Lessons on the use of online dashboards to monitor government plans in Paraguay

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A newly drafted national development plan –NDP– or poverty reduction strategy –PRS–, provide opportunities to deploy monitoring systems through online access to dynamic progress reports on priority programs. While the ideal scope of government monitoring systems may vary depending on their application, most should help to (a) identify areas in which changes to the action plan may be required, (b) provide performance information to keep track of ongoing work as well as changes in the planned deliverables, and (c) complement the results of impact evaluations through management level information on process and decision-making rationale.

Paraguay’s NDP sets forth a vision and 72 targets to the year 2030 –sharing 90 percent of the scope of the United Nations’ Sustainable Development Goals. Also, Paraguay developed *Sembrando Oportunidades*, a PRS that is going into its fifth year and has garnered useful insights in the use of tracking tools and dashboards to monitor service delivery.

Even though the Constitution of 1992 made the NDP mandatory for government and facultative for the private sector, Paraguay’s current plan is the first since 1989. This gap had been previously filled by non-traditional planning functions within state financial institutions. However, reinstating a dynamic planning function in the Planning Secretariat for Economic and Social Development –STP– allowed the Government to lead a consultation process on the country’s foresight and long-term goals, while furnishing expert advice to provide strong links to macroeconomic trends and the budgeting process, with clear prioritization based on consensus and an integrated multi-sector PRS.

Once sanctioned, it became important to design appropriate monitoring strategies to provide feedback on NDP and PRS key indicators. When Paraguay began its monitoring efforts in the field of social programs in the 2000s, these were focused on the impact of the conditional cash transfer program *Tepokorã* and the children’s safety net program *Abrazo*. In the early 2010s, the growth and overlap of these and other emerging social programs prompted the development of a unified beneficiary registry. However, a monitoring system was still required which could produce regular reports for the center of government, program managers and the public.

To service its priority agendas, Paraguay set up an online planning and monitoring system: the Planning for Results System –SPR–, which includes procedures to input and track data on planning and execution of government programs, and visualization through dashboards that support analytical and decision-making needs. Each public institution reports under a weighted value chain that brings together data on budget and contracting (inputs), service delivery information (outputs) and national development
indicators (outcomes). Its dashboards are designed to provide timely feedback while promoting accountability and transparency mechanisms. The purpose of this article is to highlight the challenges and lessons learned from the Paraguayan case.

**Lessons Learned**

The government dashboard for Paraguay’s PRS was designed initially for the President and members of cabinet. Later, monthly reports were released to the public, although not in real time and without the necessary data quality assurance methods. Today, by extending the scope of the SPR to the entire public administration (excepting autonomous local government) the main goal for the dashboard is to monitor progress for each of the NDP strategic goals, including those key priorities related to the PRS.

A good monitoring system must answer the following basic questions: a) How many products have been delivered? b) Who is receiving them? c) What is their cost? d) What is their quality? e) What results has the action plan helped to obtain? In practice, we learned some fundamental lessons in the development process of the Paraguayan monitoring strategy, and its umbrella, the SPR. These lessons may not be universally applicable, but they should provide an initial framework to assess or develop a monitoring system.

Paraguay developed dashboards as a main tool for results based management under the following requirements: i) the monitoring strategy should leverage coordination across public agencies through shared medium term goals; ii) performance information should integrate the most relevant managerial processes, which implies coordinating various supporting functions (planning, budgeting, contracting) and line agencies (health, education, employment, social services, etc.); iii) the quality of information presented in dashboards will be as good as the quality of statistical and geographical input; and iv) feedback on progress and corrections should be timely and transparent for all stakeholders in government (operative, managerial, political) and civil society.

**Lesson 1: the strategic use of monitoring in engaging with the national development agenda**

During his inaugural speech in 2013, the Paraguayan President said: “if after 5 years, at the end of the mandate that begins today, we have not substantially reduced poverty in Paraguay, all the work done will have been in vain.” The government reviewed the PRS and, while considering the elements of former strategies, framed a set of new priorities: household focalization in rural areas; access to basic services; individual support for the extremely poor; income-generating enterprises; strengthened territorial planning; effective monitoring technology; and coordination of public and private networks. A campaign named *Sembrando Oportunidades* was launched alongside a web portal to engage agencies and the public.

To achieve the goal of poverty reduction, public agencies involved in the PRS developed new strategic and operational coordination mechanisms. Additionally, the government continued to set sub-goals like improving nutrition in indigenous populations and bringing in new technologies to improve the productivity of small farms. Every single initiative became subject of monitoring both on site and through data provided to the online dashboard.

