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Abstract

Taking inspiration from studies of performance measurement systems and an understanding of the materiality of inscription devices, we examine how a loose network of funding agencies and non-governmental organisations (NGOs) assemble a performance and management system out of accountability requirements. As part of the funding process, international development agencies provide NGOs with a series of planning and project reporting requirements such as budgets, operational plans, and strategic plans. Our study focusses on how these requirements' visual features enable users to perform the calculative properties of the performance system, as a whole. Specifically, we learn how a planning and performance measurement device such as the logical framework accumulates financial, chronological, and strategic modes of ordering through a *patchwork* of interventions to address perceived and/or unexpected shortcomings. We find that it is not just a matter of adding patches to improve, but also about fostering engagement with the changing assemblage of devices and development concerns. Our study is based on field research in Guatemala and El Salvador and contributes to our understanding of how governing bodies intervene in the constitution of a calculative workspace. By analysing an accounting system's relation with other devices and their modes of ordering and calculating, we learn how a workspace for providing accounts is assembled and engaged with for actors to perform a mode of governing.

Keywords: logical framework; performance measurement systems; inscriptions; materiality; international development; engagement;

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1. Introduction

Giving accounts through performance measurement systems typically involves an assortment of complementary and interconnected forms and templates to (re)present performance in particular ways. The literature on inscriptions and accounting devices (e.g., Thompson, 1991; Robson, 1992; Chua, 1995; Quattrone, 2009; Davison, 2015), has been quite important for the study of such systems. Studies of the evolution and use of performance measurement systems, for instance, highlight how system designers and users intervene through the inclusion of additional inscriptions to alter or "update" the performance system, elaborating how performance is visualized and conceptualized (Cooper, Ezzamel, & Qu, 2017). These interventions often involve the addition of features that are intended to improve the dimensions and valuations of performance and/or make the systems fit local needs and understandings (Speckbacher, Bischof, & Pfeiffer, 2003; Ittner, Larcker, & Randall, 2003; Busco & Quattrone, 2015; Chenhall, Hall, & Smith, 2013).

We wish to emphasise two relatively neglected features of these sorts of interventions: how are the inscription's visual features implicated in these interconnections and how do they enable the performance system to accumulate calculative properties. As we will elaborate soon, these are important because, first, visual features point us to the nature of how a performance measurement system, as a composition of inscriptions and aspirations, is added to and modified. Rather than focus on individual systems, we highlight the interaction between multiple measurement systems and how managers work with these to provide accountability and/ or to help them manage. Second, the accumulative dynamics of interconnected inscriptions helps us elaborate the concept of engagement, a term widely, but somewhat casually, used. In doing so we shift the focus away from the study of how accountability and management technologies intervene to make a population legible and manageable (Neu, Gomez, Graham, & Heincke, 2006; Rahaman, Neu & Everett, 2010; Martinez & Cooper, 2017) to an account of how such technologies are themselves intervened, made practicable, engaged with, and seen to be (more or less) effective.

To learn about this, we study the logical framework (henceforth LF), a prominent system in government and international development, and how it interconnects with other control devices deployed in international development management and accountability. We conducted a field study of international development organizations in Guatemala and El Salvador, studying the project funding and performance measurement documents of bilateral and multilateral funding agencies, domestic and international non-governmental organizations (NGOs), municipalities, and consultants. By examining project proposals and monitoring reports we learned about the management and accounting inscriptions designed by funding agencies for NGOs to plan and account for their projects. Budgets, operational

plans, strategic plans, and LFs make up a system of devices that NGOs fill to access, practice, and account for development funding.

Studying visual features and the accumulation of inscriptions that compose a performance measurement system allows us to productively add to understandings of engagement. The performance measurement and management literature has already provided some insight into engagement. Quattrone (2009) and Busco and Quattrone (2015) highlight how visual "absences" encourage users to engage with the Balanced Scorecard (BSC). Cooper et al. (2017) discuss engagement as the sustained usage by a network of committed actors (users, designers, and others) in popularizing of the BSC. Townley, Cooper, and Oakes (2003) emphasise how managers engage with performance reports when they feel connected, or attached, to their own designs, customizations and opportunities to express their own problematics and narratives. While we do not offer a definitive analysis of the term, we add to these different notions that engagement is the persistent need, whether coercive or not, affective of not, to perform a composition of inscription devices and accountability concerns, fostered by what we call patches.

These patches are "layers of technology and bureaucracy" (Pollock & D'Adderio, 2012, p. 581) that are added to the LF—a *patchwork*-type of intervention where devices act on one another to "fix" an unexpected and perceived shortcoming, like lines of code to fix or change software. It is not just a matter of adding a patch, though. These patches have to be performed by users. They include visual pathways, materially inscribed guides and instructions, which are central for fostering engagement with the inscriptions—the often-seen carefully numbered and labelled cells that inform users where to input totals from one page into a cell in another. These visual pathways are central for not only how users engage with these patches, but how these patches add and accumulate calculative functionalities to the performance measurement system.

Through this notion of engagement we show that the LF, much like the BSC and European Foundation for Quality Management (EFQM) systems and their templates, is engaged with through the addition and accumulation of other planning and measurement devices that seek to integrate calculations into its *causal* mode of project design. This process of accumulation involves form-fillers copying and pasting information from one inscription to another. By studying the visual pathways of these inscriptions, and how users perform them, we show how the different devices patch-in *financial*, *chronological*, and *strategic* modes of calculation into the LF's *causal* order. This is a process of accumulating the inscriptions that constitute the performance measurement system that funding agencies design for NGOs to report their projects or that NGOs use to manage their projects. Such a system is composed of interconnected inscriptions that visually engage users on how to perform them individually and as a whole, amidst changing performance concerns. As such, engagement is not only continued usability (Cooper et al., 2017). It is also about fostering it by patching-in and accumulating

calculative orders, by recontextualizing (Hull, 2012, pp. 23-4) then into the larger composition of inscriptions and aspirations that make up the performance measurement system—but as we will see, while fostered by funding agencies, NGOs also make some of these patches their own, by selectively and creatively engaging with them. That is, through these patches the LF can engage with the agencies' changing development aspirations (e.g., for "improved" accountability) and even engage with some of the NGO's own aspirations (e.g., for "improved" efficiency), to help maintain the LF as a usable inscription device. As we will develop in the discussion, engagement is inspirationally and materially fostered—and users can engage selectively and creatively.[1]

Our findings have implications for the study of performance measurement systems. Our focus on accumulation, patches and engagement gives centrality to the role materiality plays in integrating inscriptions into, and distributing their calculability throughout, a performance measurement assemblage (Deleuze & Guattari, 1987). The patching of inscriptions that we document is part of a process where users are technologically and bureaucratically entangled (Pollock & D'Adderio, 2012, p. 581) and we trace how these patches distribute calculative orders throughout the system of interlocking inscriptions. These patches include "the specific sociomaterial features of a graph" (ibid, p. 566) that inform how users perform certain types of financial calculations (Miller & O'Leary, 2007), but also "spark digression" (Reed, 2006, p. 175) and other unexpected uses (Riles, 2006a)—that is, adding patches, while often done in the spirit of improvement, may (or may not) be considered successful by those involved and in some cases they are practiced whether they are coercively required (or not) by funding agencies.

To summarize, our motivation is to trace the visual pathways among the devices (see Appendix C for an overview) thereby showing how inscriptions and their respective calculations are connected, performed, and impact one another and the system that they compose. This provides an account of the way designers and users intervene through a patchwork of devices around the LF to foster engagement with the device itself, the practice of accountability, and international development concerns (notably over effectiveness and accountability). Tracing the pathways also provides an account of how a loose network of funding agencies intervene around a device and the expected and unexpected ways these interventions are performed by user NGOs. In contrast to Neu, Everett, and Rahaman (2009) and Martinez and Cooper (2017) which focus on how an assemblage of agencies and NGOs is brought into being, we examine how the inscription devices that they use to constitute these assemblages are themselves assembled for users to perform.

[1] What we don't learn, and is beyond the scope of our study, however, is whether these sorts of interventions has led to more sustained and consistent form-filling practices by NGOs or how the information generated from the integrated devices are used by the funders. (See also Appendix B for the implication these interventions have on accountability practices)

Our article proceeds as follows. In the next section, we outline the relevant literature on inscriptions and engagement to conceptualise our study. In Section 3 we present the research methods and the field study. Section 4 briefly describes the LF's features and situates its usage in international development. In section 5 we present our findings, showing how the LF interferes with budgetary, operational, and strategic management and accounting devices. In section, 6 we discuss our main findings, contributions, and implications.

2. Engaging a calculative workspace

We study the material features implicated in introducing funding agencies' aspirations into a *workspace* of interlocking inscriptions. This workspace is equipped with agencies' accountability requirements for NGOs to give accounts—it is a "visual performable space" (Busco & Quattrone, 2015, p. 1246) where the funding agencies' aspirations for improve accountability, their designs, and performances intervene with one another. This space is abstract and yet "very material: for [it is] made up of inscriptions and specific calculations" (Rose, 1999, p. 213) that enable certain ways of acting in the space. As Quattrone, Puyou, McLean, and Thrift (2012, p. 6) explain, "For a performance to happen, specific spaces for action and mediation are required. In many organizations, these spaces could be constituted by various platforms which prompt and around which, some performance happens." For example, scientific management links different objects together under the same model: "Taylor brings all these objects together into a single mechanism so that they become articulated parts of a single structure" (Thévenot, 1984, p. 7). One way to think about this bringing together into a material and calculable workspace, is as an assemblage (Deleuze & Guattari, 1987).

The concept of assemblage has been used in accounting research to highlight a loose arrangement of diverse elements—related terms include agencement, complex, constellation, arena, and network (see for example, Burchell, Clubb, & Hopwood, 1985; Miller & O'Leary, 1993, Miller & Power, 2013; Martinez & Cooper, 2017). In this paper we do not develop the concept of assemblage in detail since our focus is on the materiality of inscriptions. Instead we simply accept that an assemblage "is both a process and an outcome" (Neu et al., 2009, p. 321) whereby material and discursive components are arranged, act on each other, and give rise to an emergent whole (i.e. not just the sum of parts). Our use of the concept emphasises the dynamics of the calculable workspace: that its elements are shifting and changing, often organically and in an emergent manner.

Funding agencies provide NGOs with this assembled workspace for "action and mediation" (Quattrone et al., 2012, p. 6) by inscribing it with the visual pathways for them to perform. This is based on the idea that visualizations are powerful. Pollock and D'Adderio (2012) write that accounting visualizations contain a "format and furniture" that constitutes the domain it visualizes. Accounting inscriptions, that is provide, "a vision, a guide, a practice which helps to discover how to do things"

(Quattrone, 2009, p. 100). Similarly, for D'Adderio (2008, p. 773), "rules and procedures are embedded in technological artefacts." By inscribing technologies with such scripts, "dominant interests are reflected in the form and functioning of the technology" (Orlikowski, 2000, p. 405). As such, funding agencies inscribe scripts into devices, which enable their integration with other inscriptions (Jordan, Jørgensen, & Mitterhofer, 2013) and calculations (Miller & O'Leary, 2007; Pollock & D'Adderio, 2012). These scripts provide the visual pathways for users to perform the integration of templates, that is, the combination of different modes of ordering project components into an evolving calculative whole.

Examining how these visual features are implicated in the making of a calculative space is central for our understanding of engagement.[2] Townley et al. (2003) highlight how an unstructured performance system allowed managers to be actively involved in constructing narratives of performance. Managers were committed to their own designs, to telling their own performance stories and became cynical and less attached to them when confronted by templates designed elsewhere. For Cooper et al. (2017), engagement, as sustained usage, is related to building robust networks and producing success stories. For them, the BSC has been "accepted and even a taken-for-granted component of 'good management'" (p. 992). This type of engagement with the BSC is the result of network building by the promoters. An important way in which its promoters persuaded allies to coalesce around the device is through the device's visual features: its format helped transmit its intuition thus "winning over people with skeptical views" (p. 1012).

But Cooper et al. (2017) only go so far in examining how the BSC's visual features explain its continued engagement. This contrasts with Quattrone's (2009) study of the visual features of accounting manuscripts and Busco and Quattrone's (2015) study of the visual features of the BSC, which stimulate engagement through both presences and absences. Notably, gaps are "left for appropriation by the user rather than simply to a supposedly existent underlying logic" (Quattrone, 2009, p. 104). In the case of the BSC, it "engages users by offering them a space in which they can perform a work of strategy composition, where they can imagine various meanings for abstract strategic imperatives, objectives, KPIs, and the possible links between them (Czarniawska 1998)" (Busco & Quattrone, 2015, p. 1246). Similarly, several field studies, including Qu and Cooper (2011), highlight how users are stimulated to "populate" scorecards by filling gaps and constructing meanings through the use of local knowledge.

