



# Towards open development: Leveraging open data to improve the planning and coordination of international aid



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## ABSTRACT

The purpose of this article is to examine how aid agencies are strategically leveraging open data to improve the effectiveness of aid. Recognizing the vital role of information in international development, aid agencies have eagerly begun to adopt the tools of Open Government within the context of development (i.e. “Open Development”). Examining this trend, the author finds much scope for open data to support the development community’s commitment to improving the effectiveness of aid by adopting a more systematic, coherent, and strategic approach to aid delivery (known as the “aid effectiveness” agenda). An investigation of the current state of the art finds that open data has made significant contributions towards realizing this more integrated vision of aid delivery, but that much of open data’s potential remains unexplored. In particular, the use of open data is still largely focused on supporting after-the-fact reporting functions, overlooking its potential to enable integrated strategic planning and improved coordination across the full spectrum of development actors.

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## 1. Introduction

National and local governments across the world have committed themselves to an unprecedented degree of openness in government by adopting the Open Government principles of: transparency for improved public accountability, participation for improved citizen engagement; and collaboration for improved cross-sector partnerships (Linders & Wilson, 2011). The international development community has drawn much inspiration from these efforts and has shown significant interest in using Information and Communication Technologies (ICT) to *open up* the processes of development so as to improve accountability and coordination and broaden stakeholder engagement.

The UK’s Department for International Development (DfID), for instance, has committed to ushering in “a new culture of radical transparency” with a commitment to “publishing clear, simple data that’s easy to understand” so that development projects can be held to account by both taxpayers and recipients (Mitchell, 2011). Similarly, the United States Agency for International Development (USAID) has adopted an Aid Transparency Agenda for Action within the context of President Obama’s Open Government Initiative (OGI). Multilateral development banks like the World Bank have very much followed in the footsteps of the OGI. Table 1 demonstrates these parallel efforts, with the World Bank lagging the U.S. Government’s initiatives by just a few months across five key elements of Open Government.

This application of Open Government principles within the context of international development has gained the predictable moniker of

“Open Development,” which is now widely regarded as the new anchor for the “ICT for Development” research discipline (Smith, Elder, & Emdon, 2011). To date, much of the focus of Open Development in practice and research has centered on immediate on-the-ground solutions to specific problems—mobile apps for disaster response, “hack-a-thons” for water delivery, citizen consultations on local budgets, etc.

This article will argue, however, that for Open Development to be fully institutionalized, it must become part of the overall development framework—i.e. the “architecture of aid”—that governs the consensus policies, processes, and overall strategy of the traditional institutions of development. Accordingly, the author will examine the potential of ICT, and particularly open data, to systematically improve the effectiveness of aid through integration into the traditional mechanisms of international development for improved strategic insights, coordinated action, real-time collaboration, and joint accountability. Specifically, it will examine the extent to which open data has—and *can*—advance the development community’s “Aid Effectiveness” agenda, which seeks to establish more holistic, strategic, and coordinated approach to international development.

Looking ahead, Section 2 of this article will cover the methodology. Section 3 discusses the vital importance of information to international development, suggesting much scope for the use of ICT and open data. Given that the use of open government and open data tools in the context of aid is today best characterized as experimental, Section 4 will examine the progress made to date in scaling and “mainstreaming” early experimentation by assessing the current state of the art and the main constraints and limitations. Section 5 then builds from this analysis to discuss how these limitations can be overcome through the adoption of new innovations and emerging best practices from within international development as well as by borrowing successful tools and approaches

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**Table 1**  
U.S. Government and World Bank openness initiatives compared.

	U.S. Open Gov't Initiative	USAID	The World Bank
Open site	Whitehouse.gov/open	Usaid.gov/open	Worldbank.org/open
Openness strategy	Open Government Directive (Dec 2009)	Open Government Plan (April 2010)	Access to information policy (July 2010)
Open data portal	Data.gov (May 2009)	Data.gov/list/agency/184/* (Jan 2010, first dataset)	Data.WorldBank.org (April 2010)
Spending dashboard	Recovery.gov (Feb 2009)	ForeignAssistance.gov (Dec 2010)	Maps.worldbank.org (Oct 2010)
Open innovation	Challenges.gov (Sep 2010)	Development 2.0 Challenge (Nov 2008)	Apps4Development (Oct 2010)
		Food Security Open Data Challenge (May 2012)	Apps4Climate (Dec 2011)
International partnership for openness	Open Government Partnership (Sep 2011)	International Aid Transparency Initiative (signatory since Nov 2011)	Open Aid Partnership (Dec 2011)

from other domains. Finally, the article concludes with a discussion on the limits of technology and the need for continued reform.

