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The Use of Process Mapping in Microfinance

A Case Study of Pro Mujer Nicaragua

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The Practitioner Learning Program Improving Efficiency—Maximizing Human and Physical Resources Case Study #1

The Use of Process Mapping in Microfinance:
A Case Study of Pro Mujer Nicaragua

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Preface

The Practitioner Learning Program (PLP) is a SEEP Network initiative that explores key challenges facing the micro-enterprise field. The SEEP PLP, a competitively run grants program, engages participants in a collaborative learning process to share and document findings and lessons learned, as well as to identify effective, replicable microenterprise practices and innovations to benefit the industry as a whole. The SEEP PLP is funded by the office of Microenterprise Development of the United States Agency for International Development (USAID). For more information on this and other SEEP PLP initiatives, see The SEEP Network website: www.seepnetwork.org.

The SEEP PLP in “Improving Efficiency—Maximizing Human and Physical Resources” was conducted from 2004 through 2006 and examined strategies, tools, and technologies that microfinance institutions (MFIs) use to maximize human and physical resources. There was a particular focus on low-technology solutions to increase staff productivity, decrease personnel or administrative costs, and increase outreach and client retention.

The “Improving Efficiency” PLP has produced a series of ten Learning Products—as well as an overview outlining the PLP process and its results—to share with the microfinance and microenterprise field that are explained in more detail below. All of these publications are available on-line at <http://www.seepnetwork.org/>.

Most of the participating institutions began with a rigorous analysis of their core processes, including credit delivery, accounting, and management information systems. Process mapping proved a crucial tool in shedding light on organizational bottlenecks and inefficiencies. Three Learning Products produced from this PLP are devoted to process mapping: case studies of Pro Mujer Nicaragua and of MI BOSPO, which used the tool to make significant changes to their core operations, and a technical note that compiles interviews with MFI managers who used process mapping in their efforts to boost efficiency.

Based on their institutional assessments, most of the MFIs identified a similar set of interrelated issues they need to address in order for them to become more efficient. Decentralization emerged as an overriding theme, especially the exploration of what kinds of institutional structures and systems would support a shift in decision-making authority for credit operations to branch offices. “Decentralization of Microfinance Institutions: A Guide for Decision Making” addresses these issues in depth.

Closely related to the topic of decentralization was the need to train branch managers. Many of the participating MFIs’ branch managers had been senior loan officers and did not have many of the skills and perspectives needed to manage staff and operations. Two of our Learning Products are comprehensive training programs that address areas that were identified as key for branch management training: human resource management and financial management. The training manual on human resource management was developed by the PLP in conjunction with MEDA and is entitled “Branch Management Training for MFIs: Developing Staff Management Skills.” The financial management training manual is “Principles and Practices of Financial Management.” Based on an identified need for training materials in other topics, several of our other Learning Products have accompanying PowerPoint presentations that summarize key information in a format conducive to training.

Several other topics related to enhancing efficiency emerged during the course of this PLP. One topic was the importance of cultivating client loyalty. Loyal clients provide repeat business, contributing to both lower expenses and higher income. The second technical note, “Building Client Loyalty,” explores this issue in detail. Another recurring issue was staff incentives and the dangers of implementing a system before it is thoroughly analyzed. The third technical note, “Pitfalls and Unintended Outcomes: Advice on Designing and Implementing Staff Incentive Systems,” explores these issues. Another valuable tool that emerged from this PLP was a framework for mapping key operational tasks and areas of responsibility. This is explored in the fourth technical note, “Division of Responsibilities Framework: A Tool to Strengthen Operations Management of Microfinance Institutions.”

PLP colleagues from India faced an inverse set of challenges to those posed to most of the other participating institutions—how to capture information from an extremely decentralized network of savers and borrowers in self-help groups and centralize it in order to create accurate, timely, consolidated financial reports. The solution they developed and implemented is explained in the learning paper, “Promoting Quality Bookkeeping in Self-Help Groups: The Mahakalasm Management Information System.”

The ten Learning Products reflect both the range of institutions and issues explored during this PLP and the consensus that emerged regarding what is needed to efficiently utilize human and physical resources while remaining responsive to client needs. The participating institutions found the PLP to be a rich learning experience and we hope the lessons learned that are distilled in this series of Learning Products prove to be of value to the field as a whole.

--Tony Sheldon, PLP facilitator and Learning Products editor

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Section 1. Introduction

Most successful microfinance institutions operate with a philosophy of continuous improvement. Often the most experienced institutions have the greatest potential for gain when they are willing to question their most basic assumptions. What is being done to meet customer demands? How are we delivering our services? Why is it being done this way? All are central questions required for continuous improvement.

Process mapping can be a valuable tool for microfinance institutions. With support from The SEEP Network's Practitioner Learning Program, the experience of Pro Mujer Nicaragua, a leading microfinance institution, reveals the many facets of its potential, from simple process improvement to the creation of new performance standards serving to improve the institution's competitive position. Pro Mujer Nicaragua presents a compelling case for the successful application of process mapping.

Pro Mujer Nicaragua, established in 1996, has long operated with such a mentality. While adopting many of the lending practices utilized in other Pro Mujer institutions in Latin America, from its initiation Pro Mujer Nicaragua was committed to developing and implementing its own approach to meeting the needs of local women entrepreneurs.¹ Years of experimentation with the village banking methodology, combined with education and health services, have resulted in the establishment of one of the most successful microfinance institutions (MFIs) in the country, specialized in serving the market's poorest enterprise segment.

In 2004 Pro Mujer Nicaragua, as part of the Pro Mujer network of institutions, applied to and was accepted into the SEEP Practitioner Learning Program.² This SEEP Practitioner Learning Program (PLP) was specifically designed to investigate and promote practices resulting in greater efficiency gains for MFIs, long considered a central challenge of the microfinance sector. One of the most important tools applied by the participating programs, including Pro Mujer Nicaragua, was process mapping.

A process map is a visual representation of a process that illustrates what activities are performed, where, by whom, in what sequence, and over what period of time. It enables an MFI to document, improve, streamline and redesign the way it works. Recognizing that all work is part of a process, the development of process maps can be an integral part of continuous improvement, allowing institutions to visualize and identify problems and their solutions. Armed with an understanding of inputs, outputs, and interrelationships of processes, an MFI can peel away the complexity of an institution's organizational structure (and internal politics) to focus on the activities that are truly at the heart of the business.³

The level of analysis and the overall scale of a process mapping project will depend on the needs and capacities of each MFI. Institutions may choose to approach process mapping with very specific objectives, limiting their analysis to only a select number of activities, such as credit delivery or customer service, or they may choose to undertake a more comprehensive analysis focused on wide-scale improvements in several functional areas. Pro Mujer Nicaragua represents a case of an MFI that over time applied process mapping to nearly every aspect of its operations, using a very detailed level of analysis, beginning with the credit delivery and repayment cycle.