[2] There is an extensive literature in advertising and computer science on visual representations and user engagement (Attfield, Kazai, Lalmas, & Piwowarski, 2011). Software such as Facebook and Twitter have used the notions of "likes" and "shares," which can be understood as affective engagement, to develop their networks. This literature is largely irrelevant for our analysis of engagement as it is typically functionalist, focussed on designer choices, and insufficiently socio-material to provide an organizational understanding of the operations of devices.

These prior studies are primarily about one performance device. We extend their argument by highlighting engagement fostered through the accumulation of devices—the device's relation to an assemblage of devices and aspirations acting on one another. Accumulation is important because, as designers add layer upon layer of inscriptions, "the cost of dissenting increases with each new collection, each new labelling, each new redrawing" (Latour, 1986, p. 13). And yet, as Quattrone argues, openings are still left "…as the designer is never omniscient and thus gaps are always left for the user to colonise" (2009, p.104). Designers and users intervene to address these gaps through patches. These patches are not just meant to fix a shortcoming, like lines of code to fix software. These patches are an essential part of how the workspace is engaged with, that is how users remain involved with the emerging workspace: by inciting the performance of visual associations amongst devices and of their emergent functionalities and by performing them in unexpected ways thereby necessitating further interventions that (re) contextualizes (Hull, 2012) them in agencies' and NGOs' changing aspirations.

One can think of embedding devices in one another, of patchworking, as *recontextualizing* practices. As Hull (2012) writes, for designers of bureaucratic documents, the concern is that they become "radically decontextualized or drawn into new associations" (p. 26)—that they take another life and functionality that may undermine bureaucratic ambitions. For Goody (1977), lists decontextualize by placing a sentence's linguistic components into another context and other sets of relations. While Goody was interested in the cognitive effects of such decontextualization, Hull highlights how the list itself is placed in another context and how it affects its role and significance (p. 200). He explains that "[a]n artifact is decontextualized, disconnected from some of the elements it was associated with, only by being recontextualized, brought into association with other elements" (Hull, 2012, p. 25). Visual features play an important role here. Fostering engagement through an inscription's visual pathways is important for the performance of the workspace, because it engages users to perform associations that recontextualize the LF in an assemblage of agency devices and development aspirations.

Visual pathways enable users to engage with and perform these contextualizing activities. Each device adds an order onto the LF's calculative base. We will show that the LF introduces a causal-sequential order, the budget introduces a financial order, the operational plan a chronological order, the strategic plan an order of specialization, and the impact chain a transnational target-setting order into the account-givers' workspace. This is not just about devices adding a calculation or an order, but also about how these calculations are connected to one another; that is, how their design fosters engagement with the assembled whole—to do the budget and operational plan, one has to do the LF, to do the LF one has to do strategy, etc. Each device is a self-contextualizing entity (Riles, 2006a, p. 20): it contains the terms and materials needed to complete them. Each device also contains the terms and materials to engage with the totality of devices that compose the workspace that they are a part of. To contextualize

is to perform the device and, in so doing, engage with a broader set of interlocking devices and calculations.

Our study of engagement is mainly about interventions around the "prepared environment": the complex of devices brought together and "adjusted so that they work together" (Thévenot, 1984, p. 6) as a workspace. We don't document how information circulates from a distance or through chains of translations from periphery and centre (Callon & Law, 1982; Dambrin & Robson, 2011). While our emphasis develops Thévenot's work on how environments are prepared for performance, it differs from his work on how this environment is engaged with. His notion of engagement revolves around an interest in how the individual coordinates with the social and material environment. That is, individuals have different "regimes" for engaging with the world—for Thévenot, these regimes are cognitive frameworks actors use to interpret and intervene in a situation. Our notion of engagement is not about the actors' cognitive framework implicated in how they intervene in the world. Nor is it only about a user's emotional attachment to the device (Hennion, 2017), as highlighted by Townley et al. (2003). While the devices that we study are cognitive devices, we develop another approach to study them by highlighting the visual and calculative connectivity and their accumulation implicated in making them work, that is, making them continuously engageable. We emphasise the unexpected and patchworked-way inscriptions are mobilized and how they provide a visual and calculative means to engage with a changing assemblage of patches and their efforts to (re)contextualize the LF in changing funding agency and NGO aspirations and concerns.

To summarize, we emphasize engagement fostered through the accumulation of devices and their visual features. Agencies provide users with visual pathways for them to perform the accumulated devices and calculations that compose the emerging workspace. Given that assemblages shift and change, these patches add layers of contextualizing material around the LF for users to perform both their, and funding agencies', development and managerial aspirations. These patches and processes are incomplete and resources are finite, so what gets attended to will depend on the specifics of the field.

3. Research method and field study

We learned throughout the field study that we were dealing with an object "that wasn't fixed, an object that moved and slipped between different practices in different sites" (Law, 2004, p. 79). Investigating the accountability workspace proved challenging, given the diversity of agencies, devices, and NGOs, and their aspirations. This is even so for a specific device, such as the LF, which was talked about in our interviews as having a clearly identifiable matrix, while also being altered; as a tool to design projects, but also to monitor them; as an agency requirement, but also something NGOs used out of their own volition; as a device with visually identifiable boundaries, but also inseparable from the other devices. We realised that, even if we wanted to, we would not be able to depict a clear narrative, whereby

the object is assumed to change in a linear manner over time and space (Quattrone & Hopper, 2005, p. 222). The LF and the other devices that populate the workspace are varied, are distributed throughout the field, and are experienced differently by the various NGOs that use them. Thus, similar to Lynch's (1988) illustrations from science textbooks, Law and Singleton's (2005) discussion of alcoholic liver disease, and de Laet and Mol's (2000) analysis of a water pump, we provide a "patchwork image" (Mol, 2002, p. 151), or snapshots, of this workspace. We focus specifically on a series of snapshots of interventions involving the LF.

This does not mean that the LF and the workspace it is a part of are anything and everything. We focus on the conditions that enabled the devices to be assembled and performed in the field of NGOs. We investigate how devices, and, more generally those involving performance measurement, accountability, and international development, were problematized and intervened for various reasons by funding agencies and how NGO directors, project designers, and technicians talked about, modified and practiced the devices.

Our examination is based on two field trips, in 2010 and 2011, to El Salvador and Guatemala. Over the span of 14 weeks, 67 interviews were conducted with staff from bilateral and multilateral aid agencies, international and domestic NGOs, municipal governments, project evaluators, and consultants (see Appendix A).[3] Our interest was mainly focused on the domestic NGOs accessing international development funds and the forms they had to complete. These NGOs are for the most part dependent on external financing (Banks, Hulme, & Edwards, 2015), which put the staff (NGO coordinators, project designers and technicians, and accountants) in a position to talk informatively about these requirements as they encounter them through the project cycle—from design to monitoring and evaluation. After potential participants were identified,[4] initial contact was established through email, telephone, or visits to their offices. The interviews, which lasted between 45 and 120 minutes, were initially unstructured to help us get a sense of the relevant issues and understand what management technologies were used and how they were implicated in the organisation. This helped identify areas of interest and general categories that would be explored in more detail through subsequent interviews (Hammersley & Atkinson, 2007).

Interviewees were asked for documents that illustrated some of the reports and management tools commonly used in their organisations. Most of them provided us with copies of project proposals, project monitoring reports, annual financial reports, strategic plans, etc. We also examined documents

[3] All the interviews were conducted in Spanish, and most were recorded. One of the investigators translated all the transcripts.

[4] Potential organizations were identified through contacts in the region, by searching online (for local NGOs, international NGOs, and aid agencies with offices in the region), and through recommendations from participants. The study includes organizations of various sizes, years of experience, degrees of professionalization, and programme focus (agriculture, education, rural development, gender, etc.).

downloaded from NGOs' and funding agencies' websites (including annual reports, promotional material, financial statements, etc.). We then conducted close readings of funding proposals and monitoring reports, with special attention to the devices embedded in them (e.g., LFs, budgets, and operational templates) and the way they were populated by users, to get a sense of the tools used during the project design, evaluation, and monitoring phases.

We examined another set of documents to help us position these devices in the broader field of international development. United States Agency for International Development (USAID) documents helped us understand how they problematized performance measurement and accountability. They were the agency responsible for developing the LF and published materials on its uses, modifications, and linkages with other devices (e.g., United States Agency for International Development, 1973). But, to learn more about these devices in relation to development problematizations and aspirations, it was necessary to go beyond bilateral funding agencies such as USAID, to examine the general pronouncements made in the name of international development. Initiatives such as the United Nations' Millennium Development Goals, The Paris Declaration on Aid Effectiveness, and the Accra Agenda for Action articulated general concerns and aspirations. These initiatives elaborate on the problems of international development and make explicit the ways in which funding agencies, partner countries, and NGOs are implicated in this change. For instance, the 2005 Paris Declaration on Aid Effectiveness,[5] problematizes aid effectives as, among other things, one to be corrected through results management, by "implementing aid in a way that focuses on the desired results and uses information to improve decision-making" (Organisation for Economic Co-operation and Development, 2008, p. 7). Such public management discourses make their way into NGOs' management practices through the LF, which for USAID (2012, p. 1), "remains relevant today, as international development agencies and programs are mandated to justify program expenditures based on results, particularly in an era of budget austerity." These general concerns were inscribed in funding agency requirements that entered into the offices of NGOs in Guatemala and El Salvador as a collection of files, documents, and systems.

We also observed how the files, documents, and systems that comprise the workspace were enacted in NGO's offices and projects. Our interest is in the way these devices are implicated in practices. For Hull (2012, p. 118), "we should be cautious about relying on the files themselves as evidence of practices that involve them." As such, we study how inscriptions alter and facilitate relationships with other inscriptions and development aspirations. Visiting the NGO's offices, and accompanying staff on project visits provided opportunities to observe how funders' devices were worked on. The visits often started by asking NGO users to show us a report or a LF that they were

[5] An agreement reached by over 100 developing and developed countries that provides a "roadmap to improve the quality of aid and its impact on development" (Organisation for Economic Co-operation and Development, n.d.). The agreement "expresses the international community's consensus on the direction for reforming aid delivery and management to achieve improved effectiveness and results" (World Bank, n.d.).

working on. They often then showed us how they filled documents, often having to retrieve another inscription to show how LF's components are connected to other devices such as a strategic plan, or how the LF's components require further detailing through other inscriptions. Similarly, users would refer to the LF when we asked them to show us how they filled operational reports or budgets.

It was important for us to not just rely on what was expected of these devices, but to observe how these devices and users' aspirations were engaged with. To capture this, we observed and took photos of the related devices as they were filled by users and noted their visual features and the linguistic codes (for, e.g., when a user plugged a device's activities into another). Devices were also sometimes inconsistently integrated. For instance, we attended an NGO's project meeting where a project designer struggled to explain to a field coordinator the inconsistency between the information he recorded in the LF and the contents of the budget and the performance report. Accompanying NGO technicians and coordinators to carry out a project activity was also an opportunity to observe how project proposals were enacted (e.g., at workshops and community fairs) and how project technicians used other materials (e.g., receipts, participant lists, photos) to connect these projects back to the LF's results' indicators, the operational plan's time schedule, the budget, and so on.

Extensive field notes were taken during the field study to record the investigation. Field notes were a means to reflect on the observations, conversations, concepts, and the challenges of the field study (Strauss & Corbin, 1998). Regular Skype meetings between the researchers allowed us to develop, dispute, and elaborate our experiences and ongoing interpretations. Through them we developed and revised the themes and categories that helped us code and categorize the information collected (Hammersley & Atkinson, 2007). We used the method of constant comparison to develop and elaborate our conceptual codes, saturating our conceptual scheme with examples. The notes enabled us to discuss and rethink our research strategy and our conceptual inclinations. In other words, the field notes were sketches, opportunities to experiment, in which the boundaries between concepts, the case, and authors are blurred and are transformed through the enquiry (Alvesson & Kärreman, 2007).

The above research procedures inform our analysis of the five snapshots of the international development calculative workspace. These snapshots were selected to show five different but related ways in which funding agencies attempt to address their concerns (e.g., financial, operational, and strategic) by intervening in the LF. Each snapshot materializes a way to modify the LF (one snapshot, for instance, shows how a funder weaved an activity-based budget into their LF). These snapshots are not intended to be representative.[6] The devices, and the way they connected to one another, varied by

[6] The materials collected and the ways the "data" are enrolled are not meant to depict the "reality" of international development, but to provide a narrative that helps us make theoretical points (de Laet & Mol, 2000; Quattrone & Hopper, 2006) about the governance of international development projects. Recall, that our study is not about evaluating the effects of the devices (for such accounts see Ebrahim, 2005; Wallace, Bornstein, & Chapman, 2006; Wallace, Crowther, & Shepherd, 1997).

funder—each funder has its own measures and forms for the budgets, operational plans, and LFs, and combines them in their own way. The devices and their usage varied across the NGOs that we interviewed (and even within an NGO, since they typically have multiple funders). Thus, it is important to acknowledge that the various devices were used and attended to in various, and even idiosyncratic ways; each NGO and each funder used their own mix of inscriptions and methods. What was constant, though, was that all of the NGOs in our study were given a package containing a LF and other devices, each one connecting to others and accumulating their calculative properties, for funders to scrutinise, select projects, and monitor their progress. At the same time, NGOs actively engage with the inscriptions in their project management and try to assess their own performance in terms of their own aspirations.

