

Basic Efficiency Resource: A framework for measuring the relative performance of multi-unit programs

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Table of Contents

1. INTRODUCTION	1
1.1 EVALUATION CHALLENGES.....	1
1.2 THE BER SOLUTION	2
2. THEORETICAL FOUNDATIONS	3
2.1 BER'S THEORETICAL ROOTS	3
2.2 BER VARIABLES: EFFICIENCY IS OUTPUT RELATIVE TO INPUT	3
3. PRACTICAL APPLICATIONS.....	4
3.1 SELECTING UNITS OF ANALYSIS.....	4
3.2 MEASUREMENT TOOLS	5
3.3 DATA TYPES	6
3.4 VISUALIZATION APPROACHES.....	7
3.5 INTERPRETATION.....	9
4. FUTURE WORK AND BER DEVELOPMENT	10

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1. Introduction

The last stage for many programs is the final evaluation, which assesses a program's impact and collects lessons learned. However, evaluations typically take place only after a program has concluded, often when it is too late to change the program based on learning along the way. For non-profit or public sector organizations that build monitoring regimes into their programs, or that commission mid-term evaluations, the insights and knowledge gathered can inform corrective actions, which are likely to help the program increase its performance.

The feedback offered by monitoring and evaluation reports is critical to program success. However, evaluators frequently operate in highly complex social and institutional environments where it can be difficult to judge what evidence to collect and how to best collect it. This is made more challenging by the plethora of evaluation methodologies, research philosophies, data collection tools available, as well as statistical considerations. Still, another major challenge is to evaluate the complex interplay between operational units, and to assess their unique contributions to a program's success.

To assist evaluators in overcoming many of these challenges, this paper introduces the Basic Efficiency Resource (BER) model, and presents its theoretical roots. It presents a fictional case study that is used to demonstrate the step required to carry out a BER analysis. Finally, this paper discusses potential applications and invites evaluators to partake in the future advancement of the model.

1.1 Evaluation challenges

Many evaluation projects face the following difficulties:

Simplifying complex multi-unit programs

Evaluators are challenged to measure complex multi-unit programs and to present their findings through a simple overview, which summarises complicated data in a framework that can be used to flag areas of concern, acceptable performance, and high achievement.

For example, evaluators may be commissioned to assess a complex multi-unit program, in which they are required to examine the overall impact of the program and each sub-unit. An evaluation may study a coalition with numerous partners, a campaign with several operating units, a developmental program with several components, a business with various interrelated departments, or a foundation with a pool of interrelated projects. This can become difficult as each unit requires a separate analysis in a way that shows its overall impact and performance relative to other units.

Measuring multi-unit programs can result in assessments that are highly complex and tricky to interpret. An evaluation may offer a report where units are each assessed using different types of evidence, resulting in a vast amount of information that can be difficult to compare.

Many evaluations are about ROI, but ROI is difficult to assess in social contexts

The private sector has an ultimate measure of performance: return on investment (ROI). Many consider it the primary performance metric, which measures the proportion of funds invested in an activity relative to the profits earned. ROI is easily measured in the private sector by comparing figures of financial investments to profits. However, ROI is difficult to measure in the social sector where outcomes are sometimes difficult to define, and often harder to measure.

Despite these difficulties, social sector organizations are often required to demonstrate that they are spending public funds in an efficient way, and that they are achieving a large impact relative to their capacity. Consequently, researchers have developed accounting methods based on ROI that apply to social outcomes. Perhaps the most popular metric is Social Return on Investment (SROI)¹, which the UK SROI network has developed into a systematic framework for measuring the societal payback resulting from investments in social programs². The principles behind SROI reflects the same principles behind many impact evaluations--to measure program efficiency. Although SROI methods offer a way to quantify SROI, the methods can be conceptually demanding, time consuming, and labour intensive.

Nothing is good or bad, except in comparison to something else

When comparing the performance of various units, it is challenging to maintain a relative perspective on performance. It is not uncommon for individuals from poorly-resourced programs to feel that their work may be judged unfairly in evaluations, and to argue that their unit achieved more with less, while other units achieved less with more. In some ways, this notion resembles the concept of equity, where evaluators are asked to hold relative standards of performance that reflect a unit's resources, capacities, and contexts. Moreover, this relative perspective also fits with the concept of SROI, where program output is a function of the invested input. By looking at performance from an SROI perspective, units are seen in a relative light, where their output is a function of their input.