This case study documents the initial experience of Pro Mujer Nicaragua in its use of process maps and the early impacts on the institution dating from January 2004 through June 2005. It presents the principal activities that took place during this time period, key lessons learned, and the most salient challenges faced by the institution, with the objective of aiding other MFIs considering undertaking similar process mapping initiatives.

1. Pro Mujer Nicaragua is part of the Pro Mujer network of institutions. Established in 1990 in Bolivia, there are now Pro Mujer institutions in five countries in Latin America. <http://www.promujer.org/>

2. The SEEP Practitioner Learning Program (PLP) is a competitive grants program funded by the Microenterprise Development Division of the U.S. Agency for International Development (USAID).

3. "A Toolkit for Process Mapping for MFIs" MicroSave, 2004, Nairobi, Kenya.

Section 2. Background Information

Nicaragua and Pro Mujer Nicaragua

Pro Mujer Nicaragua operates four branch offices, referred to as “focal centers,” through which it serves approximately 14,000 borrowers.⁴ Customer groups are organized into “community associations” of approximately twenty-eight borrowers. Community association meetings function as a forum for health trainings as well as loan repayment activities. Medical consultations are offered on an individual basis at focal centers for a minimal charge.

Within community associations, individual loan sizes average approximately US\$205 payable over four to six months. Customers manage a group savings account at a local commercial bank, referred to as the “internal account,” that is derived from both mandatory and voluntary savings deposits. Accumulated savings represents close to twenty five percent of the institution’s outstanding portfolio.

Pro Mujer Nicaragua has been offering group lending and training services for women entrepreneurs since 1996. Since the time of its establishment the country’s microfinance sector has become increasingly crowded with competitors, dramatically increasing the supply of services to the local population. With potential customers sometimes having several options from which to choose, customer demands are continually evolving. At a minimum they expect rapid, affordable, and easily accessible services. Institutions that can consistently meet or exceed these expectations are those that will survive.

In a highly competitive environment, Pro Mujer Nicaragua attempts to distinguish itself from its competitors in important ways. Its combination of lending, savings promotion, education, and provision of health services is unique. The institution’s specific orientation to the needs of women entrepreneurs also sets it apart from other more traditional MFIs. The institution’s first experience with process mapping began with a general orientation on the subject during the initial meeting of the SEEP Practitioner Learning Program on Improving Efficiency in January 2004. The Country’s competitive microfinance market, as well as Pro Mujer’s own strategic vision, led the institution to conclude that process improvement could be an integral tool in making major gains in performance. Competitive advantages created from highly efficient and integrated processes are far more sustainable than those arising from discrete activities, individual products, or “core” competencies.⁵ Pro Mujer Nicaragua saw process mapping as an important step toward reaching this goal.

Table 1. Nicaragua Country Statistics 2005⁶

Population (2004)	5.4 million
Gross National Income (GNI) per capita (2004) US\$	\$790
Population below poverty line	45%
Maternal mortality per 100,000 births	150
Percent of households with female head	25%
Adult literacy rate (2000-2004)	77%
Unemployment rate	6.4%, underemployment est. 46.5%
GDP composition by sector	Agriculture 16.8% Industry 27.6% Services 55.6%
Inflation rate	10.1%

4. June 2005

5. “Introduction to Process Mapping” Women’s World Banking presentation, Tuzla, Bosnia and Herzegovina, March 2004.

6. UNICEF “At a Glance: Nicaragua” The State of the World’s Children 2006, <http://www.unicef.org/infobycountry/nicaragua.html>. The World Factbook, CIA US Gov., <http://www.cia.gov/cia/publications/factbook/geos/nu.html>

Table 2. Institutional Summary⁷

Legal structure	NGO
Core products	<ul style="list-style-type: none"> • Community Association (group) working capital loans • Health training for women • Basic health services for women
Start of operations	1996
Portfolio value \$US	\$2,085,139
Total assets \$US	\$2,443,436
Number of loans outstanding	14,039
Number of staff	63
Number of branch offices (“focal centers”)	4

Table 3. Loan Product Description Table

Target market (client)	Poor women entrepreneurs with limited access to credit and training services
Target Market (geographic)	Urban and rural areas
Eligibility requirements	<ul style="list-style-type: none"> - Between 18-65 years old - Home ownership, or stable residence in community for at least one year - Primary economic activity is commerce with at least four months experience
Average loan size	US\$238.00
Average loan term	5 months
Guarantees	Solidarity group

Section 3. The “Process” of Process Mapping

Begin and End With the Customer

Process mapping was not the first exercise undertaken by Pro Mujer Nicaragua related to better understanding its operations and products. The institution had been engaged in extensive market research for some time, including an important participatory investigation completed the end of 2003. Information obtained during these activities played a vital role in shaping the institution’s strategic orientation. Techniques used in its market research included suggestion boxes, focus group discussions (consultative groups), and field surveys. Both external clients and internal staff were considered. This research helped the institution better identify customer demands and determine the best means to distinguish itself from its competition. Armed with this information, Pro Mujer was able to enter into a detailed analysis of its activities with a greater degree of certainty, capable of identifying whether a process added value as defined by the customer and if it measured up to the standards set by competing institutions.

Pro Mujer Nicaragua established the following objectives for its process mapping activities:

- Reduction in the time to disburse both new loans and repeat loans
- Reduction in clients’ group meeting times (during the loan cycle and at the end of the loan cycle)
- Increased customer satisfaction, and
- Elimination of inefficient processes resulting in excess expense and slower response time.

In reality, the institutional impacts exceeded in many ways these initial, very specific objectives. Nevertheless, the influence of market research findings in the establishment of process mapping objectives, and later in the analysis of processes, was essential to the initiative’s success.

7. SEEP PLP Progress Report, June 2005, Pro Mujer Nicaragua.

Box 1. The Role of Consultative Groups—Pro Mujer Nicaragua

A large-scale participatory market research initiative in 2003 undertaken by Pro Mujer Nicaragua and led by a group of external consultants utilized “consultative groups” of customers to gather relevant market information. Having participated in community initiatives for years, ranging from group lending to training, Pro Mujer customers adapted easily to the concept and from the initial meetings were forthright in providing information.