4. The LF in international development

NGOs implement projects in many areas, including education, health, and basic infrastructure, using funds provided by international donor agencies. While there are well-known private-sector donors, most NGO funding comes from OECD-member states. Bilateral aid agencies[7] seldom provide funds directly to these NGOs, but instead channel funds primarily through multilateral organisations such as the United Nations Development Programme (UNDP) and international NGOs such as Oxfam, CARE, and Trocaire.

To be eligible for funding, NGOs have to meet a series of legal and administrative requirements. Typically, they have to be legally constituted, thus binding the organisation to legal and financial regulations. NGOs must also adopt a series of management and reporting technologies to design and account for the project's implementation and use of funds. Projects are the primary form of development intervention and "lend coherence to a set of quite disparate set of activities" from purchasing materials and hiring staff to surveying a population, giving a workshop, digging a well, and writing reports (Krause, 2014, p. 25).[8] Our interviews and NGOs' project proposals and monitoring reports indicate that they produce strategic plans, operating plans, performance budgets, LFs, monitoring and evaluation reports, and financial audits of projects.

Throughout our study, we learned about the centrality of the LF for the way NGOs design and account for their projects. For a project designer at a rural development NGO in El Salvador:

[7] Government agencies that administer foreign aid programs to developing countries; examples include United States Agency for International Development (USAID) and the German Corporation for International Cooperation (GIZ).

[8] The project is one of the mechanisms through which international aid agencies intervene in a country. A programme is usually made up of several projects. For instance, a gender programme may include projects such as increasing women's community participation, access to education and training, and so on. Project outcomes are expected to contribute to their programme's goals (Youker, 2007).

> The funding agencies told us to use it. It is the language of international development and we had to learn how to use it. They always ask for it … they trained us and taught us how to use it. It permits us to function in the same logic as those that give us the funds. It is like speaking the same language.

The LF provides funding agencies and NGOs with a common vocabulary and mode of visualizing the project as a series of components arranged according to a "logic" (the project is conceptualized as linked activities, outputs, goals, and indicators). Although perhaps not as familiar to accounting researchers as the BSC and other performance measurement systems used in the for-profit sector, the LF is an accounting technology used for planning, measuring, and reporting performance. As we will show, it is also often part of NGOs costing, budgeting, and strategic management.

The LF was developed in 1969 for USAID to help address what they identified as poor planning, unclear lines of management responsibility, and ineffective evaluations (Practical Concepts Inc., 1971b, p. 1). Its template has since become well known in international development. The 4 x 4 matrix is what is referred to as the LF, the logic frame matrix, or simply as the logframe (Schmidt, 2009; Ebrahim, 2005) (See Figure 1 for an example). This output is "a one page, concise summary of major project elements and their relationship to each other" (although now they can extend to a few pages) that "facilitates clearer communication among all parties to the project design" (Practical Concepts Inc., 1979, p. 4).

[Insert Figure 1 about here]

The visual features of the LF can be broken down into: *linguistic tags* that indicate the category or nature of information (activities, results, objectives, indicators, etc.), *cells* that provide users with a visually demarcated space for them to insert said information, and a logic that gives tags and their cells a causal-sequential *order*. The LF provides scripts for users to transform the world into a two-dimensional representation that can be operated on and expanded. It places the project into a workspace to be broken down into labels, cells, and order.[9]

The importance of the LF in international development is evident in its widespread adoption by funding agencies for their own internal usage and as a recommendation or requirement for its NGO counterparts. Notwithstanding, there are criticisms (Hummelbrunner, 2010; Gasper, 2000; Wallace, 1997; Ebrahim, 2005; Ramalingam, 2013). There have also been changes centred on issues of controllability, results measurement, and the global coordination of development. In section 5 we will

[9] Leon Rosenberg, the principal developer, told us that the LF enabled one to "put this almost living, scrawling project on the lab bench so that it could be safely examined."

provide five snapshots showing how inscriptions are connected to the LF to address criticisms, gaps, and improvements that funders and NGOs had of the LF, and international development more generally.

5. Assembling the performance measurement and accountability workspace

We start by documenting interventions at the 'bottom-end' of the LF through three snapshots, highlighting a table of planned activities, a budget, and an operational plan, that are intended to control project's activities and results (Figure 2).[10] This is followed by two snapshots at the 'top-end' of the LF, where it is linked with a strategic plan and is modified into an impact chain. While the bottom-end linkages gave financial and operational coherence to the calculative workspace, these top-end links are intended to make it coherent with the NGO's, the partner state's, and funding countries' development objectives. Behind these interventions is a major concern for form-designers and form-fillers: that the LF risks being regarded as a separate device, disconnected from the work of NGOs; a risk, well known to designers of all manner of accounting devices—that they will be treated as an administrative ritual (Power, 1997). Designers wanted to ensure that it was a practical part of the planning and evaluation work of funders and operating NGOs; that the development community engaged with the approach.

[Insert figure 2 about here]

5.1. Making Activities and Results the object of control: The LF as a tool for budget and operational control.

> "a Logical Framework is not meant to stand alone. It should be an integrated element of the overall project management systems" (USAID, n.d.)

From the outset, the LF has been altered and paired with other project management devices. A USAID manual states that the LF matrix requires the introduction of other devices to address the operational component (the activities) of the project, to better design, monitor, and evaluate projects. The manual claims that the LF is "objective-oriented, it does not *describe* the actions, activities or processes which transform means into ends. Other instruments will fill this need…" (USAID, 1973, p. 2, emphasis added). Nearly four decades later, USAID restated the point: the LF "does not *describe* the sequencing of activities and results that may be required to achieve developmental changes" (USAID, 2012, p. 3, emphasis added).

One consultant we interviewed provided us with some perspective into the importance of these additions and concerns. Roberto worked for many years with development organisations (from funding agencies to NGOs) in Guatemala. The LF was introduced to him at a USAID workshop in the mid-

[10] Bottom-end components of the LF matrix are the rows located at the foot of the hierarchy of objectives—such as activities and results. Top-end components include rows such as project purpose and programme goals.

1980s.[11] He argued that other devices are required to work with the LF because it is "ambiguous" and "it doesn't present a clear methodology" for managing a project's operations. "The logical framework has to be made *present* in the project's *operational plans*." Roberto urged: "we should also be conscious that the logical framework should not be separated from the *budget*." The mistake has often been "of separating them, and it was not meant to be that way."

This interest in complementing the LF with other devices is part of a broader problematization of international development accountability, which is closely linked to so-called New Public Management reforms (Hood, 1991). These reforms often shifted attention from measuring inputs and processes to measuring outputs and outcomes. But, such governing ambitions are often feared to be decoupled from NGO's ongoing management. As Vähämäki et al., (2011, p. 14) put it: "Results frameworks, often manifested in an LFA [logical framework approach] results matrix, were seldom if ever put to use in day-to-day project management," and that "causal thinking required by the model introduced difficulties in project management." It is in this context of results management and its decoupling from operations or from other devices ("separate" in Roberto's language) that agencies intervened in the LF by attempting to integrate it with operational plan and budget templates. This sort of patching, though, also had the effect of recontextualizing the LF; to keep it engaged in funding agencies' changing development aspirations. Performance management and accountability were not to be rituals of form filling, but something to be actively engaged with.

We now proceed to document the visual integration of financial and operational devices that enables the accumulation of *financial* and *chronological* calculabilities over the LF's *causal* order.

Snapshot 1: Table of planned activities: emphasizing activities and results

We observed numerous ways that project designers and coordinators explained their funders' focus on activities through changes in the LF's templates. A particularly compelling example occurred in the offices of an El Salvadorian NGO working in rural development. Manuel, the project designer, discussed the proposal he was about to submit to a European funder. He scrolled down the 43-page document on his screen—the output of a month's work.

He started at the beginning of the funder's project proposal form and explained how he populated it, pausing at each one of its subheadings: the project summary, the list of the communities served, the context and justification for the project, until he reached the "Logic of Intervention." There, he showed us a LF matrix, one that was distinct from the matrices we had so far seen. It had the familiar columns (objectively verifiable indicators, modes of verification, and assumptions) but its hierarchy of objectives only contained the program goal, project purpose, and results. When we asked to see the

[11] At that time, he explained, its use was mainly restricted to the funders.

activities that feed into each result he scrolled down to the following page: they were in a separate template. Manuel enlarged this table (see Figure 3) and commented:

> Apart from the logical framework, this funder asks us for something additional, which not all of them do: that we present a table of planned activities. It includes the activities that we are going to implement, each one with a summary and the human and material resources needed.

[Insert Figure 3 about here]

The table of planned activities is not included as part of the LF matrix. It is distinct. Rather than objectively verifiable indicators, modes of verification, and assumptions, Manuel submits information for the human and material resources columns for each of the activities. While the LF's causal order is maintained, Manuel included activities believed to cause the expected results. The inclusion of these other columns, as a table of planned activities, focuses users on the inputs and the operational components of the activities. For Manuel, aid agencies "now require much more during the designing phase. When designing the project, ….it includes a detailed operating plan with resources, time frames, and persons responsible for the activities." Manuel not only believes that he needs this inscription to obtain funding and that he will be held accountable for this more detailed plan, but, significantly, it is also important for managing project finances and operations—as a stepping stone for operational budgeting and monitoring. He is not only coerced to use the LF but the patch engages him in using the calculative assemblage as a whole, as will be made more apparent below.

The table of planned activities provides an additional organising technology to address the concern that the LF is not suitable for describing activities. Through it, users can detail project components. The project manager at an international NGO that funds NGOs like Manuel's noted that they also require that their counterpart NGOs complete a similar table:

> Basically, apart from the logical framework, we get them to include a table with a breakdown of their activities by result, which is then linked, I mean, it should square with the financial part of the project proposal. And for this we provide the templates for the budget, which are quite detailed.

This international NGO also encases activities in a separate matrix, requiring designers to break down activities sufficiently to be easily plugged into project control mechanisms such as the budget, and in a way that "squares with" each other. The table of planned activities is a patch between the LF and other patches such as the budget and operational plan—as we will see, it is a means to foster engagement with the LF as a financial and operational device.

Snapshot 2: Incorporating financial calculability through the budget

After discussing the table for activities, Manuel searched his computer for the project proposal's spreadsheets. He opened a file containing the funder's templates for the budget, and explained:

> The budget for a project of this type includes several spreadsheets. It starts with a summary budget describing the different contributors and their contributions to the project: what the funders, the beneficiaries, and our NGO will contribute to the project. Then comes a line item budget detailing all our direct costs for the purchase of materials, transportation, and personnel, and our indirect costs to cover our administrative expenses. We cost every item down to the cent. And in this other spreadsheet we have the activity-based budget, in which we arrange the items per activity and result.

Manuel breaks down the funder's financial contribution for the project (as noted in the public tender) into these different budgets. Out of these, the activity-based budget (see Figure 4) is closely connected to the LF because, for him, it "details all the logical framework's costs, all of them are integrated there." It is also the first budget that he prepares. For Manuel, the budgeting process starts by plugging in the table of planned activities' activities and results into the budget: "As you can see, I have included all the activities under each result. The top row contains the result and below [are] its corresponding activities…each one of them with their items and their cost."

[Insert Figure 4 about here]

Manuel makes explicit how the LF's results and the table of planned activities' "corresponding activities" make their way into the budget. Figure 4 shows that the budget shares the LF's categories and their sequential order (activities, then results). Now, however, each activity is broken down by line item to be costed. "Activity 3.1: 3 Municipal rallies (1000) participants," for instance, is broken down into fuel, transportation, food, water, etc. Activities are the sum of line items (A.3.1 has a total cost of $16,834.54) and results are the sum of the activities' costs (R.2. has a total cost of $74,801.85). The budget superimposes a financial calculability on the LF's causal hierarchy, introducing another ordering principle into the workspace. The causal-sequential order can now be calculated financially: it is both an "if this, then that" logic, and a "this plus that" logic.

This principle of calculability alters the way the LF is populated. Financial calculations permeate the workspace. Manuel made this explicit when he modified some of the budget's figures to show how the requested funds are allocated to the different activities. But in so doing, Manuel often returned to adjust the LF or the table of planned activities. He commented:

> For example, if I say [in the table of planned activities] that an activity in the project's first month consists of a workshop in each one of the municipalities we are working in, and that 30 women will participate [see Figure 3: A.2.], well, this gives me an idea of how much this

> activity will cost. And I will allocate funds to the activity in such a way that I can meet the result's indicators: 30 women are trained. But, sometimes I have to reduce the result's indicators [according to how funds are allocated in the budget] …there could be 30, but there could be more, or even less.