The relative perspective on impact is important. It would be unfair to conclude that a poorly resourced program was ineffective, when it may have made a small, but significant contribution compared with a highly resourced program. At the same time, it would be a mistake to praise a highly-resourced unit for contributing large impacts, when it could be seen to be underperforming when compared to a similarly-resourced unit.

1.2 The BER solution

Seeking to overcome these challenges, Dr. Brian Cugelman and Eva Otero designed the BER analysis as a framework that met some of the criteria set out by Oxfam GB for the evaluation of their global climate change campaign³. The idea was to devise an evaluation methodology that could assess the impact and performance of the global campaign while also assessing the campaign's numerous integrated units.

The BER analysis seeks to (1) provide a simple framework for evaluating complex multi-component programs, campaigns, or activities; (2) build on the basic concepts of SROI to evaluate unit's impact compared to its resources; and (3) offer a relative perspective on performance where the units analyzed are judged in comparison to other peer units.

The BER model is not a stand-alone analytical method. Rather, it provides a helpful piece of evidence which can aid triangulation, which draws on a wide variety of data sources. It can be used in group processes and during the feedback stage of evaluations, to initiate discussions on *why* a particular unit is performing in an unexpected way.

¹ LISTER, G., MCVEY, D., FRENCH, J., BLAIR-STEVENSON, D., & MERRITT, R. (2007) Cost effectiveness of interventions aimed at promoting health and reducing preventable illness. Judge Business School, University of Cambridge and National Social Marketing Centre.

² SROI NETWORK et al. (2009) A guide to social return on investment SROI Network, Cabinet Office, NEF, Charities Evaluation Service, NCVO, New Philanthropy Capital.

³ Cugelman B, Otero E. (2010) Evaluation of Oxfam GB's climate change campaign, Leitmotiv, AlterSpark, Oxfam GB.

2. Theoretical foundations

2.1 BER's theoretical roots

The BER analysis is an adaptation of matrix analysis frameworks used by commercial and social marketers. These frameworks are commonly used to summarize vast quantities of data into visual charts that can aid insight into complex multi-unit programs. In general, these analytical frameworks compare two variables within a matrix that is divided into quadrants. This simple framework helps facilitate management insight and aid their decision-making process.

The BER model was directly inspired by portfolio management matrix analysis approaches from the Boston Consulting Group and the General Electric Grid⁴. The measurement and interpretation approach was inspired by customer satisfaction quadrant analysis by Andreasen⁵. It also borrows concepts from bloc modelling techniques used by social network analysts⁶. Although matrix analysis approaches inspired BER's visualization and analysis approach, SROI inspired BER's two variables: input and output.

2.2 BER variables: efficiency is output relative to input

Although many evaluations start out with the goal of measuring impact, in practice they often evaluate efficiency. There are several reasons for this. Individuals whose work is to be evaluated commonly ask to have their work evaluated in light of the resources they have and the challenges faced in their particular context. They may also wish to showcase innovations that helped them achieve a large impact with limited resources.

Although business accounting can be highly intricate, private sector ROI calculations are generally a simple comparison of investments to profits. However, in the social sector, these concepts are more complex. For example, *input* constitutes a program's resources which may be measured by its budget, number of staff, pool of talent, social capital, or any measure of capacity, concrete or abstract. *Output* measures a program's impact, and will vary according to a program's purpose. Output may be considered behaviour change in social marketing campaigns, public awareness in marketing campaigns, policy change in advocacy campaigns, reduced inequality in a government equality program, improved environmental health in a community environmental program, or any other measure depending on a program's goals.

Input	High	Below Average Efficiency	Average Efficiency
	Low	Average Efficiency	Above Average Efficiency
		Low	High
		Output	

Table 1: BER analysis conceptual model

⁴ KOTLER, P., WONG, V., SAUNDERS, J., & ARMSTRONG, G. (2005) Principles of marketing. (4th European Edition ed.)

⁵ ANDREASEN, A. (1995) Marketing social change. San Francisco: Jossey-Bass.

⁶ HANNEMAN, R. & RIDDLE, M. (2005) Introduction to social network methods. Riverside, CA: University of California, Riverside.