In 2004 Pro Mujer Nicaragua decided to institutionalize the practice following the success of the research initiative by formally constituting groups in each geographical area where it provided services. It later formed a national consultative group made up of representatives from the regions. These groups now form a central part of the institution’s ongoing market research program. Groups are brought together every three months with clear objectives to analyze and critique the institution’s services. Past recommendations from these meetings have contributed to changes in group size, savings management, payment terms, and size of loans. In cases where recommendations are not adopted, an explanation is later provided to the group. “The consultative groups are the most important advisors to Pro Mujer Nicaragua...Maintaining two-way communication is vitally important,” states the institution’s Executive Director, Gloria Ruiz.

Documenting Key Processes

The seeming simplicity of process maps is one of its principal advantages. The common adage “a picture is worth a thousand words” is certainly applicable. Nevertheless, achieving the appropriate level of visual simplicity, while at the same time assuring accuracy and completeness, can be a significant challenge. In the case of Pro Mujer Nicaragua, the development of process maps was in itself a process. A lack of formal training in the subject combined with use of inappropriate software initially posed considerable obstacles. The institution’s first attempts at mapping processes resulted in an overly complex depiction of 180 distinct activities in a single Microsoft Word file involving nearly every aspect of loan disbursement and repayment. However, despite its drawbacks, this first attempt was an important step. By sharing the maps with others, management was able to solicit useful feedback from staff members as well as Pro Mujer personnel from other countries, something that past reviews of operational manuals thick with text had not done.

Following its early attempts, Pro Mujer Nicaragua learned the importance of using appropriate software. It chose to use Visio, a Microsoft product designed for creating process diagrams. The software helped to familiarize the institution with an array of types of maps in addition to providing access to an essential standardized set of symbols. Later a series of maps depicting its core “front office” operations replaced the original version. Processes were defined more precisely with a beginning and ending point, relevant inputs and outputs, and estimated durations for each activity, with special attention given to the estimation of waiting times from the perspective of Pro Mujer’s customers. Technical support was provided virtually by Pro Mujer’s office in New York.

Box 2. Front Office Processes Mapped

Community Associations

1. Pre-credit activities broken down by sub processes: recruitment, training, opening bank accounts
2. Loan disbursement
3. Loan repayment
4. Repeat loans
5. Arrears recovery
6. Loan write-off
7. Commission reimbursement to client

Solidarity Groups (new product)

1. Pre-credit activities
2. Loan repayment
3. Commission reimbursement to client
(as of July 2005)

Getting the Right People Involved

Many organizations mistakenly believe that the responsibility to identify and document processes is a specialist task that requires outside assistance. While Pro Mujer Nicaragua benefited from the knowledge of experts on the subject of process mapping, it soon realized the real experts were those that perform the processes in their own institution. Individuals responsible for carrying out the large array of activities associated with the institution's lending operations were the best source of information. They were capable of providing valuable insight into the intricacies of how the processes were performed, as well as identifying bottlenecks and potential improvement opportunities. While senior management support was essential, the experience of Pro Mujer Nicaragua revealed it was the contribution of the various perspectives of operational staff that ensured the "process" of process mapping achieved its objectives.

Early on the institution decided to appoint a project leader, Pro Mujer Nicaragua's Operations Manager. This individual was responsible for gathering data, creating the maps, leading the analytical process, as well as designing and overseeing the implementation of process improvements. Getting the right people involved was one of the most important responsibilities of the project leader. While an expert in processes, the project manager set aside existing operations manuals as well as his own preconceived notions, and relied as much as possible on first hand accounts of staff in the field. Every process documented was a result of numerous interviews with staff combined with close observation. Processes were first depicted as they existed in the field. They were then subject to analysis by a cross-functional group of individuals with different responsibilities related to the process including focal center (branch) managers, group promoters and others.⁸ These meetings, referred to as internal "consultative group meetings," took place periodically over the course of several months.

One of the most important lessons learned was the realization of the amount of time the process mapping project would consume of the local staff including initial research, map construction, analysis, definition of proposed changes, and the design and monitoring of pilot implementation. Recognizing the project's importance, senior management made adjustments to the project leader's normal work plan. While it is difficult to calculate the actual amount of hours and days consumed over the initial period of the project from January 2004 to June 2005, by his own account, the project leader estimates at least 60% of his normal work day, combined with several evening and weekends, was required. Fortunately, most involved in the project recognized that their own skill development and growing familiarity with process mapping had a favorable impact, making what were once seemingly complex tasks relatively simple after several months of experience.

Identifying Improvement Opportunities

The important task of critiquing processes took place periodically throughout the map development process. Facilitated by the project leader, these meetings aimed to identify opportunities for improvement. Improvements were generally defined as a reduction in process times, elimination of non-value-added steps, a decrease in errors, and/or a more productive use of resources.

In many cases, the most important realization for those involved was to see how their work impacted other parts of the organization. Process maps make work visible. This opened channels of communication within and across departments through which small issues could be quickly resolved. For Pro Mujer Nicaragua this was especially true for communication between what is considered "front office" positions that deal directly with customers and "back office" administrative positions. Very often, small issues in process terms can become bigger issues to the person performing the process as well as those dependent upon its outcome. Maps gave a clear insight into how the organization operated, making it possible to exploit this information to feed strategic reviews and consider the implementation of larger more consequential changes such as adaptations to savings policies and revisions to pre-credit training programs.

Information from past and ongoing market research was integral to these deliberations. Knowledge obtained from research activities offered vital insight into customer values. For example, Pro Mujer staff knew rapid response and overall efficient time management was an important priority. Customers wanted faster loan approval for first time loans, faster renewals, and more expedient repayment meetings. Close analysis of process maps enabled the Pro Mujer team to identify major bottlenecks that in many cases prevented them from meeting their customers' demands.

8. Focal centers are the Pro Mujer equivalent of branch offices.

Another critical discovery revealed during map analysis was the simple lack of consistency among focal centers in the implementation of some processes. In many cases years of relatively fast growth compromised standardization. While specific outputs had always been carefully monitored, such as portfolio at risk and portfolio growth, the means in which certain activities were carried out was under far less scrutiny. The result was a noticeable variation in the implementation of processes from one focal center to another. In cases where this type of inconsistency existed, the process mapping analytical review was much more challenging. Processes cannot be properly evaluated if they are not implemented in accordance with their design. It is thus critical to separate problems with process design from problems with implementation. Ensuring compliance in these cases became an important objective for Pro Mujer Nicaragua.