## 2. Approach

This article is intended as a first step towards identifying areas for collaboration and integration among the studies of international development, aid effectiveness, open government, and information science. The author concedes that the analysis that follows is more broad than deep, in part due to its relatively wide scope. Yet, in line with the aid effectiveness agenda, the author felt it essential to adopt a holistic perspective to ensure that the analysis comprehensively examines the needs and interdependencies of the macro architecture of aid.

To obtain the relevant insights, the author conducted extensive reviews of reports, documents, and strategies issued by the development community to identify the remaining obstacles to aid effectiveness. This included desk reviews of the World Bank's Comprehensive Development Framework, country-specific strategies, national Poverty Reduction Strategies, and reports on the implementation experiences of the Paris Declaration and Accra Accord on Aid Effectiveness by donors, multilaterals, and recipient countries. Building from this qualitative analysis, the author consulted quantitative measures on aid effectiveness, including studies by Publish What You Fund, the World Bank's Country Policy and Institutional Assessments, and the OECD's Paris Declaration on Aid Effectiveness Assessment Surveys.

The results from these studies, from a dedicated review of the literature, and from an evaluation of the tools marketplace are used to identify "best of breed" solutions—data platforms, standards, information exchange, bottom-up project monitoring, etc.—which are then evaluated to assess the current state of the art, on the assumption that these solutions best presented the path forward for all others. This exercise includes identifying information-based solutions that have proven effective in other contexts to allow for a full exploration of the possibilities. Lastly, the author conducted an extensive review of roadmaps, blogs, reports, and other medium—formal and informal—to understand the future direction of the Open Development agenda and its potential for improving aid effectiveness. This analysis was guided by a traditional requirements gathering methodology that translates business needs into system requirements.

The aim of this study is to provide a new, holistic perspective on the role of open data in international development. These high-level observations will offer a foundation that future studies can be expanded upon to achieve the level of depth required for more specific, actionable, and empirically robust conclusions and recommendations.

## 3. Background and context: the vital role of information in international aid

In order to assess how ICT-facilitated openness can improve the effectiveness of aid, it is important first to understand the challenges. This section therefore provides an overview of the constraints to aid effectiveness and the potential for information-based solutions to address

these constraints—and thereby outline a set of requirements around which to develop Open Development solutions.

### 3.1. Defining the challenges to aid effectiveness

Official development assistance (ODA) has at best a mixed record of success (The World Bank, 2011). Researchers are unable to find a clear correlation between aid disbursement and growth rates (Mosley, 1980). ODA's record of success is so spotty, in fact, that a number of prominent economists and respected commentators argue that aid is not only ineffective, but may actually do more harm than good (Easterly, 2006).

The suggested causes for aid's poor track record of performance are too numerous to comprehensively catalog here. But most agree that, at a macro level, it is the result of three key factors:

- *High complexity.* The international aid system constitutes a loose federation of over 150 multilateral agencies, 33 "traditional" bilateral agencies, and a growing list of emerging donors such as China, which together produce tens of thousands of transactions per year (Burall and Maxwell, 2006). This picture has only grown more complicated in recent years with the rise of new global funds (such as for agriculture or AIDs), regional initiatives, and the tremendous growth in activist private foundations and the ever sprawling network of NGO's. Coordination *within* individual donors is often highly complex as well. For instance, the United States possesses a "disjointed and increasingly difficult to manage" aid system "with often competing and contradictory objectives, interests, and processes [that] must appear bewildering and rather difficult to understand, let alone explain" (Blue & Eriksson, 2011).
- *Enormous transaction costs.* This complexity results in an incredible burden on recipient countries. For instance, the small island of St. Vincent with a population below 120,000 must monitor 191 different indicators, while the World Health Fund must produce over 1400 reports to comply with 4600 separate agreements (Burall and Maxwell, 2006). As the World Bank concludes, "coordinating these efforts to support a coherent development strategy—even at the sector level—is nearly impossible" (The World Bank, 2011). Clearly, "there are too many cooks in the kitchen" (Rocha Menocal & Mulley, 2006), and there is widespread consensus that "the system is too complicated and imposes high transaction costs on all parties" (Burall and Maxwell, 2006).
- *Lack of strategic and holistic approach.* Aid has traditionally taken a project-centric approach—build a health clinic here, distribute seeds there, etc. Yet aid projects should not simply be ends in themselves, but contribute to the wider country transformation. Reconstruction after a disaster, for instance, is not simply about fixing physical infrastructure but also preserving social relationships and creating employment. The failure to take this holistic, strategic perspective results in the "micro-macro" paradox whereby agencies often report stellar results at the project-level, and yet aid has not been shown to have significant long-term, sustained impact on a nation's economic progress (Independent Evaluation Group, 2011).

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