Despite the complexity in comparing input to output, evaluators of social programs are routinely pressured to focus on efficiency. Table 1 presents a simple conceptual model of the BER analysis. In this conceptual model, a unit with a high input and high output is deemed to achieve average efficiency. Similarly, a unit with low input and low output is also deemed to achieve average efficiency. However, a unit with a low input and large output is regarded as above average. Conversely, a unit with a high input and low output is deemed below average.

3. Practical applications

A BER analysis may be incorporated into a diversity of evaluations. Initially, BER was developed as a research tool to assess several campaigning approaches and tactics in an evaluation of Oxfam GB global climate change campaign. Additionally, it was used in the mid-term evaluation of the UN Joint Programme⁷, a rapid assessment evaluation that sought to identify the best practices and lessons learned from the programme to generate knowledge that could be applied during the second phase of implementation.

This section discusses how to conduct a BER analysis, provides templates, and offers practical advice. For illustration purposes, this section contains a fictional example that represents the units typically used by lobbying campaigns.

3.1 Selecting units of analysis

For any complex evaluation, the first step is to identify the units of analysis that will be evaluated. Depending on the nature of the organization, program, or campaign, these units will vary according to the needs of the evaluation.

There are several ways to identify the units of analysis. For example, the organization may have pre-selected these units in the initial evaluation project documents or early consultations. However, in many cases, the evaluator may need to identify them during stakeholder interviews or the desk review. During qualitative interviews, evaluators can ask a range of stakeholders to name the program units that need to be assessed, then build a master list out of this. In a desk review, the evaluator would be charged with building this list from available documentation.

For large campaigns where there are too many units to assess, the evaluators may be a need to define the scope of the BER analysis by developing selection guidelines, such as only including top priority units, or those that meet particular criteria.

For our example evaluation, we have selected the following eight units of analysis: (1) coalition/partnership building, (2) intra organisational coordination, (3) lobbying and advocacy, (4) media relations, (5) online engagement, (6) public mobilization, (7) public relations, and (8) research papers.

⁷ Otero E. Leitmotiv (2010) Evaluation of “Improving Cultural Understanding in BiH” implemented by UNDP, UNICEF and UNESCO.

To organize the units of analysis and prepare for subsequent data collection stages, we recommend using a stakeholder map to keep track of all internal and external informants. The stakeholder map is an exhaustive list of all stakeholders involved with the program, broken down by the units of analysis.

Regardless of how the units are identified, before undertaking a BER analysis, we recommend having the sponsoring organization validate the units of analysis and the stakeholder map. Once the sponsoring organization has validated the list of units and the stakeholder map, the evaluators will be ready to move to the next steps.

3.2 Measurement tools

Evaluators need to collect three pieces of information to conduct a BER analysis: a list of units that will be evaluated, a measure of input, and a measure of output. How evaluators define the units, input, and output will vary from evaluation to evaluation. Table 2 provides an example of possible items to measure. At the onset, evaluators and stakeholders may wish to brainstorm and discuss possible metrics.

Table 2: Example of possible input and output metrics

Input	Output
<ul style="list-style-type: none"> • Program budgets (perceived and/or real) • Number of staff • Staff level, experience, or skill 	<ul style="list-style-type: none"> • How often a lobbying keyword appeared in policy • Number of products generated • Number of people engaged • Perceptions of impact • Measurable change in policy or legislation

The data may be collected qualitatively during interviews, where the evaluator may ask informants about specific units of analysis, or they may ask people to list the three activities that are the most effective, and the three that are the least effective. When coding informant responses, evaluators could use a qualitative interview instrument, such as the example in Table 3.

Table 3: Example of a qualitative BER interview

1. Units of Analysis	3. Perceived Input (Budgets)	2. Perceived Output (impact)
Online engagement	<ul style="list-style-type: none"> •Most •Average •Least •I don't know 	<ul style="list-style-type: none"> •Most •Average •Least •I don't know
Research papers	<ul style="list-style-type: none"> •Most •Average •Least •I don't know 	<ul style="list-style-type: none"> •Most •Average •Least •I don't know
Lobbying and advocacy	<ul style="list-style-type: none"> •Most •Average •Least •I don't know 	<ul style="list-style-type: none"> •Most •Average •Least •I don't know

Once a list of units has been compiled, perception data can be collected in a survey format. Table 4 provides an example where survey respondents are asked to rate each unit on a 6-point Likert-type scale, where one question focuses on the input and the other, on the output.