The table below presents a summary of some of the most consequential problems identified and their root causes:

Table 4. Problem Identification

Problem	Cause
Time to disburse new loans	<ul style="list-style-type: none"> • Pre-credit training processes too slow, spread out over too many different days • Duplication of information in several forms, excess paperwork • Complexity of application forms • Errors in applications
Duration of repayment meetings too long	<ul style="list-style-type: none"> • Internal account (client managed savings accounts) used to cover arrears problems • Administration of internal account time-consuming
Duration of cycle closing meetings too long	<ul style="list-style-type: none"> • Problems with resolving arrears and use of internal account
Time for loan renewal	<ul style="list-style-type: none"> • Complexity of application forms; existence of errors led to repetition of steps • Lack of capacity of community association (client groups) boards • Excessive number and duration of credit committee meetings attended by staff • Busy schedule of loan officers.
Inconsistency in the implementation of some processes	<ul style="list-style-type: none"> • Weak supervision • Lack of staff capacity • Lack of capacity and experience of borrower groups

Section 4. Implementing Change

Process Improvements

The identification of process improvements took place as each individual process map was analyzed. In some cases, changes were quickly agreed upon and immediately implemented on an institution-wide basis. In other areas, where change required a greater degree of planning and training, pilot initiatives were designed. Pilots were conducted in the two most experienced regions of the institution, Leon and Managua, over a period of six months. Process maps were revised to reflect changes.

The use of the clients' internal savings account was identified as being a major source of problems for community associations, and thus an important area for process improvement. Internal savings were often used to cover payments on delinquent loans during the cycle. Customers were then in arrears not with Pro Mujer but with the community association, creating delays in meetings and customer dissatisfaction.

As a result, Pro Mujer Nicaragua decided the best means to change behavior was to create an appropriate system of incentives that would motivate customers to pay the institution on time, as well as limit the use of internal savings as a means to pay their debt. Specifically, Pro Mujer decided to offer a commission rebate equal to a 1% reduction in the interest paid for all community associations that limited use of their internal account for these purposes. At the same time, these groups were given access to larger loans and eventually access to a larger percentage of their savings for personal withdrawal. Pro Mujer's expectation was that a reduction in internal account problems would dramatically expedite repayment meetings during the loan cycle as well as at cycle closings.

Change Area 1.

Internal savings account used to cover debt payments to Pro Mujer

- Commission rebate to community associations that avoided paying with savings
 - Access to larger loans
 - Increased access to personal savings for withdrawal.
-

Another area of close scrutiny was the application process itself, both for new loans and loan renewals. Analysis revealed application forms could be simplified through the elimination of redundant questions and superfluous information, and the reduction in the number of client signatures required. Simplified forms would be completed faster and with fewer errors. In addition, pre-credit training for new loans was redesigned. A close analysis of the curriculum and of the training process itself led Pro Mujer to the conclusion that some subjects could be condensed and longer daily training sessions could be designed. As a result, mandatory pre-credit training was reduced from seven days to four.

Change Area 2.

Complexity of application forms, frequency of errors, difficulties experienced by community associations

- Elimination of redundant questions.
 - Elimination of superfluous information
 - Reduction in number of required signatures
 - Longer daily training sessions and condensed subjects in pre-credit training
-

A basic underpinning of the village banking methodology is the self-management of the group. To the degree that the groups, and specifically the group's board of directors, can assume management responsibilities, including bookkeeping and arrears control, the more efficiencies the MFI can gain. However, process analysis revealed that in many cases the community associations did not assume the level of responsibility required. This was a failure of group promoters that did not sufficiently train groups or who failed to delegate tasks appropriately to the groups.

One area of particular importance was loan renewal. Applications for loan renewals were often not completed on a timely basis, and credit committees formed by members within the community associations were mismanaged. Despite having distributed forms to customer groups far in advance of cycle closings, in many cases both group promoters and community associations were delayed in submitting the necessary paperwork. Time dedicated to dealing with these problems delayed end of cycle meetings and, ultimately, loan disbursements. In response, Pro Mujer launched an intensive training initiative with the purpose of equipping community associations with the skills and understanding needed to properly perform their roles and responsibilities.

Change Area 3.

Timeliness in submission of repeat loan applications. Difficulties experienced by community associations.

- Training of customer groups
 - Improved delegation of responsibility to customer groups
-

The speed of loan renewals was also impacted by the work load of some of the credit committees within Pro Mujer Nicaragua. A typical credit committee meeting could take as long as forty minutes and involve up to four staff members. Due to increased volume of lending activities, more and more staff time was dedicated to committee meetings, which would often extend work days, frustrating personnel and occasionally delaying disbursements. Pro Mujer Nicaragua decided to pilot the elimination of credit committees for loan renewals from community associations with perfect repayment records.

Loan disbursements were also sometimes delayed due to the busy schedule of loan officers. Process analysis revealed the presence of the loan officers in disbursement meetings was not essential to the disbursement processes. Disbursements are done electronically to customer bank accounts. At disbursement meetings customers receive only documentation of money transferred to the bank. Groups oversee the withdrawal process from the bank. Pro Mujer decided to shift the responsibility of supervision of disbursement meetings to focal center staff with or without the presence of the loan officer.

Change Area 4.

Staff time dedicated to credit committee meetings and loan disbursements	<ul style="list-style-type: none">• Elimination of credit committee for community associations with perfect repayment records• Increased responsibility of focal center staff in disbursement meetings
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Finally, a widespread effort to increase staff capacity and understanding of new and existing processes took place. The clear and understandable format of process maps was a significant aid to training activities. Staff training was combined with increased supervision that focused on ensuring the quality of the processes as well as the outcomes.

Change Area 5.

Process implementation	<ul style="list-style-type: none">• Staff training using process maps• Increased supervision and monitoring
------------------------	------------------------------------------------------------------------------------------------------------------------------------

Box 3. Summary of Major Process Changes to Front Office Operations

1. Simplification in loan application forms: elimination of unnecessary or redundant information.
2. Reduction in number of signatures required on loan application forms (first loans and loan renewals).
3. Staff training in processes.
4. Increased supervision of process implementation.
5. Capacity building of customer groups in loan application processes.
6. Increased role of clients in managing application process.
7. Providing 1% of interest rate as commission rebate to community association that does not use internal savings to cover arrears.
8. Access to increased loan amounts for community associations that do not use internal savings to cover arrears.
9. Larger percentage of client savings accessible for withdrawal for community associations that do not use internal saving to cover arrears.
10. Extending duration of daily sessions of pre-credit training and compressing subjects.
11. Elimination of credit committee meeting for approval of loan renewals to community associations with perfect repayment records.
12. Increased responsibility of focal center staff in loan disbursement meetings.