Manuel adjusts the LF's expected results (e.g. number of female participants) according to the way he allocated funding to the different activities in the budget. He realized that training 30 women would cost too much, leaving less resources for the project's other activities. As Figure 4 shows, the budgeting process requires him to connect activities and their costs to the results' indicators in the LF. The activity-results-budget has the effect of disciplining his expectations (there are now concrete costs associated with the expected results), requiring more careful planning during the project proposal phase—it introduces financial calculability and responsibility into the LF. It also shows how accountability is not simply hierarchical; Manuel changes the LF and the NGOs activities as a result of his interrogation of the detailed activity budgets. Performance management involves changing plans and actions in anticipation of expected results.

This added order also enhances the monitoring of projects, because it can be financially assessed by the designer and funders. Manuel recommended that we speak to the NGO's accountant, Victor, for some additional insight into the budget as a monitoring tool. For Victor:

> The budget is used as a control device so that there is little variation, because if an activity with an expected cost of $100 ends up costing us $200 after we add all the receipts, well, that can't happen…and that we have to investigate.

The budget, in other words, provides his NGO and funders with a well-known feature: the analysis of variances. Through the combined LF and budget templates, NGOs and funders sought to control costs: that they are "properly" assigned to projects and add up, and that projects are appropriately implemented and costs are consistent with the budget. What this budget-LF pairing also does is to show how the patches foster engagement with the LF. Users are involved in the effort to contextualize it through a concern over managing performance and cost control, and thereby give it another functionality. That is, the visual pathways between the LF and the budget enable NGO users such as Manuel and Victor to connect them and engage with the funder's contextualizing efforts.

Snapshot 3: Incorporating chronology through the operational plan

Projects are also planned and monitored through operational plans that specify a temporal order to activities. The connection between the LF and operational planning is articulated by Schmidt (2009, p. 147), who writes that the LF's rows of inputs are the "jumping off point for more detailed planning." Relatedly, in a report for the World Bank, the LF is described as: "Assisting the preparation of detailed

operational plans" (Clark & Sartorius, 2004, p. 8). Like the budget, the operational plan is seen as a way to address USAID's and Roberto's earlier concerns about what he called the LF's ambiguity and unclear methodology, by placing activities alongside other columns to provide a chronological order.

At an education NGO in El Salvador, Gerardo, the executive director, explains the way the LF and operational plan work together. The operational plan is a form designed by their funder for the project implementing NGO to annually submit for the duration of the project. Gerardo flips through the 16-page document marked by instructions, tables, and dedicated spaces for project summary information. He singles out the page where the project's "logic" is to be explained through a table entitled: "Specific objectives, expected results, and indicators" (see Figure 5) with the following instructions: "it should be completed by taking into consideration the logical framework that was approved for the project's implementation and the expected results for the year." The table's design itself instructs the user to rewrite each expected result with its objectively verifiable indicator (OVI) and the modes of verification (MOV), as outlined in the LF, and, specifically, to place it alongside its "estimated completion dates for the year."

[Insert Figure 5 about here]

The following page includes a Gantt chart (Figure 5), where Gerardo lists the activities planned for the year, the month in which the activities will be executed, their duration, and cost. He circles one of the activities in the LF: "while it is true that the logical framework tells us the type of activity and whether it will be implemented in the beginning or end of the project," he directs our attention to the Gantt chart, where he circles the same activity, "In this type of operational planning we include the exact date, time, and place[12] […] The question is how to make more *concrete* what we have written in the logical framework."

This making "more concrete" is done through the inclusion of a chronological order. As we learned from the first two snapshots, the LF and the table of planned activities provide a causal order to which the budget adds a financial order. For users, this sequence of activities and results is made more concrete through the addition of a chronological order. The timeline in the operational plan does more than "create and impose order onto an otherwise incoherent (nameless) set of activities" (Yakura, 2002, p. 968). In our case, a timeline is integrated and reinforces existing causal and financial orders. The operational plan adds another dimension of controllability; temporal variances indicate time lags (expected date vs. actual date). Gerardo can engage with the temporal order to monitor progress on projects.

[12] Other tables in the operational plan require the location and person responsible for each of the activities.

This is more than the addition of calculative principles; it is also about *distributing* these principles across the workspace as a whole. Otherwise funders and the NGOs themselves fear that they might suffer from a separation of control systems—that devices will simply exist, side-by-side, and potentially unused. To engage with this concern, devices can be woven together as one workspace, as a calculative assemblage, through the sharing of the same labels, cells, and orders. The "results" and "activities" encased in their own cells and causally ordered in the LF and in the table of planned activities are rewritten by users in the budget and operational plan. Each device adds a calculative principle to be engaged with by the user. The Gantt chart in Figure 5 shows how the activities' hierarchical-causal, chronological, and financial orders come together in one device. It is this level of integration that Roberto invokes when he argues that these devices should be "present" in each other. With the LF, the table of planned activities, the activity-based budget and the operational plan, activities and results can be now visually plugged into each other (through cells, categories, and orders) and distributed throughout the workspace.

A project administrator of an international NGO in El Salvador felt that connecting these three inscriptions enabled her to perform a more comprehensive monitoring of activities and results. She illustrated her point using a report she had just received from a NGOs they had been funding: "the chronogram is where the year's activities go, so when there is an activity scheduled and I do not see any costs incurred that day, then I ask myself: 'why was that activity not executed?'" For her, the addition of causal, chronological, and financial orders gives her another level of controllability, a means of accountability within the NGO. The three devices have to be filled correctly, both in relation to their respective internal calculative orders and to be consistent with one another. It would be seen as a problem, for instance, if the activities in the LF, budget, and Gantt charts were not properly plugged into the other (missing activities or arranged in a different order). The way the devices are designed in relation to one another makes incongruent data more explicit; consistency enhances confidence in the assemblage.

But this aspiration is not always performed as expected. There are financial consequences that an NGO may encounter if the forms are not filled correctly. The monitoring and evaluation specialist for a multilateral funding agency noted how their partner NGOs are required to comply with these templates:

> Because, at the end of the day, they [the NGOs] basically work for the funding agency that tells them how they want things…it is almost totally rigid. So, one tells the NGOs 'this is how it has to be done. If you do not comply, then, no funds.'

Filling incorrectly can jeopardize a project's financing. For a Guatemalan NGO administrator responsible for submitting these reports: "Every three months we have to submit a report to receive

funds. If not done properly, we can't access the remaining amount of the approved budget." Agencies inscribe these visual pathways into devices for users to perform the agencies' aspirations for more comprehensive monitoring and evaluation. These visualizations and also the sanctions around them help focus users on their "correct" performance (that each has the same number and order of activities and results). One implication is that this is not just about fixing or improving the LF, but about fostering what funders might regard as "proper engagement"—creating the visual and calculative conditions where consistency can be verified, sanctioned, and penalised. This is engagement in a coercive sense of compliance, with NGOs working with the forms (in terms, for example, of consistency and completeness) from a desire to meet the demands of funders. As we will show in the following section, though, these patches encourage users to engage with them in an unexpected way.

5.2. *Controlling goals and impact: The LF as a device for NGO, state, and agency development strategy.*

The interventions discussed above focus NGOs on the activities and results articulated in the LF. This has effects other than providing more detailed designs and opportunities for managing, monitoring, and accountability. The senior manager at a Guatemalan NGO noted bluntly how the other project components are not a priority for him:

> The logical framework's General Objective is basically blah blah blah; that's essentially what it is, no matter how nicely you formulate it. The Specific Objectives that are linked to the activities and the results, in contrast, have always been central for our results and our processes.

For this manager, and others, NGOs have tended to reduce projects (and development more generally) into inputs, activities, and results. The LF is seen as complicit in this reduction. Roberto, the consultant that we quoted earlier, upon hearing us recount this "blah, blah, blah" assessment, laughed and added that disregarding higher-level objectives is understandable since NGOs' attention is focused on activities and results. He also noted that the problem is not restricted to NGOs, since funders are the ones inscribing this focus into NGOs' workspace. A monitoring and evaluation specialist at a multilateral donor agency in Guatemala confirmed this, stating: "There is a lot of activity-ism[13] and sometimes the result is a bit difficult to identify and that is one of the challenges we are facing." For him, funding agencies, like his own, are often responsible for monitoring activities and funds, but are not responsible for measuring long-term impacts.

This issue is also a concern for local NGOs interested in understanding the broader impact of their work. A project designer and coordinator for a popular education NGO in El Salvador noted:

[13] Activity-ism, or activismo in Spanish, was the term used to describe the attention given to the activities that drive project results.

> One activity leads to another and we cannot only focus on this sort of activity-ism. We need to analyse what sector of the population we should target, whether we have done a good job, whether we are having the impact that we want, and whether we are changing things.

For her, it is important to link activities with broader development objectives. The problem is that even if there is a causal-sequential, financial, and chronological order to these activities, the devices do not show how these activities and results are part of a sustained effort to improve the wellbeing of a particular population. There is thus a concern to foster another form of engaging with the LF assemblage.

The LF was designed to address this activity-ism, or, as its creators put it, to address "vague" connections in project design where objectives were "not clearly related to project activities" (Practical Concepts Inc., 1979, p. I-1). The LF's "goals thus relate our project aspirations to aspirations of those for whom our activities have no intrinsic interest" (ibid., p. II-3). And yet, the LF's causally informed hierarchy of objectives did not sufficiently control activity-ism. One funder made this explicit in a report, noting that their programming covers "a broad spectrum of international development interventions…. [lacking a] clear direction." This funder also argued that the NGO had "difficulties in demonstrating how its activities contribute to the realization of its mission and how its mission contributes to the objectives of its [funding agency's] program." This intervention highlights the funder's concern to make more explicit how an NGO's projects, specifically its activities, connect with its own and its funders' objectives.

Funders problematized the NGO's activity-ism as a concern over the coordination of international development interventions. The intent was to connect projects to the NGO's, the developing countries', and the funding agencies' development strategies—to engage NGO workers in global and national strategies. In one sense these can be interpreted as coercive pressures, where the Millennium Development Goals and the 2005 Paris Declaration on aid effectiveness sought to connect local interventions to national and transnational targets. In particular development actors were encouraged to develop tools to "[t]ranslate national development strategies into prioritised results-oriented operational programmes" (Organisation for Economic Co-operation and Development, 2008, p. 3).[14]

In the rest of this section we present two snapshots examining how the LF workspace is elaborated to make the project accountable to these strategic concerns—thereby addressing the unintended consequence of activity-ism. Both interventions revolve around concerns about strategic

[14] The UNDP further articulates this concern that "while individual agency outputs and activities are very important, they must always be seen as being in support of national development efforts. Agency outputs should, wherever possible, derive from national planning documents and be coordinated with and remain centred on supporting national objectives" (United Nations Development Programme, 2009, p. 13).

thinking, but these top-end patches are intended to make the workspace coherent with the NGO's, the partner state's, and funding countries' development objectives. The patches foster further engagement with the LF, now as a tool to address strategic and global discourses. These developments are not only coercive, nor are they only an example of "symbolic violence," as highlighted by Oakes, Townley, and Cooper (1998). Snapshot 4 shows how an NGO, for example, engages with their own activity-ism by contextualizing the LF as a component of a larger assemblage to further their own commitments and strategies.

Snapshot 4: Introducing organizational strategy into the LF

Unlike the LF, budget, and operational plan, there is no general template for strategic plans. Their format and content differ across NGOs, but they are quite standardised, nevertheless. An NGO's strategic plan typically inscribes its mission, goals, and geographic and programmatic areas of development intervention. The geographic (regional) and programmatic (e.g., education, rural entrepreneurship, and institutional strengthening) areas indicate the NGO's specialisation. Each programmatic area contains subsections with its own development objectives (see Figure 6). The strategic plan is often a required component of a project proposal (Wallace et al., 2006, p. 44). A project manager for a European development agency noted that the "logical framework is *used together* with strategic planning; both of which are very popular tools." For him, the devices are well known, and importantly for our argument, they are "used together."

We learned about a LF and strategic plan connection at a feminist NGO in El Salvador. Rebeca, one of their project designers and coordinators, outlined the organisation's new strategic plan, which they had completed after a long and difficult process. Yet, she was pleased with the way the strategic plan had been mobilised during the project proposal process. "For us, what is important is that we develop our plan and then we see how the funders are willing to contribute." It is through the internationally funded projects that her organisation can comply with the strategic plan, keeping specific projects closely connected to the organisations' goals.