Table 4: Example of a quantities BER survey

ORGANIZATION NAME has influenced policies or legislation because of the following activities:

	Completely Disagree 1	2	3	4	5	Completely Agree 6	I can't say
Online engagement							
Research papers							
Lobbying and advocacy							

An organizational investment can be measured in terms of money, resources, staff time, or effort. For ORGANIZATION NAME, how much do you believe they invested in the following activities:

	Not Enough 1	2	3	4	5	Too Much 6	I can't say
Online engagement							
Research papers							
Lobbying and advocacy							

In surveys, we recommend using a 6-point Likert-type scale to aid analysis. These scales force users to make binary decisions between high and low categories. This data also offers more visualization options, as it can be transformed to fit continuous or categorical analyses. The 6-point scale can be used to create a continuous graph. As well, it is easily transformed into a four-quadrant BER analysis by dividing the data into even categories: low (1-3) and high (4-6). Alternatively, a nine-quadrant analysis can be generated with three categories: low (1-2), med (3-4), and high (5-6).

3.3 Data types

The two dimensions in the BER framework represent two variables that may be measured in many ways. For example, both could be quantitative or qualitative measures, or they may be mixed, with one measured through quantitative means, and the other through qualitative means.

Quantitative input data may include budgets, number of staff, or combined multi-item resource indices. Likewise, quantitative output data may include process evaluation measures

such as the number of people engaged by a campaign or media hits. Qualitative measures can include perceived program investments and the perceived output achieved.

There are cases where mixing data types may be advantageous, such as when budgets are readily available and can be compared with informants' perceptions of impact. However, when figures are combined, this can cause complications as it is easier to compare the same data types measured on the same scale, rather than combining two different data types measured on different scales. In cases where the measures are radically different, evaluators may be forced to undertake statistical transformations. This is methodologically acceptable, but may make it difficult for readers to understand what the outcomes mean⁸. In many cases, it will be more practical to measure both input and output variables through qualitative means.

For evaluators that do not have the time or capacity to collect hard impact evidence, we recommend collecting user perceptions as proxy measures of input and output. This approach allows the evaluator to choose one common scale to compare both variables, which will simplify comparisons and visualization techniques. For example, when both input and output perceptions are measured on the same scale, it is easier to combine them without having to resort to statistical transformations.

3.4 Visualization approaches

There are a number of visualization techniques that may be employed when conducting a BER analysis. Evaluators will have to select their preferred presentation methods based on the purpose of the analysis, the number of units, and data types. As well, evaluators need to select accurate titles for the input and output variables. For example, it may be tempting to label the x-axis "impact", when it could be more accurate to call it "perceived impact". Likewise, the input axis should list the specific input, whether it's "perceived resources", "budgets", or "number of staff".

Depending on the level of detailed required, evaluators may wish to select among continuous or categorical data. Figure 1 presents an example of a continuous BER analysis of an advocacy campaign. The Y-axis represent financial investment perceptions on a scale where 1 represents low investment and 1 high investment. On the X-axis, 1 represents low impact while 6 represents high impact.

⁸ Statistical transformation may include converting measures to z-scores, performing a logarithmic transformation, or re-scaling two separate scales to the same scale. Although these are all viable statistical solutions, they present conceptual complications, as readers may not fully understand what these transformations means, and may question the significance of findings based on these modifications.