Monitoring Outcomes and Processes

Pilot tests served two purposes: to evaluate the effectiveness of changes in processes and to test the collection and use of new “process indicators.” Process indicators are different from output indicators in that they measure key variables associated with specific steps in the process. For example, the time to disburse new loans measures a critical aspect of service delivery, as does the duration of repayment meetings. The most useful kinds of process indicators are customer focused, measuring the degree to which the institution meets customer expectations. Inclusion of these types of indicators in performance monitoring systems enables MFIs to detect problems *before* they impact results and are revealed in outcome indicators, such as client case load, operational efficiency ratios, or financial self-sufficiency.

Pro Mujer Nicaragua identified and defined specific process indicators to monitor as part of its process map analysis. Results of pilot tests were measured with respect to these indicators alongside critical output indicators.

Box 4. Process Indicators for Pilot Tests

- Duration of repayment meetings
- Duration of loan cycle closing meetings
- Number of days to disburse repeat loans
- Percentage of new loans disbursed as scheduled
- Percentage of clients utilizing internal account to pay loans in arrears

In most cases, process improvements were detected very rapidly in pilot testing and were quickly rolled out for institution-wide implementation. All measures showed improvement over time.⁹

- Eighty five percent of community associations in the Leon office experienced a reduction in time of repayment meetings, with an estimated average reduction per meeting of thirty minutes. Thirty percent of community associations in Managua experienced a similar reduction in meeting time during the period of the pilot.
- Twenty-five percent of community associations in the Leon office experienced a reduction in time of cycle closing meetings. In the best cases, meetings times were reduced by half from four hours to two hours. Fifteen percent of community associations in the Managua office experienced a similar reduction in meeting times.
- The percentage of customers using the internal account as a means to make loan payments to Pro Mujer was reduced in the case of the Managua office, but not in Leon. Managua reported 6.5% of customers using the internal account at the end of the pilot period as compared to 12.8% at the beginning of the period.
- Both pilot offices experienced a reduction in loan renewal times. Leon reduced loan disbursement for repeat loans from 2.4 days on average to .8 days. The Managua office reduced disbursement times from 3.8 days to 2.6 days for repeat loans.
- According to pilot statistics, the percentage of new loans disbursed as scheduled reached 100% in both offices. Completion rates at the beginning of the pilot period were 79% and 71% for Leon and Managua, respectively.
- Customer desertion was reduced in both offices. In Leon average desertion per community association was reduced from 4.2 customers to 3.1 by the end of the pilot. In Managua, client desertion measured 6.5 per community association as compared to 4.6 by the end of the period.

Figure 1. Pilot Results: Percentage of Clients Utilizing Internal Account—Managua Office

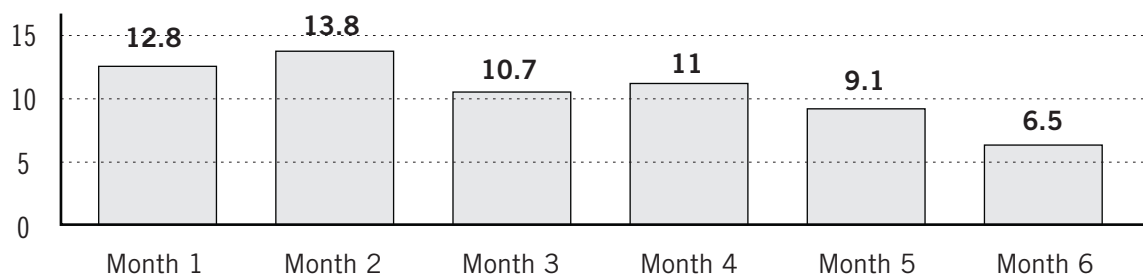
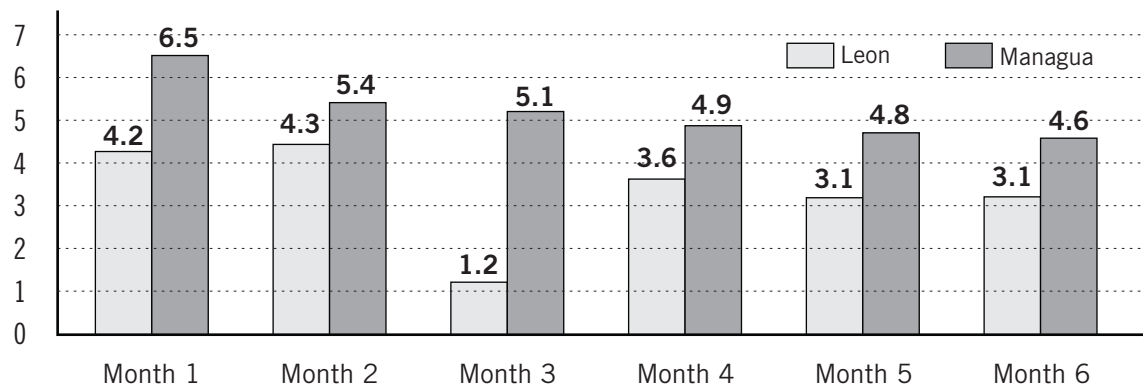


Figure 2. Pilot Results: Reduction in Client Desertion per Community Association



9. Results reported as of December 2004.

Since the time of the pilot, the number of process indicators measured on a systematic basis has been reduced to four: duration of repayment meetings, duration of loan cycle closing meetings, number of days to disburse repeat loans, and number of days to disburse new loans. As changes were rolled out on an institution-wide basis, many of the same trends observed in the pilot offices were maintained. The table below present results as of December 2005, a year after completing the pilot phase of the project. Numbers reflect averages for the entire institution.

