



Understanding Data Use

Building M&E Systems that
Empower Users

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International **development actors spend upwards of USD \$2.5 billion annually performing program monitoring and evaluation (M&E)**.¹ Ostensibly, this investment aims to enable data-driven decision-making² in support of institutional accountability and learning, and to achieve better development outcomes.



Yet our work in the Results Data Initiative (RDI) has uncovered a critical flaw in this theory of change. Despite these enormous investments in M&E systems, **staff in donor and government agencies report little to no utilization of M&E data for decision-making**. Rather, the predominant effect of these investments has been an increase of human and material resources dedicated to data collection and reporting, often at the expense of primary service delivery duties and responsibilities.³

Given these high levels of investment in data – and given the value of useful data in supporting evidence-based decision-making for better outcomes⁴ – it is evident that the issue of low data use requires immediate attention.

We propose that achieving data use requires changing how M&E systems are implemented, which requires changing the traditional approach to designing M&E activities.

Beyond identifying technical requirements that reflect policy or program objectives – the traditional approach – explicit effort is needed to ensure that systems are complementary to the institutional and organizational contexts in which they will operate.⁵ For example, national and local organizations working to implement partner country national and sectoral development plans and contribute to the Sustainable Development Goals (SDGs), and/or institutional and organizational contexts, shape the “decision space” of intended M&E data users.

Decision space encompasses institutional policies, programmatic goals, and mandates; and individual operational tasks, incentives, and authority over financial and human and resources. By better understanding decision space, we can better anticipate what types of data would be most useful; what systems would be more or less resource-intensive to sustain; and invest in systems that will be used to support data-driven decision making for better development outcomes.⁶

1. See Powell and Stout (2018) and KPMG (2014).

2. We define decision-making as program management, policy definition, and other inflection points during the implementation of a program, project, or daily work.

3. See Homer (2016).

4. See Open Data Watch (2015).

5. See Lopez-Acevedo, Krause, and Mackay (2012).

6. See World Bank (2004); Birdsall, et. al. (2011); and Andrews, Pritchett, and Woolcock, (2017).

Understanding Data (dis)Use

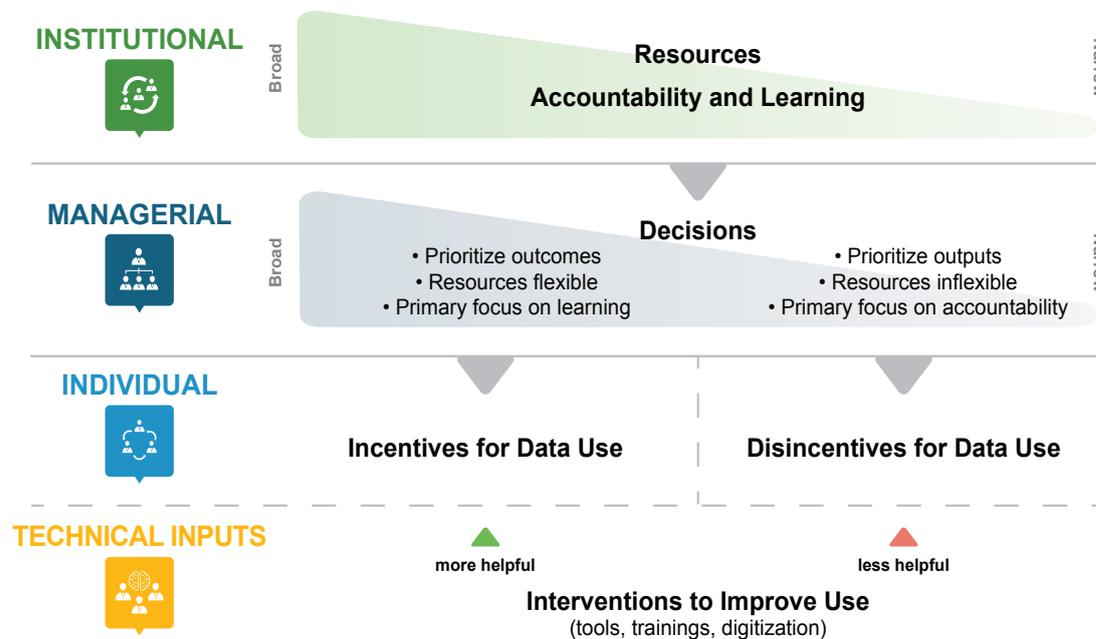
Within the data for development space, there is an implicit assumption that a supply of data, analytical tools, and skills will automatically lead to the utilization of data in decision-making.⁷ However, our and others' research shows this assumption fails to hold true.⁸ We posit that low data utilization can be attributed to a mismatch between how M&E systems are designed, the institutional and organizational contexts in which they will operate, and the decision space of intended system users ("agents").