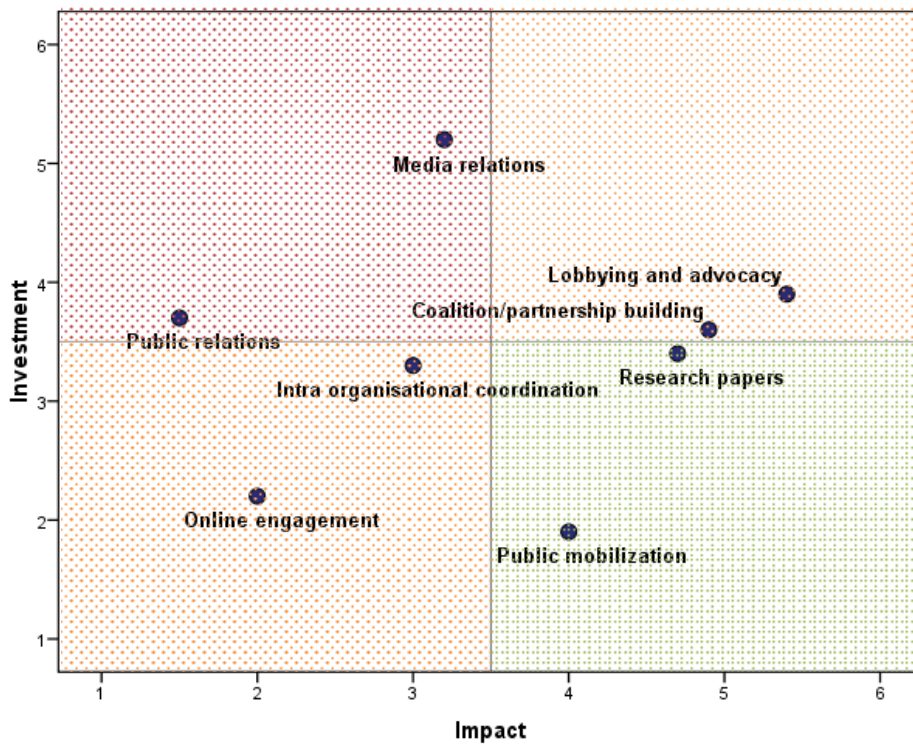


Figure 1: Continuous data BER analysis

Categorical data are measures describing impact as high, medium, or low. Or as *made an impact*, or *made no impact*. Categorical data may be easier to collect and process, though this will come at a price later on, as it will be difficult to use the data for any detailed analysis.

Table 5: BER analysis with two categorical divisions

Input	High	<ul style="list-style-type: none"> • Media relations • Public relations 	<ul style="list-style-type: none"> • Lobbying and advocacy • Coalition/partnership building
	Low	<ul style="list-style-type: none"> • Intra organisational coordination • Online engagement 	<ul style="list-style-type: none"> • Research papers • Public mobilization
		Low	High

Output

The number of quadrants should be selected to balance the volume of units, desired precision, and practical application. Table 5 shows a simple BER analysis with two categories (high/low), which may be good for a simple overview. Table 6 presents a three-category (high/medium/low) analysis that may offer a better tradeoff between insight and simple data collection.

Table 6: BER analysis with three categorical divisions

Input	High		<ul style="list-style-type: none"> Media relations 	<ul style="list-style-type: none"> Lobbying and advocacy
	Medium	<ul style="list-style-type: none"> Public relations Online engagement 	<ul style="list-style-type: none"> Intra organisational coordination 	<ul style="list-style-type: none"> Coalition/partnership building Research papers
	Low			<ul style="list-style-type: none"> Public mobilization
		Low	Medium	High

Output

Still, Figure 2 presents a simple means of presenting a BER analysis, where the output measure is divided by the input measure, providing a simple indication of when units are over or under performing.

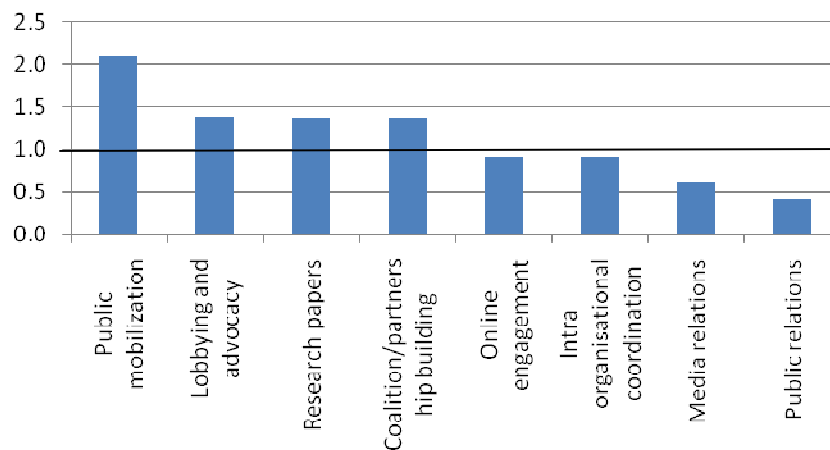


Figure 2: Bar chart (Efficiency= Output/Input)

3.5 Interpretation

The four quadrants of the BER analysis provide a perspective on efficiency, denoting average performance, under performance, and over performance. Although the quadrants correspond with various performance perceptions, we advocate avoiding rash conclusions such as interpreting these components as binary good/bad evaluations. Instead, we propose interpreting the visualizations in light of qualitative data, insight into the units of analysis, and knowledge of how these units interact.