Table 5. Summary of Institutional Performance Indicators

	June 2004	December 2004*	June 2005	December 2005
Number of Days to Disburse New Loans	7	7	4.8	4
Number of Days to Disburse Repeat Loans	3	2	1.8	1.5
Number of Clients per Credit Officer	511	504	542	538
Portfolio at Risk (>30 days)	.6%	.1%	.4%	.3%
Operating Cost Ratio	41%	41.2%	36.6%	35.3%
Financial Self-Sufficiency	106.9%	108.1%	104.3%	110.8%
Adjusted Return on Assets	3%	3.4%	1.8%	3.8%

* End of pilot in two activities in two offices

From Process Mapping to Process Management

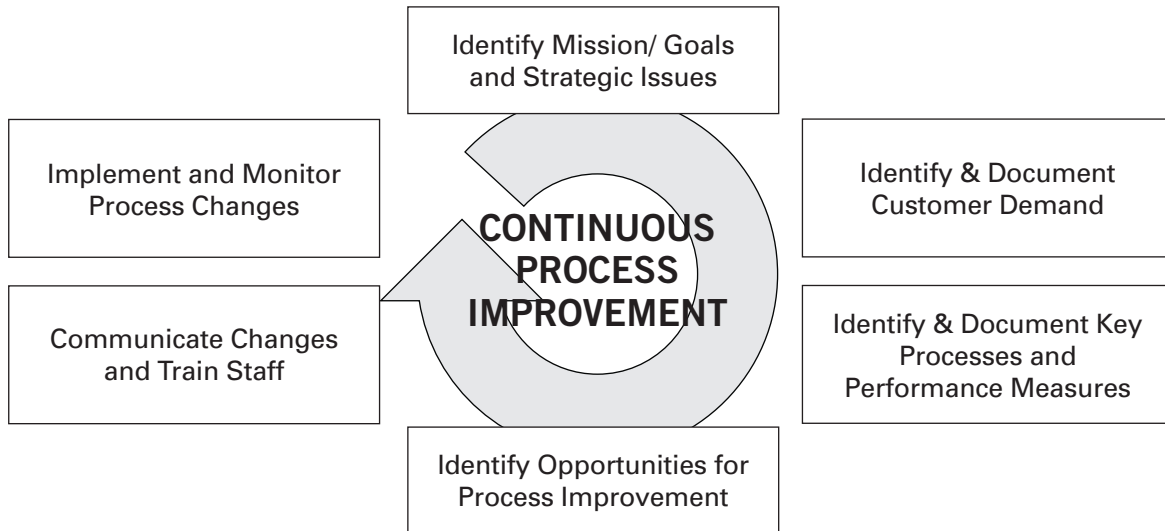
In many ways the institutional impact of process mapping exceeded the very specific objectives originally established by Pro Mujer Nicaragua. Initially the institution saw process mapping as a one-time activity, a tool to help identify needed process changes. However, with experience the institution soon realized a much greater potential. Process mapping became an essential management tool. It revealed much more than simple opportunities for improvement. The most powerful impact on the institution was the realization of the value of managing processes as a means to achieve performance goals. In the case of Pro Mujer Nicaragua, process management became a new priority. A considerable amount of focus of the process mapping activity was not on individual process improvements, but instead in the improved documentation of processes, the communication of these processes to staff and customers, and the close supervision of process implementation.

An essential element of process management is the establishment of performance standards. Management must communicate new expectations to staff. Staff must clearly understand the importance of compliance and the impact key steps in processes play on institutional objectives and outcomes. For example, in Pro Mujer Nicaragua, the performance standard in relation to which individuals and focal centers are judged for loan renewals is now 24 hours. Management knows that if process quality is assured, service delivery can be dramatically improved.

At the same time, performance standards imply standardization. Variations in how certain activities are carried out such as pre-credit training, recruitment of new clients, and credit committee meetings within community associations are no longer acceptable. For Pro Mujer Nicaragua, careful study has identified optimal process designs in all these areas. Management's responsibility is not only to monitor results but also to assure process quality, build capacity, and ensure that policies and procedures manuals are contributing to achievement of results. The planned creation of a new supervisor position within Pro Mujer Nicaragua's operations department will respond to many of these new responsibilities.

As strategy evolves, processes need to adapt. Another important conclusion from the process mapping experience was the need to institutionalize the analytical review process to some degree. Just as Pro Mujer Nicaragua maintains a continual effort to solicit and respond to customer feedback, they needed to preserve an open and honest critique of their processes to ensure continual improvement. Process mapping is not a one time effort. It is part of a cycle of continuous improvement that will play an important role for Pro Mujer Nicaragua in its expansion into new geographic areas, its introduction of new products, and its unending pursuit of ever higher standards of performance.

Figure 3. Cycle of Continuous Process Improvement¹⁰



Section 5. Success Factors

The Influence of Organizational Culture

Process mapping often requires an institution to question the efficacy of some of its most ingrained practices and closely held beliefs. Organizations must create an environment where constructive criticism is valued. Staff at all levels must feel comfortable and motivated to participate in an open dialogue. Pro Mujer Nicaragua presents a compelling case for the successful application of process mapping. The influence of the organizational culture was critical to this success.

Pro Mujer Nicaragua has a long tradition of critical self-assessment. Staff openly demonstrates a capacity to engage in problem solving exercises while management seems equally adept at listening while at the same time contributing to the discussion. The institution's previous experience utilizing cross-functional teams, referred to as internal "consultative groups," was a critical support in process mapping activities where responsibilities for outcomes were shared among the Pro Mujer team.

This same culture of open communication is promoted in relationships with customers. Pro Mujer staff encourages feedback on a regular basis. Participation and communication are values promoted within community associations through training techniques and encouragement from group promoters. The shared perspectives of customers strongly influence judgments of staff which in turn serves to strengthen the overall self-examination process. Undoubtedly, the same process mapping tool could be applied to other institutions with very different outcomes. However, in the case of Pro Mujer Nicaragua, the organizational culture, characterized by open and honest communication, a problem solving-mentality, and a high degree of staff participation, played an important role in every phase of the project.

Senior Management Support

In large part organizational culture is promoted from above. Senior management, by example, sets the tone and influences behavior for the institution as a whole. The identification of process mapping as a high priority by senior Pro Mujer management served to motivate staff and maintain commitment through months of arduous work. The organization's culture of participation was exemplified the executive director's own contribution. In many cases the executive director attended the internal consultative group meetings, dedicating many hours to the analysis and definition of key processes. The importance of the project was underscored through her own presence in these meetings as well as her thorough knowledge of the subject. At the same time, she recognized the time and dedication needed on the part of the senior management team, front office staff and others. Employee work plans were adjusted to accommodate new responsibilities during the project, and meeting times were carved out of already busy schedules.

