboards, potentially heterogeneous sources of data and data mining algorithms to be selected. **(4) Data visualization:** Depending on the areas of activity of public organizations and target players, we conduct analysis visualizations of the most appropriate data. **(5) Validation:** A session with specifically chosen public bodies is organized to provide the results for their field and harvest their feedback. A first study has been conducted over 10 public administrations. It was focused on the energy domain. The analyses were conducted over 10 different communes. A set of different questions was addressed to the public administration. A set of dashboards was designed by combining energetic and financial data revealing hence an overview of the energetic status. In a glance, the dashboards allow to identify the large consumers, the most expensive resources and their evolution over time (Figure below).

These dashboards helped identifying critical points and consequently undertake appropriate decision to investigate in depth the cause of the raised issue. They were a base for discussion to stakeholders and decision makers. These discussions helped enhancing the comprehension of the critical issues. The dashboards have been realized by extracting from the annual account the rows involving water or energy (electricity and heat) using the KNIME software. Then the data are mashed-up in a single view.



### 3. Conclusion

These first results pointed out the issues in public administrations in order to provide dashboards. It confirmed that dashboards seem to meet the needs related to visualization and communication; it also revealed a clear lack of operational tools that public administrations can use everyday for monitoring and driving their decisions.