Interpreting a BER analysis requires an understanding of the units of analysis and the informants who participated in the evaluation. Consequently, we advocate using BER in conjunction with other data, and never as the only analytical approach. When impact is based on stakeholders' perceptions, interpreters need to be aware that stakeholders may not be sufficiently informed of the program, and may hold views on the impact that contradict other evidence. Consequently, informants may judge an inefficient program to be efficient due to a program's public relations. Likewise, apparently underperforming units may contribute a large impact, but stakeholders are not aware of the unit's contributions. In addition, some units may exert indirect impacts through the support they provide to other units. For instance, an

administrative unit is unlikely to make a direct impact on an organization's advocacy goals. However, the administrative unit may support the organization's lobbyists who would be unable to function without the administrative support.

The best use of BER is as a starting point for deeper discussions into the performance of units, their challenges, opportunities, and operating environment. In this regard, the chief use of BER is to initiate dialogue on numerous "why" questions. A BER chart offers a good starting point for asking "why" programs may be clustered in their particular quadrant. For example, why would stakeholders perceive a program to be in quadrant X, when others believe it is performing in the opposite way? In this regard, it may be worth contrasting internal and external views. Moreover, during mid-term evaluations, this provides a useful form of feedback and offers a platform to discuss options for corrective action.

Moreover, not all units within a program operate under the same conditions. Some operate with objectives that are easier to achieve, while others may operate in hostile environments. Low performance may be a function of context, and this needs to be addressed when interpreting results. These contextual factors may be critical in understanding why a unit has performed in a particular way.

Although matrix analytical frameworks can aid decision making, they simplify complex information and should not be relied on alone. As Kotler et al. (2005) noted, reliance on matrix approaches prompted several companies to sell off strategic assets and plunge into businesses that they lacked the experience to manage. It is easy to draw conclusions from the simple visualizations that would never stand in the face of a deeper understanding of the reality behind the chart. The BER framework offers a useful summary, but like many analytical frameworks, it needs to be used by people who understand the context.

4. Future work and BER development

Although this paper discussed a lobbying campaign application, the BER framework could be applied to numerous applications. For example, it could be used for a quantitative study that compares the financial investments in institutions' websites with their online impact. It could be used in a more qualitative sense, as part of a developmental evaluation process, to help institutions understand how different departments interact and how each unit is perceived by colleagues. Moreover, it may be used to assess individual tactics and activities, rather than units.

However the BER framework is used, the authors of this paper invite anyone who uses the model to share their experience. Additionally, any feedback is welcome in the BER Facebook group.

<http://www.facebook.com/group.php?gid=143779348990230>

Glossary of Terms

Terms	Definition
Effectiveness	Capacity to produce an effect or achieve a goal.
Efficiency	Doing things in the most economical way, such as an activity that achieves a high output with a low input.
Evaluation sponsor	The organization, or their staff, who have commissioned an evaluation.
Multi-unit program	Any program that comprises numerous interdependent units, such as a campaign with different departments such as a lobbying unit, communication team, media unit, and research department.
Program	For this paper, we refer to a program as the object of an evaluation, whether it is an organizational department, or a campaign.
Return on investment (ROI)	A performance measure that compares the amount of money invested in an activity with the profits earned.
Social return on investment (SROI)	The application of ROI to social sector contexts, where the social return constitutes the impact of a program, and the SROI represents the social return as a function of the money invested in that program.
Units (units of analysis)	The operation units that are being evaluated, whether they represent a department, campaign, program, or a complex blend of numerous small units (activities, strategies) comprising a larger program.

About the Authors



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Leitmotiv works to improve the professional, national and international contexts for social development and international aid. We provide support, advice, and technical assistance through project and programme evaluations, training, and support for strategic processes.

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Our company specializes in online measurement; we use science-grade research tools and processes to conduct online impact assessments and studies.

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