10. Adapted from SAE International Total Quality Process Map. <http://www.sae.org/totalquality/>

Box 5. Successfully Generating Staff Participation

Traditions play an important role in promoting organizational culture. Beginning in 2002, Pro Mujer Nicaragua began the tradition of periodic staff retreats. One important activity of these events is recognition of employees that achieved superior results on institutional policies and procedures exams. Every employee in the institution, regardless of her or his position, takes the same test covering specific elements of loan policy and other service-related issues. Employees that score 100% are publicly recognized and awarded with prizes. Accountants, cleaning personnel and back office support staff are equally as responsible for understanding the critical elements of Pro Mujer Nicaragua's services as loan officers and other front office staff. One of the winners recognized during last year's retreat was Pro Mujer's driver, Manuel Garcias Hernandez. Mr. Hernandez proudly boasts of his accomplishment and his commitment to the institution, as he serves as a valuable motivation to others.

Section 6. Next Steps

Management Information Systems

Challenges remain for Pro Mujer Nicaragua. The movement from process mapping to process management has put new demands on the institution. Of particular importance is systematic data collection. In many cases, important process indicators, such as time to renew loans and the duration of repayment meetings, have been collected on a manual basis and through sampling of loan transactions as opposed to more reliable and cost effective automated methods. This reliance on manual data collection has limited Pro Mujer's ability to monitor more closely process quality and the overall effectiveness of process changes. As a result of this dependence on manual data collection, information is collected on an intermittent basis with only a handful of indicators currently used. Close analysis of process variables and their impacts on financial performance is not realized to the full extent of its potential.

The institution is currently managing the design and development of a new management information system in collaboration with other Pro Mujer institutions in Latin America. Development of this system will likely take place during the first half of 2006. Pro Mujer Nicaragua is challenged to find the best means to incorporate process indicators into the institution's new system. They must examine the utility of their current indicators and consider the possibility of incorporating different, more useful measures. The automation of data collection and report generation will be an important priority.

At the same time, as with the installation of any new system, certain changes may need to be made to key processes in order to accommodate system requirements. Pro Mujer Nicaragua's recently hired MIS manager was not present during much of the front office process mapping activities. Management will thus have an important responsibility to participate in system design meetings and to communicate important aspects of processes and their justification, knowing when and under what conditions changes can be considered. Process mapping is frequently a starting point for system designers. Ideally, if managed properly, the previously realized process mapping activities should be an aid in this next very important step.

Risk Management

Pro Mujer entered into process mapping with a clear focus on customer satisfaction, improved competitiveness, and greater overall efficiency. Analysis of processes and proposed solutions were conducted with these goals clearly in mind. However, relatively fast growth, introduction of new loan products, and increased geographic dispersion is putting a higher priority every day on issues of internal control and risk management. Pro Mujer, like any microfinance institution, is obligated to strike a healthy balance between meeting customer demands and managing an appropriate level of risk.

The recent establishment of an internal audit department within Pro Mujer Nicaragua is an important step in that direction. The internal auditor's participation will be essential to helping the institution identify risks and verify appropriate controls are in place within processes. Nevertheless, much of Pro Mujer's work on process maps of front

office operations had been completed by the time the internal auditor was formally incorporated into the activity. This presents some challenges. Key processes may need to be re-examined in light of new risk mitigation criteria. The desire to maintain expeditious and cost effective procedures cannot be at the expense of exposing the institution to unacceptable levels of risk. Once again, the acceptance of process mapping as an integral part of continuous improvement allows Pro Mujer to introduce new criteria into its process analysis and management as needs arise.

Organizational Design

A probable but sometimes unexpected result of process mapping for MFIs is a serious reconsideration of organizational design. Organizational design considers factors such as reporting relationships, levels of authority, and the allocation of tasks and responsibilities among individuals and departments. Assessment of process related bottlenecks can often bring to light problems associated with inefficient and ineffective use of human resources due in large part to organizational design.

Process changes like those defined and implemented by Pro Mujer Nicaragua have the potential for making incremental and sometimes important improvements in performance, but on their own they may not fully meet the institution's objectives for improved performance. In such cases, consideration of new organizational design models may be in order. For Pro Mujer Nicaragua this has meant the consideration of a flatter, more decentralized organizational structure with the creation of new mid-level management positions with increased authority. In this case, improvements in both efficiency and internal controls are not expected from relatively simple process changes but from the reallocation of responsibilities over key processes, the most important process being loan disbursement and collection. Middle management, with a close connection to focal centers, will be tasked with the responsibility of assuring faster, more responsive service to customers, as well as increased supervision of operations.

As of the time of the writing of this case study, these organizational changes were still under consideration. Once approved, the institution expects to implement the new structure in stages. Some changes are dependent upon technical capabilities such as information management and on-line communication systems still under development.

Conclusion

Pro Mujer Nicaragua's experience in process mapping provided valuable lessons learned for both the institution and other participants in the SEEP Practitioner Learning Program on Improving Efficiency. The involvement of staff, the importance of organizational culture, the role of market information, and the overall importance of managing processes, as well as outcomes, are among the most notable and transferable lessons.

Often, in these types of initiatives, achieved results extend far beyond the stated objectives. For Pro Mujer Nicaragua, process mapping will likely represent an important organizational turning point. Its long term impact will be characterized by a notable change in management focus prompted in many ways by the critical introspection the process mapping activity generated. While incremental improvements to process will likely continue to be a priority, the institution has been greatly affected by the evaluation process itself. Already strong lines of communication among staff have been improved, participation in problem solving has increased, and, perhaps most important, the institution has learned together. As in this case, process maps, seemingly simple illustrations of activities, hold the potential for sometimes incalculable change.