The STP also monitors quality of services from the supply side, tracking compliance to national and OECD standards in service delivery, and it has...
designed a quarterly telephone survey to assess end users’ level of satisfaction of key programs. Additionally, the dashboard reflects the value chain framework showing the links between budget execution, deliverables, medium term and development goals set for 2030, all of which strengthen the notion of shared goals among agencies and help maintain a focus on the development agenda.

**Lesson 2: leverage the management strategy by linking planning, budgeting and execution**

The SPR began its development process after the approval of Paraguay’s NDP. Lacking established planning processes, the adequate execution of NDP strategies required the revision and improvement of operational plans at agency level. The SPR was thus developed as an open source\(^1\) and open data\(^2\) results oriented planning and monitoring system with three applications, each with its own set of dashboards and reporting tools. The first is a web app used for planning strategy and product delivery, describing each agency’s policies, its programs and investment projects, its main deliverables, groups of beneficiaries, key indicators, targets and budget. The second web app tracks the execution and presents progress based on the output of deliverables by contrasting geographical coverage, focalization criteria, expenditure efficiency and adequate documentation for auditing, all of which provide information for monthly and quarterly reporting. The third is a mobile data collection app\(^3\) that provides agencies with the ability to input field data for various key performance indicators, mainly used in monitoring the PRS.

The cornerstone of Paraguay’s monitoring strategy lies in establishing an adequate link between the planning and financial processes. The twelve strategies of the NDP became common programs in the budget structure, requiring public agencies to define its budget proposal through an operational alignment to these strategies. An initial one-year pilot involved 38 agencies and from 2016 to date this process expanded to 126 agencies (only municipalities are pending inclusion) allowing all government actions and expenditure to become integrated into the planning system.

When it began in 2013, the government organized its social programs under an online dashboard, but this was only later integrated with the SPR, which brought about the proper link to the budget process. Since targeting and resource efficiency are the basic performance criteria considered in the PRS dashboard, the possibility to assign real budget resources to planned deliverables under the new system created the fundamental basis for monitoring, helping to identify operational opportunity costs and fine-tuning performance targets for social programs.

**Lesson 3: enhance data quality through agile assessment and information exchanges**

To avoid the “gigo” effect (garbage in, garbage out), Paraguay focused on supporting planners and data providers in the process of drafting indicators and setting targets. As elsewhere, “gaming” in setting targets is an issue in Paraguay: easily attainable targets are frequent, while extremely challenging ones may be found partly due to poor techniques and lack of coordination with the information offices.

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1. [github.com/stppy](https://github.com/stppy)
2. [datos.gov.py](https://datos.gov.py)
To face this issue Paraguay adopted a World Bank tool designed to assess the quality of indicators, targets and data sources through a set of self-grading questions where multiple attributes are evaluated and which was adapted in Paraguay for online use through the SPR. Currently, over 1,000 indicators have been identified and assessed by Paraguayan planning heads, who have begun to prioritize as part of a planning and statistical capacity building initiative.

Paraguay also used information technology to improve data quality at its source. The documentation and links to line agency databases where service delivery information is first produced has allowed the deployment of web service backends to regularly exchange data with the SPR, saving time and mitigating possible errors. Likewise, mobile devices were used to collect data by allowing field agents to upload geotagged reports on service delivery, pictures of crop growth, housing projects, among other useful inputs to track performance.

**Lesson 4: develop internal and public reports that support learning and accountability**

The core of monitoring is enhancing organizational learning from both failure and enduring success. Monitoring reports on development agendas must be rich yet synthetic, showing key facts focused on outliers. Reports should explain the results and suggest specific recommendation to be addressed before the next reporting cycle. After various attempts, Paraguay has developed internal and external reports based on its dashboards: internally, they provide raw information on efficiency, comparative analysis and rankings, which are complemented through actionable recommendations designed to support decision making and prevent triggering negative incentives; while reports to the public show coverage and spending, highlighting improvements and opportunities for citizen engagement.

There are three types of consequences derived from using monitoring dashboards. The first is promoting accountability through the systematic release of information on the use of public resources and its various outputs. The second is the identification of potential adjustments such as target definition, adjusting the scope of an intervention or weaving the links among many. Third is to provide supporting information in the process of budget allocation.

In this sense, the monitoring strategy must be complemented with recurrent evaluation. In Paraguay, there are a few agencies independently implementing evaluation functions. Better coordination on evaluation should be developed between center of government and line agencies, strengthening evidence based analysis and decision making through learning and the use of a consistent and long-term evaluation strategy that may further improve policy outcomes.

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