# OPEN
# DATA
## TUTORIAL

Opening and promoting use of budget data

# Think about sustainability

Opening data is neither a single-day-task nor a static process. Considering the timeliness attribute that ensures data openness, it is also necessary to think about the time for the publication of such data and the resources and general means for their update. In other words, opening data also implies its regular update, and this involves **time investment, human resources and infrastructure needs (mainly technological)**.

Thus, to guarantee the sustainability of an openness strategy in the medium to long-term, it is advisable to weigh, in a realistic and responsible manner, the capabilities of the teams in charge to comply with the following parameters:

### a) Update periodicity

It refers to how often the data set is updated (e.g. daily, weekly, biweekly, monthly, yearly, not defined, etc.). Ideally, it should be updated every time new information is available, which could mean daily; however, as the data has to be reliable, the time for its update depends on how long it takes to process it.

At the same time, the processing times will depend on diverse factors such as:

### Update's Automation Degree.

Because of its sources, some data requires to be captured, integrated, reviewed and manually adjusted by one or many public servants, which may take longer periods.

On the other hand, some data is updated in the open databases by computer applications, so the changes in its content can be reflected automatically (or semi-automatically, in cases where validation is required to transform internal information into public information).

Depending on the situation, the update times might vary.

### Volume.

Even in cases where data is structured and stored in computer systems, the number of records may require additional arrangements with technology departments for the processing of data to a certain level of disaggregation, for example, about storage browsers or data queries.

Therefore, it is necessary to consider the size of the data set to be published, in order to establish its updating periods. It is even possible that because of certain technological restrictions, the highest level of disaggregation will not be feasible in the first iteration. However, it is important to always consider this process of improvement as continuous.

## b) Changes/integrations of the information systems (if any)

Some budget data is usually stored in computer systems from its source, like those related to the accounting monitoring of public resources, transfers to sub-national governments, progress on the expenditures of different public entities, and so on.

However, automatically generated data sets are not published in easy to use formats and they can only be used by information experts, since most of these systems were created to make the internal operation of the ministries easier, without considering its dissemination in open formats.

Then, it is important to consider the necessary adjustments in the technological, human, material and economic resources systems, so they can be opened by default. This is as crucial for the initial stage as it is for the stabilization of the data opened if sustainability is to be attained.

In this sense, the technological applications where budgetary information is kept are not necessarily linked to the compatible technologies that facilitate their connectivity. For this reason, it is important to consider the interoperability of data as an option, rather than the systems themselves. This interoperability can be achieved through the identification of pivot entries that allow moving from one dataset to another one or to incorporate them, which is faster and less expensive.

## c) Technological infrastructure

Opening Budget Data entails having the technological tools for its storage, analysis and publication. The more data exists, the more maintenance is needed, especially if they are manually generated or if they require processing before their publication.

To guarantee openness sustainability, the technological infrastructure installed in the Ministry of Finance, its restrictions and capabilities must be considered. Due to the nature of the information used, such as the dispersion of payments and the reception of State incomes, the technological security is very strict. Thus, it is important to keep constant and straightforward communication between the departments responsible of opening data and the departments responsible for the technology of the Ministry, especially those related to security issues, in order to keep the expectations about the possibilities of budgetary data openness clear.

TIP
The Open Fiscal Data Package (OFDP) is a tool to facilitate the opening of data in an agile way. Its technological infrastructure was developed and tested by other countries and promoted by the **Global Initiative for Fiscal Transparency** (GIFT) in cooperation with **Open Knowledge International** (OKI) and World's Bank **BOOST Initiative**.

## d) Time costs and/or human resources

As improvement is achieved on the Tim Berner Lee's[1] openness scale, open data becomes more oriented to communication between machines; however, they still need humans to exist and ensure their increase in volume, connectivity, opportunity, quality, etc.

To guarantee open data sustainability, the time invested by the public servants working in this process should be considered, as well as how the relevant activities blend with other tasks of their responsibility; on the other hand, it can be decided to assume the cost of increasing human resources by hiring staff to work full time in open data activities, which is more desirable.

It is imperative, in order to reduce policy costs, to consider the previous section about technological infrastructure. The more automated the generating and data publication processes are, the less human resources are required for their preparation, publication and maintenance. This is a subject to be considered when prioritizing the publication of data.

The profile of the public servants in charge of opening budgetary data should not be left aside. Personnel with different profiles should be incorporated and trained to collaborate with information technology teams, experts on effective communication and professionals with learning skills on budget information, so all of them are capable of extrapolating it to the contex of open data.

It is important to notice that the team in charge of the budgetary data opening process should know about the budget cycle, its details and its stages.

[1] Tim Berners-Lee (S.F.) Five-Star Linked Open Data. Available at: http://5stardata.info/en/.

Since the sustainability of data openness is sought at medium to long-term, it is relevant
to think about the users and how to protect them while using our data. To learn more about this
topic, check the following review text about Licenses of use.