Rebeca referred to a project proposal she had recently submitted to a funder. She pointed out the funder's question: "does the NGO have a strategic plan?" Below she had written that the NGO has a 2010-2015 strategic plan and that the project contributed to their women's participation, citizenship, and economic development programmes. It took a few more pages for Rebeca to get to the proposal's LF, but once there she showed us how it was visually integrated with the strategic plan. The LF's *general objective* was copied and pasted from their strategic plan. It is the verbatim *project purpose* of one of their strategic programme's subcomponents: "To contribute to the development of women's rights and citizenship through their empowerment."

This degree of integration may not be surprising.[15] But Rebeca's LF and strategic plan had a deeper connection, noticeable in the similar language and causal logic. Before this, their strategic plan was mainly about objectives, and it did not go into this amount of detail. For example, other strategic plans for NGOs include the different programmatic areas and their respective objectives and general forms of intervention (what they will be promoting, what their focus will be), but they are not specific about their causal relations, nor on the activates that will feed into them, nor on the indicators. Rebeca's new strategic plan, in contrast, is different. For instance, her plan lists "the objectives, results, activities, and indicators that we are expected to achieve for each programme" (see Figure 6). In effect, the LF's categories and cells and its hierarchical order are in the strategic plan. For her, strategy formulation includes a degree of project formulation. This is something that the NGO wanted to do; Rebeca's commitment to addressing the NGO's objectives inspired her to connect strategic statements with the LF and other devices. It is not a practice required by funders, but, the strategic plan and the LF shared enough features that the NGO saw ways to integrate them.

[**Insert Figure 6 about here**]

This level of detail helps explain why it took so long and was so difficult to design their strategic plan. For Rebeca, including the LF's components into the strategic plan is part of a larger project proposal strategy. Her staff engaged with the devices to creatively address this strategy

Engagement can go further. A project designer in Guatemala illustrates a similar engaged, anticipatory approach to strategy when he discussed the time pressure his NGO faces to meet project proposal deadlines:

> Often when there is a call for projects, one does not have time to formulate the project because we are often given one month. In one month we cannot do all that is needed: go to the community, discuss, and make a decision. The strategic plan is important for this reason. It anticipates some of the discussions and decisions that need to take place for a project … in some cases, yes, we copy [from the strategic plan] and paste [onto the LF], and in other cases we have to adjust a few things…but what matters is to have the work done in advance.

NGOs engage with the LF by linking it with the strategic plan. The director and project manager for one international NGO acknowledged with amusement that some of his counterparts employ such an approach in project formulation:

> A lot of local NGOs, and with a lot of craftiness, develop their strategic plans for five or ten years and from there they identify twenty or fifty results. They then contact their donors and

[15] Wallace et al. (2006, p. 45) documents that donors and NGOs often "formulate strategic plans within a logframe."

> say: 'For you, these two results because you fund water-based projects,' 'for you, these other two because you specialise in gender,' and 'for you, these other two because you specialise in education.' That is how they get their funds. At the end of the day they learned how to turn the table around and with a lot of imagination! They fragment their strategic plan because they know how it works and they now think five and ten years ahead.

The imaginative aspect is that these NGOs visualise the strategic plan in a modular way, as LF components that can be pitched to different funders. This is a particular way of engaging with the LF. Unlike the other snapshots, the strategic plan does not have an agency-mandated template, which makes the strategy documents more susceptible to modification: users engage in other types of recontextualizations and associations (Hull, 2012). The lack of a strategic template enables NGOs to introduce the LF's order into the strategic plan: the LF is used to format and carve up the strategic plan.

Through the strategic plan and LF interaction we can appreciate how NGOs' expand their project formulation and accountability workspace. The LF's components make their way into the strategic plan, through its labels, cells, and causal order. This taxonomic consistency provides the visual pathway that enables users to integrate properties of one into another. The strategic plan, for instance, adds a principle of specialisation to the accountability workspace: projects in the LF are formulated within the NGO's programmatic and geographic specialisations. This shows a type of engagement that is fostered not by strict visual features, but by their absence (Quattrone, 2009). In other words, while NGOs are required to develop a strategic plan, the absence of a strict agency-mandated strategic plan template enabled NGO users to engage with it in this unexpected way, and, more importantly, to integrate it into, and thus add an additional layer of what they regarded as functionality to the LF assemblage. The NGOs, not funding agencies, added the visual pathways connecting the LF to their strategic plan. This becomes a way for NGOs, and perhaps also funders, to connect the LF to broader concerns in international development: with the aspiration to integrate the project's activities and the organization's strategy, which for them is a way to address the problem of activity-ism. As such, the LF acquires another functionality, it is recontextualized as a tool implicated in the management of strategic concerns.

Snapshot 5: Introducing state and global development goals into the LF

Funders too have sought to connect project activities with international and country development goals. This aspiration to improve the global harmonization of development strategies between funders, partner countries, and NGOs is prominent in the Millennium Development Goals. The UNDP also highlights that, "Agency outputs should, wherever possible, derive from national planning documents and be coordinated with and remain centred on supporting national objectives" (2009, p. 13).

Intervening in the name of global coordination serves to frame our fifth and final snapshot, the impact chain: "a variant to the logical framework in the sense that it is based on similar logic and uses some of the same terminology" (International Financial Corporation, 2008, p. 39). It was developed by the German international development agency, GIZ[16], and is different from the other snapshots in that it is less pervasive and the LF is part of the impact chain, not a separate device. Nevertheless, it indicates how managers in funding agencies try to embrace international strategies and conceptualize performance and accountability in terms of strategic outcomes and impact, rather than activities or costs.

We met Nicolas at GIZ's offices in Guatemala. He described his job developing project plans with counterpart NGOs and connecting them with national and international development objectives. He does this in part by teaching the impact chain at workshops, where he highlights the similarities and important differences their innovation has in respect to the LF.[17] For Nicolas:

> There isn't a major difference between the logical framework and the impact chain. It is something that was added to the logical framework. It is something that has been discussed for a long time ... the gap that exists between what is done during project implementation, the activities, and the project goal is enormous. There *we added an element...*

He then drew the LF's and the impact chain's hierarchy of objectives side by side on a whiteboard (see Figure 7). For Nicolas, one of the challenges with the LF is that:

> We need to make a lot of assumptions in order to logically connect the results of our activities with the specific objectives…. There is a need to make more concrete this linkage between results and the higher-level goals.

[Insert Figure 7 about here]

Then, looking at the impact chain, he explained that, like the LF, "we go up in a similar fashion, starting from the activities. And through the activities we reach product or service, which is synonymous to the LF's result." For Nicolas, the LF and the impact chain are similar at the level of activities and results. Attributing results, such as a product or service, to the intervention's activities is not the problem—as our previous snapshots show, the connection between the two has been emphasized through the table

[16] Unlike the other snapshots, this one is based on one funding agency's intervention in the LF and the claims of one of its proponents. While one account, it provides a significant instance of a more generalized concern for projects to engage with transnational and national development goals and the inclusion of broader discourses on impact also found in the private sector and higher education (Power, 2015). As we will show, the LF is adapted as another tool, one to account for development impact.

[17] The LF was at one time GIZ's principal project planning and evaluation tool: they renamed it Zopp (Zielorientierte Projektplanung), after they added a participatory component to it in the 1980s. It is often translated as Objectives-Oriented Project Planning.

of planned activities, the budget, and the operational plan. Rather, for him, the problem is the gap that exists between the results and the next item in the LF's hierarchy: the objectives.

To tighten the causal logic between the LF's bottom-end (activities-results) and the top-end (objectives-goals) they added, a patch, in this case, questions, that project implementers have to answer: "how do the project beneficiaries use the results, that is, the service or product? What does the organisation and their beneficiaries do with the product or service? What impact is there? …" The LF does not ask these types of questions. The assumption is that the result will achieve the specific objective…but we cannot know that for sure." The "gap" between results and higher-level objectives is narrowed through such questions. For impact chain enthusiasts, the LF does not properly address this gap, but rather assumes causality (e.g., International Financial Corporation, 2008).

Nicolas argued that decreasing the gap in the LF's causal relations puts the impact chain in a better position to connect projects to donor and recipient development targets (see Figure 8). For him the focus in the international development community is now less on "achieving the objectives and their respective indicators, but rather on the impacts that we want to achieve…the path has changed towards measuring impact."

[**Insert Figure 8 about here**]

He explained this shift by underlining the impact chain categories of indirect impact and highly aggregated impact:

> Towards the top-end of the impact chain, *indirect impact* has much to do with the developing country's national development strategies. Our mandate is to contribute to their development aspirations. At the very top of the chain we see *highly aggregated impact*. This is connected to the Millennium Development Goals, such as poverty reduction, gender equality, environmental sustainability, and so on. …

The inclusion of indirect impact and highly aggregated impact patches enables the agency to connect the project's results, the developing country's strategic targets, and the agency's international targets. This is seen as important so that the agency can measure their own performance and make these higher-level goals more explicit to their counterparts. Nicolas gave the example of one NGO:

> A counterpart we are working with did not know that this allows them to link their activities as a campesino[18] organisation to the current government's targets. They are usually not aware of

[18] Peasant farmer.

that…they start realising this during the impact chain exercise. And that campesino organisation was not politically in accord with that.

Nicolas acknowledged the irony that this NGO had been unknowingly contributing to the state's development strategy while they engaged in a protracted struggle contesting state policies.[19] The impact chain provides a visual pathway for the NGO and agency to trace how the project's activities connect to broader development goals. This requires partner NGOs to identify state development strategies and to reflect on how their projects contribute to them—a practice that requires thinking beyond the project and, in this case, even their political goals, by placing the project and these development objectives in the same field of visibility (one right next to the other). This attempt to engage users and designers in thinking creatively yet rigorously about linking strategy and performance measurement seems similar to claims made about strategic mapping by proponents of the BSC. They suggest that articulating a narrative (or model) linking different objectives and measures with other objectives and measures, creating a strategic map, encourages managers to articulate and test hypotheses about the links between plans, actions and multiple outcomes (Kaplan & Norton, 2004; Qu & Cooper, 2011).

This does not mean that NGOs are not engaging in activity-ism, as they may be first designing activities and then figuring out how represent them as aligning with funder's broader aspirations through the impact chain. While activities and strategies might still be decoupled, there is nevertheless a pathway that visibly connects them and facilitates engagement with the LF by both the funder and the NGO. For the funding agency, the LF's format and causal logic were ill suited for connecting project activities and results with broader development aspirations. They changed the LF "to keep the project on track in working towards highly aggregated development progress" (Lobb-Rabe, 2000, p. 12). The top-end additions were seen as a way to connect activities, those bottom-end components, and foster engagement with broader development aspirations through a tighter causal logic. Funders and NGOs can trace how activities and results are contributing to various levels of development and differing development goals. Unlike the other snapshots, the LF is not visually integrated with another device. Here the intervention is directly into the LF's design, through the addition of rows and linguistic codes at the top end. This is important for the study of engagement because rather than adding an additional layer of patched devices to contextualize the LF, we learn that the agencies keep the LF contextualized in changing developmental discourses and concerns by changing its commonly known boundaries and format through very specific patches (e.g. rows indirect impact and highly aggregated impact), making it a device to account for impact

6. Discussion and conclusion

[19] Martinez & Cooper (2017) elaborate how NGOs are enrolled into the state's mode of development intervention.

The five snapshots document how a loose collection of organizations problematize international development and assemble a workspace by integrating devices for NGOs to perform and be accountable (see Appendix B and C for a summary of the snapshots). While the pattern is often that funding agencies update requirements and NGOs comply, NGOs also stimulate changes in accountability to reflect their own achievements and influence their own operations. Further, the LF's seeming centrality in these snapshots is not taken for granted. Rather, its importance and sustained use is noticeable in the way its vocabulary, causal order, and cells are integrated into other devices which enables users to perform, and accumulate, their calculative properties, and importantly, funding agencies' and NGOs' aspirations for a specific type of international development.

The first three snapshots address apparent shortcomings in the LF's sequential-causal order and inputs control. For instance, the table of planned activities reinforces the activities-results part of the LF's causal-sequential order by placing it in another matrix (figure 3). This serves as a stepping-stone, as a "classificatory system" but also as a "reference book" (Goody, 1977, p. 153) for the activity-based budget (figure 4) and the operational plan (figure 5), which introduce financial and chronological calculations to the LF's causal arrangement. The table of planned activities, the budget, and the operational plan are detailed planning, accountability, and controllability devices that are connected to the LF to address the perceived problem of "ambiguity" by making it more "concrete." An effect of the LF-budget-operational-plan workspace has been a focus on activities and results, or what interviewees called *activity-ism*. Although the LF was explicitly developed for USAID to fix this worry, we show how its modification through patches exacerbated it, which lead to the following two patches.

The final two snapshots show how NGOs and agencies intervene in the workspace to address activity-ism. NGOs patched-in the strategic plan into the workspace to connect their project's LF with their own strategic plan and thus align activities, results, the budget, and operational plan with these strategically informed goals. Agencies wanted a tighter connection between projects and strategic objectives, and NGOs used the LF-inspired visual pathways at their disposal to integrate the strategic plan (figure 6).