Institutional and organizational contexts emerge from historical trends in governance, or "rules of the game" regarding the collection, allocation, and disbursement of public authority and finance.⁹

These contexts in turn shape decision space – organizational and individual expectations, incentives, and resources.

Within institutions, **data utilization is heavily dependent upon relative decision space.**¹⁰ The graphic below aims to provide practical meaning to this concept: how an individual's decision space is shaped by institutional factors, and how that decision space in turn affects data uptake. In particular, the graphic emphasizes that levels of control and information on key resources – financial, human, and information – vary significantly according to the agent's autonomy and mandate.

Mapping Decision Space



7. We define decision-making as planning and program design, resource allocation, program implementation, advocacy and policy objective-setting.

8. See Custer and Sethi (2017) and Lee (2016).

9. See Schiavo-Campo and McPerson (2014).

10. Though it is important to note that decision space is not destiny. Individual skill sets and motivation, operational incentives, and authorizing environments can contribute to "positive deviance." See Bhatia-Murdach, Powell, and Kirby (2017) and Homer, et. al. (2016).



Generally, agents at “central” levels have greater clarity, power, and flexibility over the amounts and forms of resources available. Central agents tend to prioritize data related to the achievement of outcomes; and are more likely able to access analytical and intellectual skills to interpret and visualize data.

In contrast, “local” agents – those at service delivery levels – often must manage activities within highly constrained budgets, based on predetermined priorities. **Local agents typically work in settings where operational procedures and monitoring requirements focus on feeding information regarding numbers of activities and outputs “up the system” to inform central budgeting and planning.**¹¹

In principle, local agents’ decision space encompasses delivering a predetermined set of services, and reporting against those services. In practice, **local agents also exercise decision space in terms of the allocation of their time.** Prioritization decisions can contribute to poor data quality, if the agent prioritizes service delivery; or poor service delivery, if the agent prioritizes reporting.

While local agents show significant demand for **outcome** data, gathering, evaluating, and applying that information often requires additional effort, beyond decision space mandates. The competing workloads of service delivery and reporting, coupled with the frequent lack of mandate to analyze and apply outcome information, can disincentivize data use by local agents. Similarly, if an agent prioritizes service delivery – at the expense of reporting – poor quality and timeliness can disincentivize data use by central agents.

Another principal-agent problem arises when a delegated task is not accompanied by the financial resources required to achieve that task. For example, when a sectoral ministry (“principal”) delegates responsibility for population health management and reporting to a district health management team (“agent”) without providing sufficient resources to carry out said mandate.¹² In this scenario, local agents become disincentivized to collect high quality data: because resources are limited, there is a sense that data will not be useful or used in decision-making. As a result, poor data quality again disincentivizes central agent data use.

There can also be mismatches between delegation and information. Delegated responsibility may be too broadly, or too vaguely, defined. **Agents may be expected to “improve outcomes,” but are only able or encouraged to collect and report information regarding inputs and number of activities. As a result, local agents may be “left in the dark” about whether efforts are resulting in positive change in outcomes; or led to consider that doing more of an activity is equivalent to doing it better.**

Importantly, the design of data systems for M&E fail to account for these principal-agent problems, or to properly analyze the decision space of actors at each level. A better design process would involve **(i) mapping out decision space at each level, (ii) identifying which information is relevant to the decisions of each agent, and (iii) matching reporting responsibilities and levels of disaggregation to agents’ needs and constraints.**

11. For example, Tanzania Ministry of Agriculture staff at the central level identified district-level data as being used for ministerial budgeting processes; monitoring national agricultural output; and as an input into gross domestic product (GDP) calculations. See Bhatia, et. al. (2016).
12. Many local agent respondents in the Results Data Initiative drew attention to the lack of relationship between information reported (e.g. gaps in drug supplies or personnel) and authority to adjust or change expected work load or targets. See Development Gateway (2016).



In order to shift decision space in ways that encourage data utilization, some methods of external intervention may be useful. For example, in hierarchical systems, interventions focused at the institutional level may seek to encourage greater alignment of budgetary allocations with outcome measures within and across sectors.¹³ Such alignment would leverage the incentive and accountability systems inherent in hierarchies,¹⁴ and allow for easier analysis of system bottlenecks.

Analyzing and navigating decision space provides a useful framework for developing approaches to foster greater data utilization. This is particularly true if such an approach includes technological development or implementation. Contextualized, institutionally-grounded assessments – in advance of the design and rollout of information tools, capacity-strengthening initiatives, or other interventions – can materially increase the utility and impact of data for decision-making.