This expansion and inclusion of a strategic order was not enough for one development agency, which sought to account for how the projects they are financing contribute to meeting national and global targets. For its proponents, the impact chain adds another linguistic category to the LF's causal order, requiring NGOs to be more precise when attributing causality to their interventions and when connecting their project to state and global development objectives (Figure 8). Like the table of planned activities, the impact chain is not about integrating the LF with another device. It is a modification of the LF's format by adding and removing components (e.g., linguistic categories and cells), and reinforcing the LF's causal order.

Through these snapshots we show how the LF and the workspace as a whole accumulate calculative properties through patchwork interventions. This is not just about a device, but a more general account of how inscription devices, even those with recognizable templates, such as the BSC, are elaborated upon (Cooper et al., 2017; Busco & Quattrone, 2015; Qu & Cooper, 2011). Like Pflueger's surveys, the LF accumulates "different accounting capabilities, such as the ability to problematize, seek to manage, seek to improve, know, account, compare, calculate, and hold accountable" (2016, p. 29). We highlight that this accumulation is done through linkages with other inscription devices. This shows that performance measurement and accountability is not just about a single device or system, but their relations. The inter-connected patchwork of inscription devices that compose the workspace accumulate "capabilities" from each other—inscriptions are implicated in assembling different calculative orders and making them work with one another as workspace. The LF introduces a causal order; the budget introduces a financial order; the operational plan, a chronological order; and the strategic plan and impact chain, strategic orders based on specialization and global target setting. This resonates with the idea that accounting introduces moral and social orders into a population or an organisation (Ezzamel, 2009), but we highlight how these orders, these modes of calculation, are accumulated, one over another, through the inscriptions' visual features. We see this accumulation as similar to geological metaphors that highlight that management systems can both accumulate and erode over time and space (Cooper, Hinings, Greenwood, & Brown, 1996). It is dynamic and relational—patches are added and affect the whole and its parts. Our focus on the accumulation of inscriptions helps us to understand better the process of assembling, not just a field of actors (Neu et al., 2009; Martinez and Cooper, 2017), but also of devices and international development aspirations. It makes explicit the dynamics of assembling a calculable workspace: that components and whole are changing in an emergent manner.

This insight into accumulation is based on our attention to the visual features that provide pathways for users to perform the accumulation of calculative properties. More specifically, the visual pathways include features such as the devices' cells, linguistic labels, and visual and calculative orders. *Cells* provide users with a demarcated space in which information can be emptied, arranged, and the contents of which can populate other inscriptions. Quattrone (2009) highlights that cells are sites where "knowledge can be disposed" and made useful for various purposes (p. 96-7). Template designers "code and categorise" these cells through the use of "*linguistic labels*" (Lynch, 1988). Users of spreadsheets are familiar with this process, where labels provide users with a visual tag, a standard language, a taxonomy. Both cells and linguistic labels form part of visual technologies, such as the matrix (Pollock & D'Adderio, 2012; Goody, 1977), often used by accounting and performance measurement devices. The labels provide a standard language and set of categories, which are also a claimed benefit of other performance measurement systems (Kaplan & Norton, 1996). Our aim is to highlight the important role of the assemblage of devices in making performance claims credible in a changing world. Central to

this integration is the device's visual structure—the BSC's quadrants or the LF's matrix. The matrix gives a visual and calculative *order* to the cells and labels. In our study, for instance, the LF gives project components an order based on causality (Practical Concepts, 1971a). The LF, like the matrix, offers a discipline: it "*has* to be filled; the scheme allows of no empty boxes; the matrix abhors a vacuum" (Goody, 1977, p. 153, emphasis in original).

These pathways provide "scripts" (D'Adderio, 2008): a set of guidelines that inform the ways actors perform, connect, and distribute the devices' calculative properties throughout the workspace. That is, funding agencies inscribe visual pathways into their technologies of intervention for users to perform connections and accumulate orders onto the calculative workspace (see Appendix C for a representation of the accumulated snapshots' and their connections). And yet, an inscription's design does not determine a particular type of performance or a specific mode of engagement: a device's visual features may not be performed as expected—actors use visual pathways to digress, to uncover other functionalities, and so on, often with unexpected effects. Sometimes form-fillers do not perform pathways as expected. Governmental aspirations, after all, are riddled with unexpected consequences (Miller & Rose, 1990) and we provide examples of some unexpected ways in which the LF and its patches provided visual pathways that can "engender a rethinking of the document's instrumental or informational purposes" (Riles, 2006a, p. 14). Specifically, we learn of two unexpected consequences: activity-ism and embedding the LF in the strategic plan.

We showed for instance how the accumulation of patches at the bottom-end of the LF intensified users' engagement with activities-results and the unexpected performance of activity-ism. This was followed by a patch that fostered another unexpected mode of engagement. NGOs designing their strategic plan consistently with the LF's linguistic categories, cells, and causal order laid down a pathway for information to be integrated throughout the workspace—making activities and results consistent with the NGO's strategic ambitions. The examples of activity-ism and strategic plan requirements may be examples of how agencies add stifling "layers of technology and bureaucracy" (Pollock & D'Adderio, 2012, p. 581) that are coercive and overwhelm NGOs (see also Martinez & Cooper, 2017). Yet users engage with these layers by performing the activities and results a little too much and by patching-in the strategic plan in a creative way. Engagement can be fostered through the visual pathways that instruct users on how to actively work with the workspace, yet it can be fostered in unexpected ways.

Such layers are more than improving visibility or repairing failed, incomplete, or unstable inscriptions (Qu & Cooper, 2011, Busco & Quattrone, 2015; Dambrin & Robson, 2011). They are layers of calculative properties, layers that are added, co-exist, and inform each other and their generative properties. This emphasizes the generative feature of the inscriptions' visual features. By generative we mean that they "spark digression" (Reed, 2006, p. 175), they foster engagement that opens different

sorts of performances and functionalities (even surprising to agencies) while "clos[ing] the possibility of an appeal to something 'outside'" (Riles, 2006b, p. 83). This generative feature puts into relief the intentions, actions, and outcomes associated with specific devices and ambitions (Burchell, Clubb, Hopwood, Hughes, & Nahapiet, 1980; Cooper, Hayes, & Wolf, 1981; March, 1987). Yes, engagement is sustained usage (Cooper et al., 2017), but also the relentless need, coercive or not, affective or not, to perform an emergent composition of devices and aspirations fostered by a more or less continuous patchwork of interventions around perceived and/or unexpected shortcomings.

This continuous need is fostered through forms of engagement. We do not see these forms of engagement as independent, but often act in concert. Along with engagement as *sustained usage*, there can be *aspirational engagement*, in the way the network of actors (in our case, funding agencies and NGOs) intervene in the LF, enabling it to remain engaged with (and adapted to) changing desires about accountability in, and management of, international development. This can be accompanied by another form, what can be labelled *material engagement,* that includes the visuals that foster this sustained usage: the patches with their own calculative orders and the visual pathways that enable their interconnected performance. There is, of course, a well-established literature on coercive *compliance* as a form of engagement, where there is limited discretion or freedom of action. These aspirational, material, and coercive engagements are sometimes connected in unexpected ways. Thus, there can be *selective engagement,* in the way users focus on activities over other (e.g., strategic) concerns and, *creative engagement*, in the way NGO users imagined and constructed a connective pathway between the LF and the strategic plan.[20] We anticipate that exploring these forms of engagement and their interaction would help in understanding the way actors use and respond to devices and systems.

These forms of engagement are not only due to funding agencies' coercion or users' passivity towards the taken for granted. What these forms of engagement show is that engagement involves users, designers, regulators, or some combination of these actors (and their aspirations). It involves working with, and on, inscriptions; it includes heedful agency. It may be the result of being enrolled in a network or device, but it is more than compliance with institutionalized practices. It may be prompted by a desire to address absence (Busco & Quattrone, 2015) in a creative way. It may involve an affective attachment to a strategy, an activity, a practice, or a vision. Engagement can involve all of these active interactions and intentions. Yet our emphasis on changing inter-connected devices and aspirations highlights how patching, repairing, modifying, or experimenting by actors fosters engagement with the parts and the whole, with the expected and unexpected, and with their own aspirations and fears. Thus, engagement is not just about fixing a problem, but about recontextualizing (Hull, 2012) one device (in our case, the LF) in new associations with other devices, international development concerns, new understandings

[20] We would like to thank one of the reviewers for inspiring these categories.

of performance and accountability (from the operational-financial to the strategic, and perhaps to other imaginaries).

To conclude, we provide a device-oriented view into the study of accounting assemblages (Deleuze and Guattari, 1987) in international development. Our study focuses on how accounting and accountability are themselves assembled as a workspace for users to perform. While this device-oriented view highlights how engagement is fostered, future studies can explore how performance measurement systems are engaged with and how users develop attachments from perspectives that give more centrality to users' "regimes" and cognitive processes (e.g. Thévenot, 1984; 2005; Hennion, 2017). Other studies may also wish to examine the conditionality of engagement. While our empirical work indicates how visual features and changing aspirations foster engagement, future work needs to also understand the sort of conditions that enable or not different *types* of engagement. For the device-focused scholar, we suggest the fruitfulness of the processes we identified for the study of other accounting systems. That is, by analysing an accounting system's relation with other devices and their modes of ordering and calculating, we learn how a workspace for providing accounts is assembled and engaged with for actors to perform a mode of governing.

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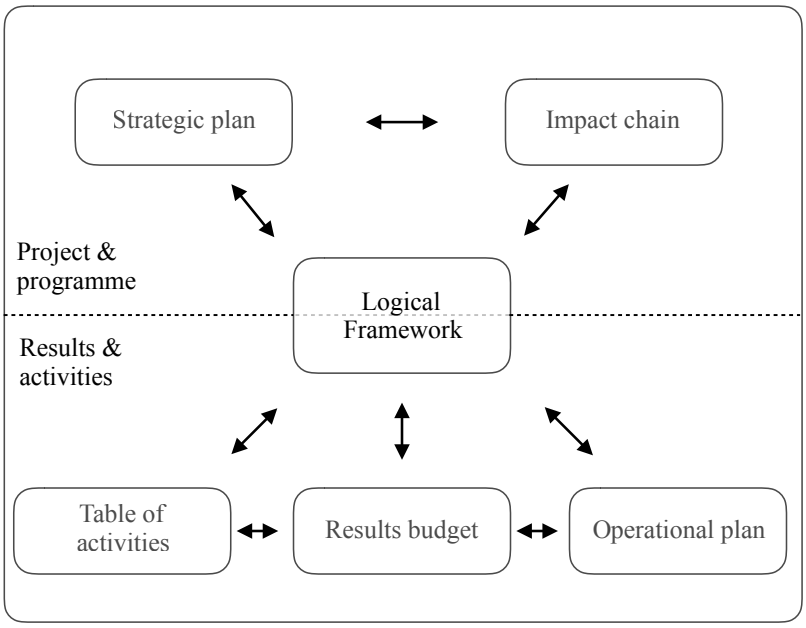
FIGURES

Figure 1. The Logical Framework

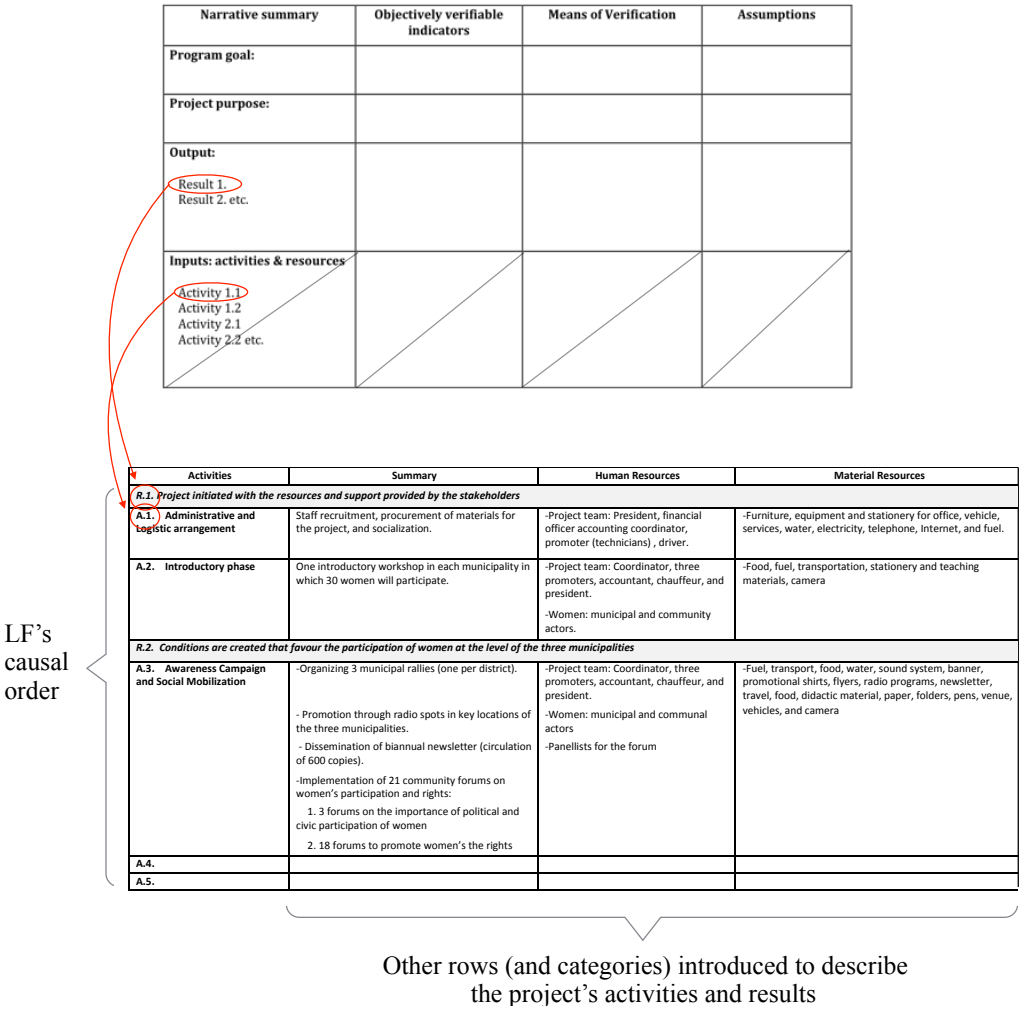
Narrative summary	Objectively verifiable indicators	Means of Verification	Assumptions
Program goal:			
Project purpose:			
Output: Result 1. Result 2. etc.			
Inputs: activities & resources Activity 1.1 Activity 1.2 Activity 2.1 Activity 2.2 etc.			

Figure 2. The accountability workspace



The devices surrounding the LF enable agencies to introduce calculative principles into the workspace. Interventions are at the LF's top-end (project & programme) and bottom-end (results & activities). For another visualisation see Appendix B.

Figure 3. Snapshot 1: Logical framework and table of planned activities (fragment)

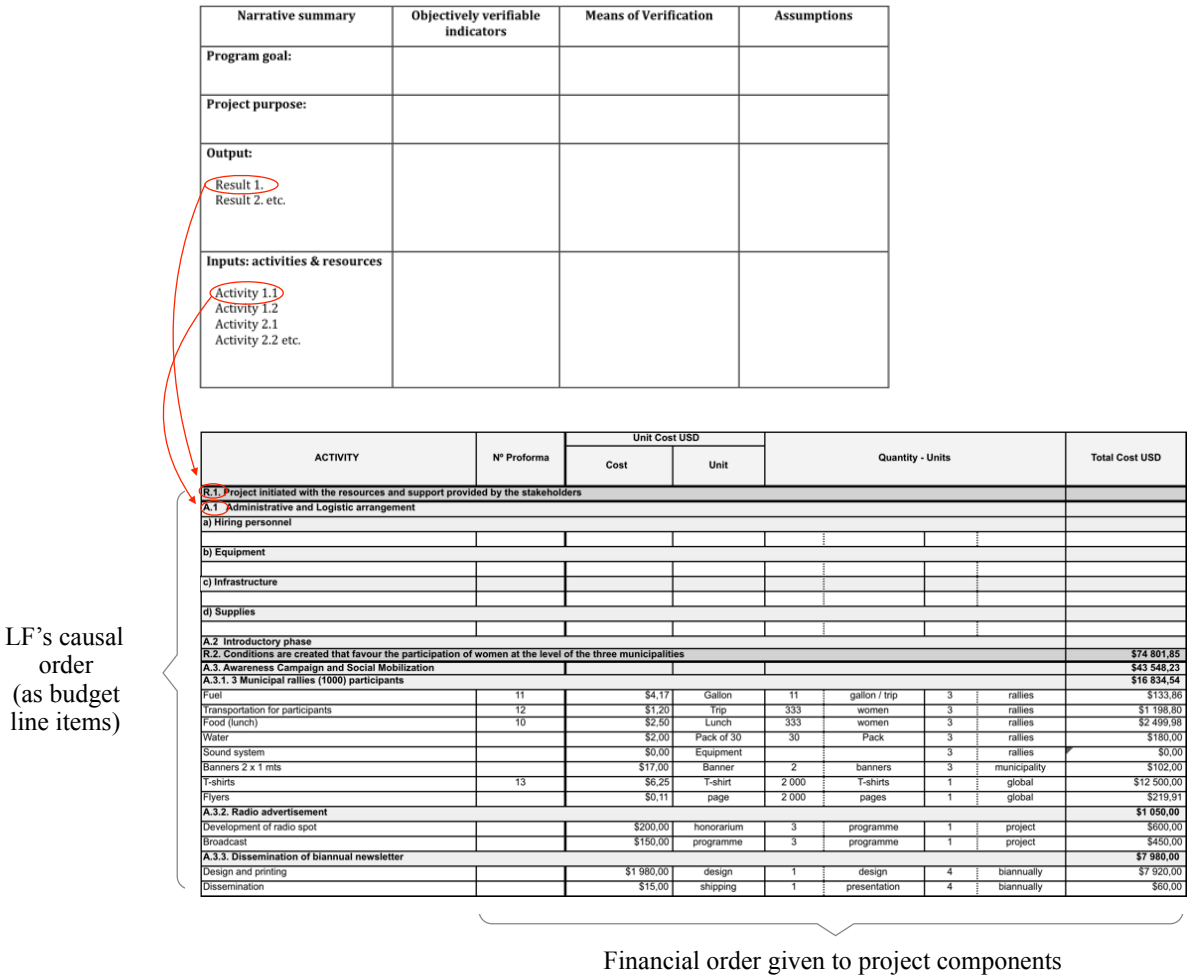


Narrative summary	Objectively verifiable indicators	Means of Verification	Assumptions
Program goal:			
Project purpose:			
Output: Result 1. Result 2. etc.			
Inputs: activities & resources Activity 1.1 Activity 1.2 Activity 2.1 Activity 2.2 etc.			

Activities	Summary	Human Resources	Material Resources
R.1. Project initiated with the resources and support provided by the stakeholders			
A.1. Administrative and Logistic arrangement	Staff recruitment, procurement of materials for the project, and socialization.	-Project team: President, financial officer accounting coordinator, promoter (technicians) , driver.	-Furniture, equipment and stationery for office, vehicle, services, water, electricity, telephone, Internet, and fuel.
A.2. Introductory phase	One introductory workshop in each municipality in which 30 women will participate.	-Project team: Coordinator, three promoters, accountant, chauffeur, and president. -Women: municipal and community actors.	-Food, fuel, transportation, stationery and teaching materials, camera
R.2. Conditions are created that favour the participation of women at the level of the three municipalities			
A.3. Awareness Campaign and Social Mobilization	-Organizing 3 municipal rallies (one per district). - Promotion through radio spots in key locations of the three municipalities. - Dissemination of biannual newsletter (circulation of 600 copies). -Implementation of 21 community forums on women's participation and rights: 1. 3 forums on the importance of political and civic participation of women 2. 18 forums to promote women's the rights	-Project team: Coordinator, three promoters, accountant, chauffeur, and president. -Women: municipal and communal actors -Panellists for the forum	-Fuel, transport, food, water, sound system, banner, promotional shirts, flyers, radio programs, newsletter, travel, food, didactic material, paper, folders, pens, venue, vehicles, and camera
A.4.			
A.5.			

R = Result; A = Activity. Some information has been removed to protect the organization's anonymity. Based on our own translation.

Figure 4. Snapshot 2: Logical framework and activity-based budget (fragment)

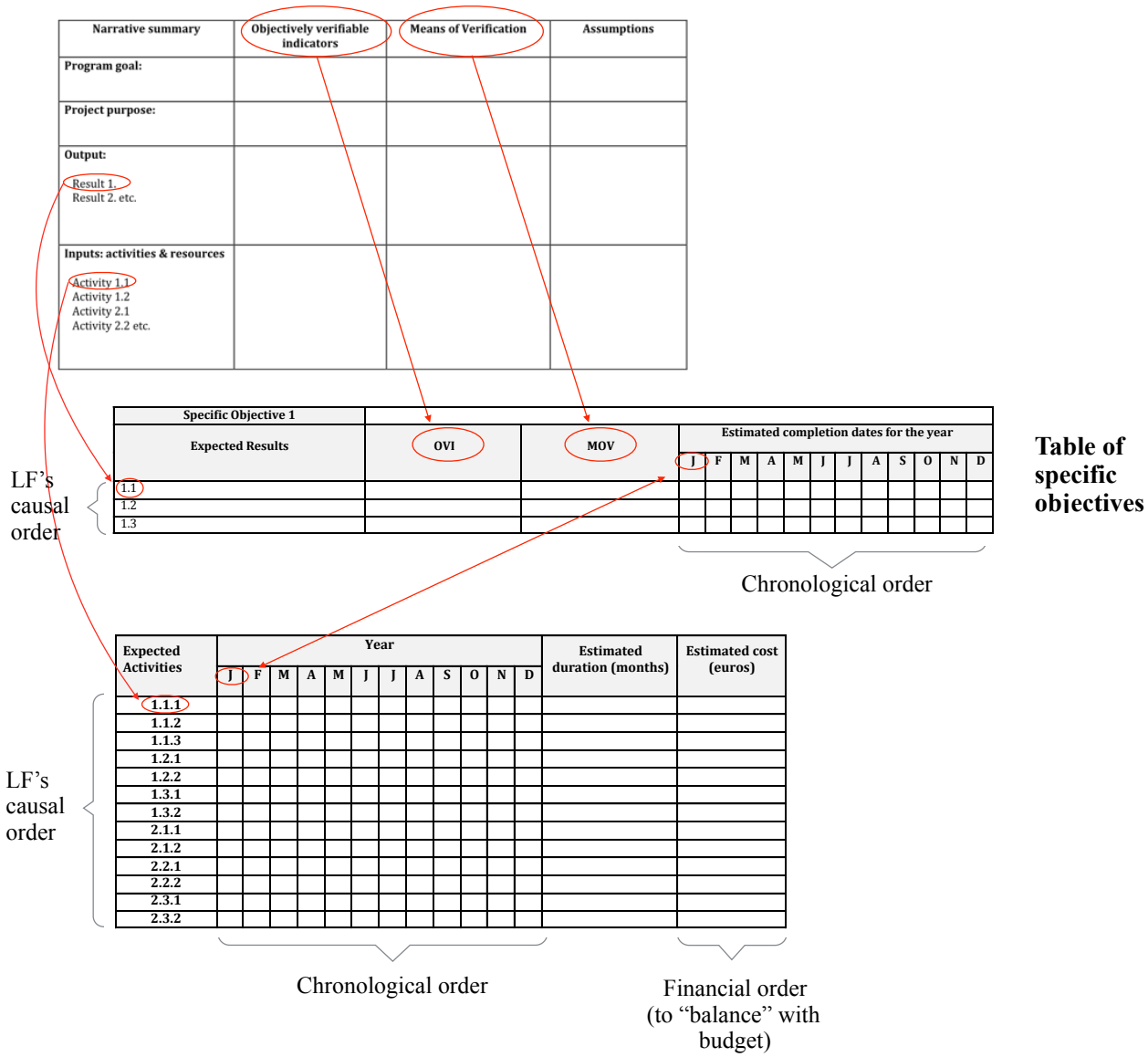


Narrative summary	Objectively verifiable indicators	Means of Verification	Assumptions
Program goal:			
Project purpose:			
Output: Result 1. Result 2. etc.			
Inputs: activities & resources Activity 1.1 Activity 1.2 Activity 2.1 Activity 2.2 etc.			