Implications and the Way Forward

Current M&E systems are typically designed based on technological considerations of what data must be captured and how. Most ignore the implications decision space has on a system's usefulness for decision-making. When M&E systems and data are not useful or used, this has negative implications for accountability, learning, and development outcomes.¹⁵

The aim of the **Results Data Initiative (RDI)** is to increase the use of data and evidence in development policy making. Through RDI, DG has worked with development agencies and country governments to assess current results information use – and is now working to co-create, test, and scale made-to-measure tools and processes. RDI is supported by a grant from the Bill & Melinda Gates Foundation.

13. Such systems design would need to take care to avoid the principal-agent problem outlined above, and must be accompanied by accountable and credible evaluation and resourcing.

14. See Nutley (2012).

15. Based on the premise that data-driven decision-making supports greater accountability, learning, and development outcomes.

References

Andrews, M., Pritchett, L., and Woolcock, M. (2017). *Building State Capability: Evidence, Analysis, Action*. Oxford University Press.

Bhatia-Murdach, V., Powell, J., and Kirby, P. (2017, October 18). Decision space and development cooperation. *Development Gateway Blog*. Retrieved from <https://www.developmentgateway.org/blog/decision-space-and-development-cooperation>.

Bhatia, V., Stout, S., Homer, D., Baldwin, B. (2016). *Results Data Initiative: Findings from Tanzania*. Washington, DC: Development Gateway. Retrieved from <https://www.developmentgateway.org/sites/default/files/2017-02/RDI-Tanzania.pdf>.

Birdsall, N., Savedoff, W., Mahgoub, A., and Vyborny, K. (2011). *Cash On Delivery A New Approach to Foreign Aid* (2nd ed.). Washington, DC: Center for Global Development.

Brinkerhoff, D.W. (2004). "Accountability and Health Systems: Toward Conceptual Clarity and Policy Relevance." *Health Policy and Planning* 19 (6): 371–79. doi:10.1093/heapol/czh052.

Custer, S., and Sethi, T. (Eds.). (2017). *Avoiding Data Graveyards: Insights from Data Producers and Users in Three Countries*. Williamsburg, VA: AidData at the College of William & Mary.

Development Gateway. (2016). *Increasing the impact of results data*. Washington, DC. Retrieved from <https://www.developmentgateway.org/sites/default/files/2017-02/RDI-PolicyBrief.pdf>.

Homer, D. (2016, September 23). What is the True Cost of Collecting Performance Indicator Data? ICTworks. Retrieved from <https://www.ictworks.org/what-is-the-true-cost-of-collecting-performance-indicator-data/#.W0evTdhKhTY>.

Homer, D., Bhatia, V., Stout, S., Baldwin, B. (2016). *Results Data Initiative: Findings from Ghana*. Washington, DC: Development Gateway. Retrieved from <https://www.developmentgateway.org/sites/default/files/2017-02/RDI-Ghana.pdf>.

KPMG International. (2014). *Monitoring and Evaluation in the Development Sector*. Zurich, Switzerland. Retrieved from <https://assets.kpmg.com/content/dam/kpmg/pdf/2014/09/2014-survey-monitoring-evaluation-v4.pdf>.

Lee, P. (2016, October 12). #LongReads: Moving from Real-Time Data to Real-Time Programs. Reboot Blog. Retrieved from <https://reboot.org/2016/10/12/longreads-moving-real-time-data-real-time-programs/>

Lopez-Acevedo, G., Krause, P., and Mackay, K. (2012). Building Better Policies: The Nuts and Bolts of Monitoring and Evaluation Systems. *World Bank Training Series*. Washington, DC: World Bank. doi:10.1596/978-0-8213-8777-1.

Nutley, T. (2012). *Improving Data Use in Decision Making: An Intervention to Strengthen Health Systems*. MEASURE Evaluation. Retrieved from <https://www.measureevaluation.org/resources/publications/sr-12-73>.



Open Data Watch. (2015). *Partnerships and Financing for Statistics: Lessons Learned from Recent Evaluation*. Washington, DC. Retrieved from <https://opendatawatch.com/knowledge-partnership/partnerships-and-financing-for-statistics-lessons-learned-from-recent-evaluations/>.

Powell, J. and Stout, S. (2018, March 22). On the Money: Getting Funding for Data Right. *Development Gateway Blog*. Retrieved from <https://www.developmentgateway.org/blog/money-getting-funding-data-right>.

Schiavo-Campo, S. and McFerson, H. (2008). *Public Management in Global Perspective*. New York: Taylor & Francis.

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