ACTIVITY	Nº Proforma	Unit Cost USD		Quantity - Units				Total Cost USD
		Cost	Unit					
R.1. Project initiated with the resources and support provided by the stakeholders								
A.1 Administrative and Logistic arrangement								
a) Hiring personnel								
b) Equipment								
c) Infrastructure								
d) Supplies								
A.2 Introductory phase								
R.2. Conditions are created that favour the participation of women at the level of the three municipalities								**$74 801,85**
A.3. Awareness Campaign and Social Mobilization								**$43 548,23**
A.3.1. 3 Municipal rallies (1000) participants								**$16 834,54**
Fuel	11	$4,17	Gallon	11	gallon / trip	3	rallies	$133,86
Transportation for participants	12	$1,20	Trip	333	women	3	rallies	$1 198,80
Food (lunch)	10	$2,50	Lunch	333	women	3	rallies	$2 499,98
Water		$2,00	Pack of 30	30	Pack	3	rallies	$180,00
Sound system		$0,00	Equipment			3	rallies	$0,00
Banners 2 x 1 mts		$17,00	Banner	2	banners	3	municipality	$102,00
T-shirts	13	$6,25	T-shirt	2 000	T-shirts	1	global	$12 500,00
Flyers		$0,11	page	2 000	pages	1	global	$219,91
A.3.2. Radio advertisement								**$1 050,00**
Development of radio spot		$200,00	honorarium	3	programme	1	project	$600,00
Broadcast		$150,00	programme	3	programme	1	project	$450,00
A.3.3. Dissemination of biannual newsletter								**$7 980,00**
Design and printing		$1 980,00	design	1	design	4	biannually	$7 920,00
Dissemination		$15,00	shipping	1	presentation	4	biannually	$60,00

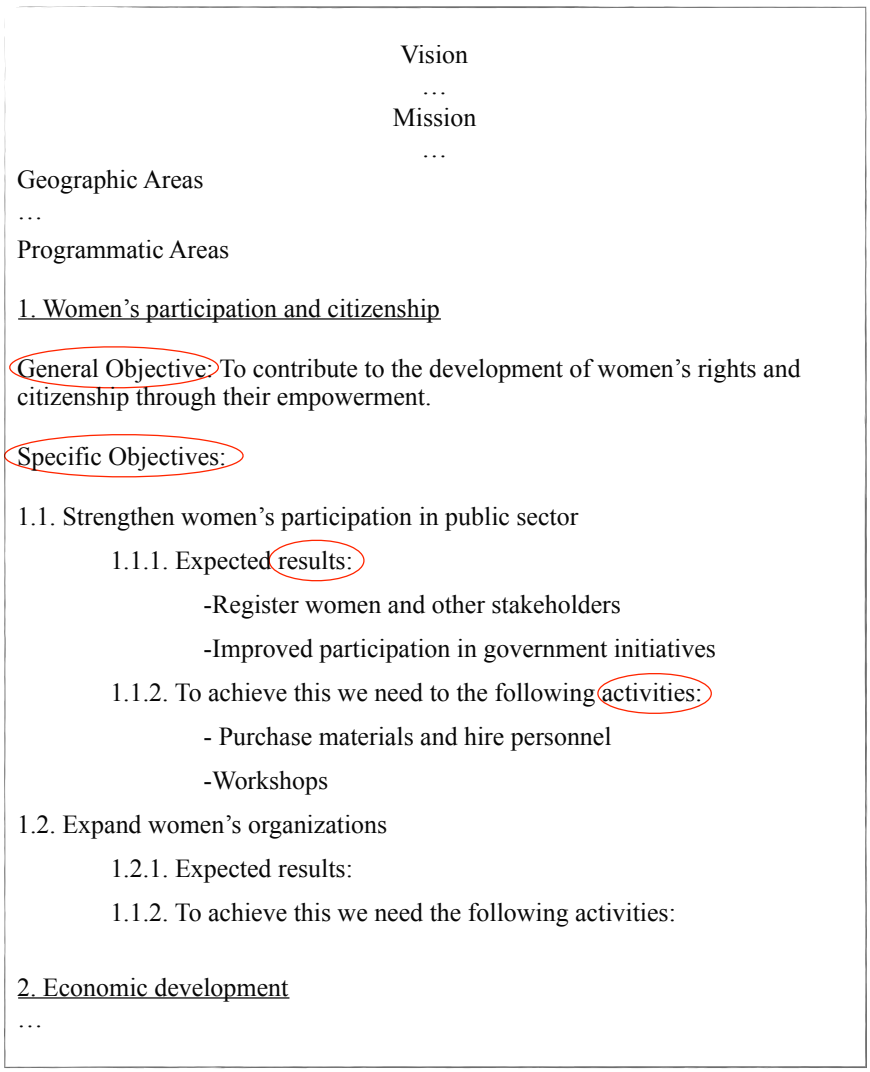
R = Result; A = Activity. Some information has been removed to protect the organization's anonymity. Based on own translation.

Figure 5 : Snapshot 3: Logical framework and the project yearly operational plan



***OVI** = Objectively Verifiable Indicators; **MOV** = Modes of Verification*
Reproductions. Based on own translation.

Figure 6. Snapshot 4: Reproduction of NGO's strategic plan (fragments)



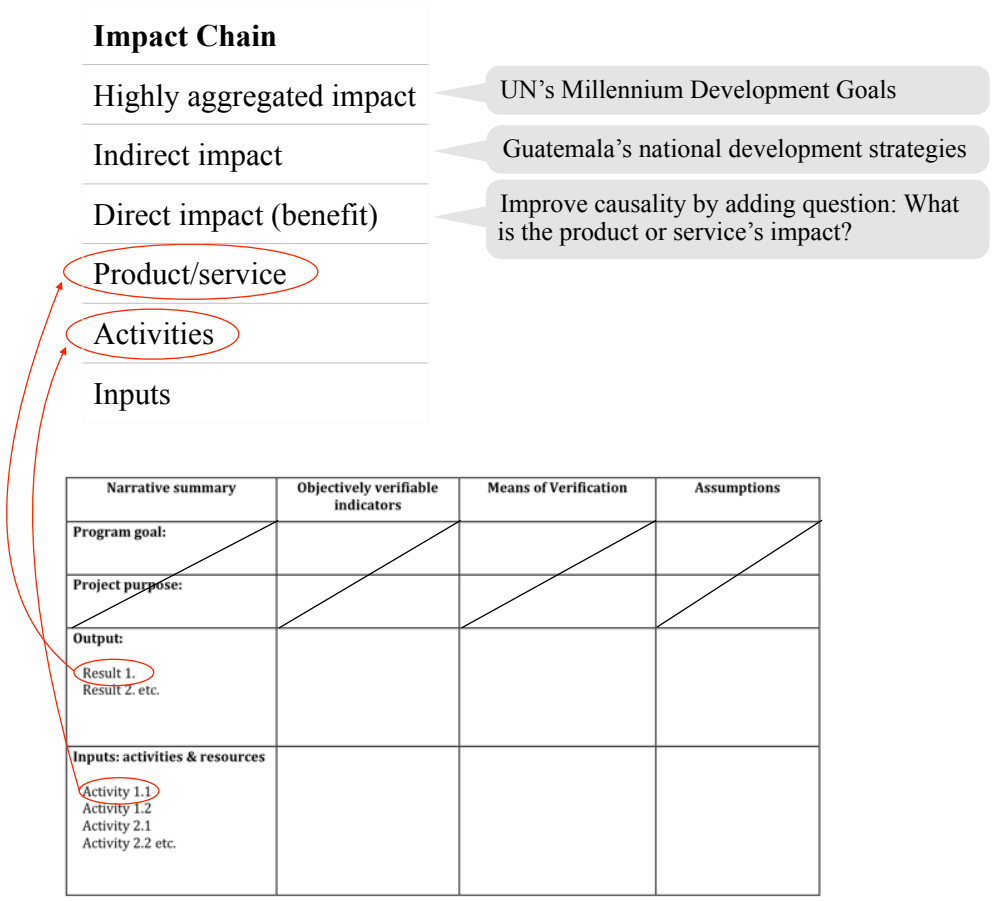
Based on own translation.

Figure 7. Comparison: Logical framework and impact chain

Logical Framework	Impact Chain
General objective	Highly aggregated impact
—	Indirect impact
Project objective	Direct impact (benefit)
Results	Product/service
Activities	Activities
Inputs	Inputs

Reproduction of what Nicolas drew on white board

Figure 8. Snapshot 5: Logical framework and impact chain: national and global targets



Appendix A. List of interviews conducted 2010-11[1]

#	Organization-type		Persons interviewed	Trip #	Interview #
NGOs					
1	Popular education	SV	Executive director	1,2	1, 40
2	Rural development	SV	Executive director/project planner	1,2	2, 44
			Accountant	1	13
3	Urban development	SV	Project designer /technician	1	4
			Administrator	1	5
4	Women's/feminist	SV	Project designer/coordinator	1	6
5	Administrative support	SV	Executive director	1	7
6	Rural development	SV	Accountant	1	9
			Regional manager	1	11
			Regional administrator/accountant	1,2	15, 41
7	Popular education	SV	Accountant	1	12
			Project coordinator/designer/technician	2	43
8	Women/feminist	SV	Project/programme coordinator/technician	1	16
9	Under process of incorporation	GT	Director/manager	1	18
10	Democratic governance	GT	Executive director	1	21
11	Rural development	GT	Project coordinator	1	22
			Accountant/administrator	1	23
12	Human rights	GT	Administrator	1	26
13	Campesino rural	GT	Project technician	1	27
14	NGO coordination/support	GT	Project coordinator	1,2	30, 58
15	Youth and arts	GT	Director/manager	1	31
16	Democratic governance	GT	Director	1	32
17	Women/feminist	GT	Founder/director	1	36
18	Displaced communities	GT	Senior manager	1,2	35, 53
19	NGO coordination/support	GT	Director	1,2	37, 52
20	Ecology/Agriculture	GT	Manager	1	55
Non-incorporated organizations					
1	Human rights/youth	GT	Community organizer	1	25
2	Human rights/campesino	GT	Community organizer	2	62
Municipal government					
1	International development office	SV	Manager	1	10
2	Arts and culture	SV	Manager	1	14
Consultants					
1	Consulting firm	GT	Junior consultant	1	20
2	Independent consultant	GT	Senior consultant	1	24, 27
3	Consulting firm	GT	Senior consultant	2	50
4	Independent consultant	GT	Senior consultant	2	57

[1] Tables initially published in Martinez and Cooper (2017)

Appendix A. (continued)

#	Headquarters		Person interviewed	Trip #	Interview #
International NGOs					
1	Europe	SV	Director and project manager	1,2	3, 39
2	Europe	SV	Accountant/ administrator	1	17
3	North America	GT	Managers	1	19
4	Europe	GT	Project coordinator	1,2	36, 61
5	North America	SV	Director	2	47
6	Europe	GT	Programme manager (evaluation)	2	54
7	Europe	GT	Administrator	2	56
8	North America	GT	Director	2	59
International funding agencies					
1	European bilateral agency	SV	Project coordinator	1	8
			Project administrator	2	42
2	European bilateral agency	GT	Executive director	1	29
3	European bilateral agency	GT	Project coordinator	1	33
4	North American bilateral agency	GT	Director	2	38
5	European bilateral agency	SV	Project coordinator	2	45
6	Multilateral agency	SV	Programme coordinator	2	46
7	Multilateral agency	GT	Monitoring & evaluation specialist	2	48
8	North American bilateral agency	GT	Senior manager	2	49
9	Multilateral agency	GT	Technician	2	51
10	Multilateral agency	GT	Programme manager	2	60

Appendix B: The workspace snapshots table

	Devices	The patches	Ordering principles	Accountability practices	Fostering engagement
Snapshots	LF and table of planned activities	LF's hierarchy of objectives is altered: Activities are detached and combined with additional categories (Human and Material resources) into another patch: a separate matrix (Fig. 3).	LF's causal-sequential order (emphasizing activities and results)	Activities given their own matrix. Stepping stone for increased detail through budget and operational control.	Problem: LF, it is ambiguous, no "clear methodology," does not properly "describe the "sequencing of activities and results." Intervention in top-end: Agencies control for results and also inputs (to account for tax payer money). Improve LF's causal-sequential order by fostering engagement with activities-results and financial and chronological orders.
	LF and activity-based budget	LF's activities and results plugged into the budget for costing. The activity-based budget (Fig. 4) is patched in.	Financial order	Activities and results to "balance" financially (have to add up). Can now determine financial "value" of activities and results. Inputs can be controlled through variance.	
	LF and operational plan	The LF's activities and results are plugged into the project's operational plan. The table of specific objectives and Gantt chart (Fig. 5) are patched in.	Chronological order	More detailed and periodic project monitoring—variance control. The Gantt chart also serves as a way to link operational with financial orders for further controllability.	
	LF and strategic plan	The LF's causal order and linguistic tags are patched in to design the strategic plan (Fig. 6).	Specialization order	Position project in NGO's strategic plan: its programme and geographic specialization. Streamlines project design process.	Problem: Engagement with inputs, activities, and results encouraged "activity-ism" Intervention in bottom-end: Improve myopic focus on causal-sequential, financial, and chronological orders by fostering engagement with NGO, national, and global development aspirations.
	LF becoming impact chain	LF's hierarchy of objectives is altered: Categories (highly aggregated impact, indirect impact, and direct impact) are patched into the LF (Fig. 7 & 8) to form another device.	Reinforces the LF's causal-sequential order and its links to national and transnational target-setting orders	Users link projects with country and agency (e.g. MDGs) development strategies. Requires users to measure usefulness of service or product.	

Appendix C: The workspace snapshots (summary diagram)