Figure 4. Process Map 1: Pre-Credit Training

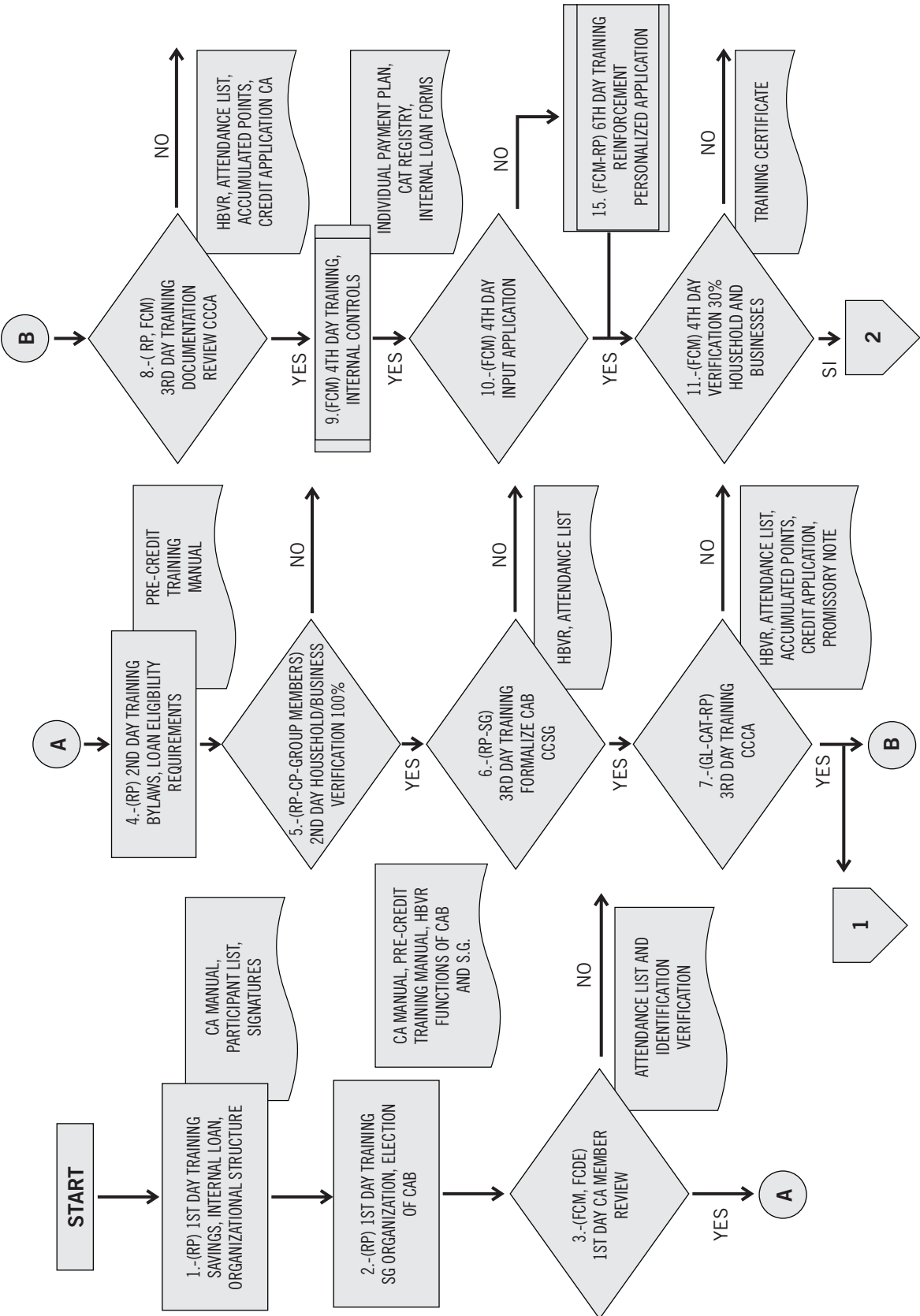
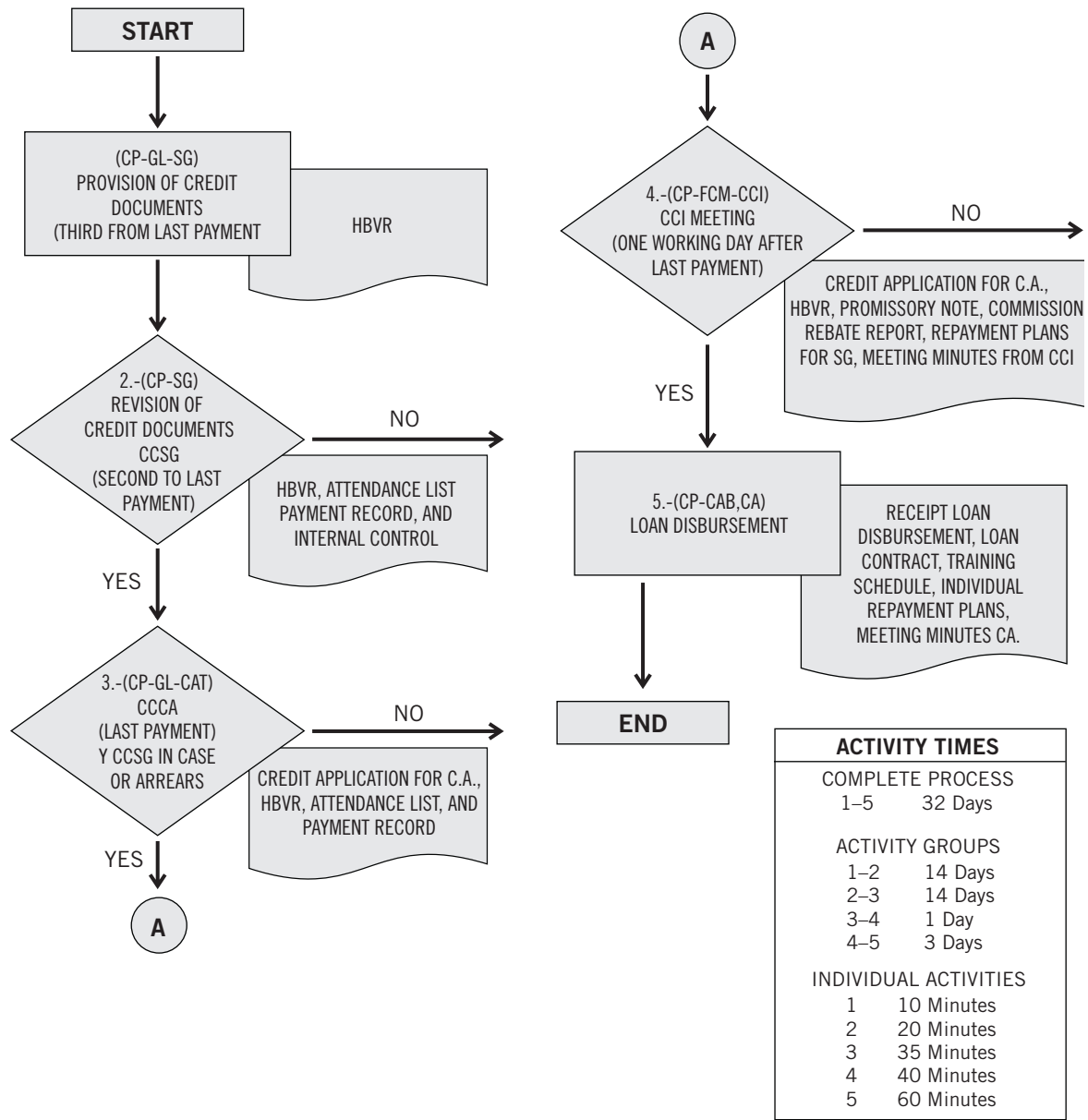
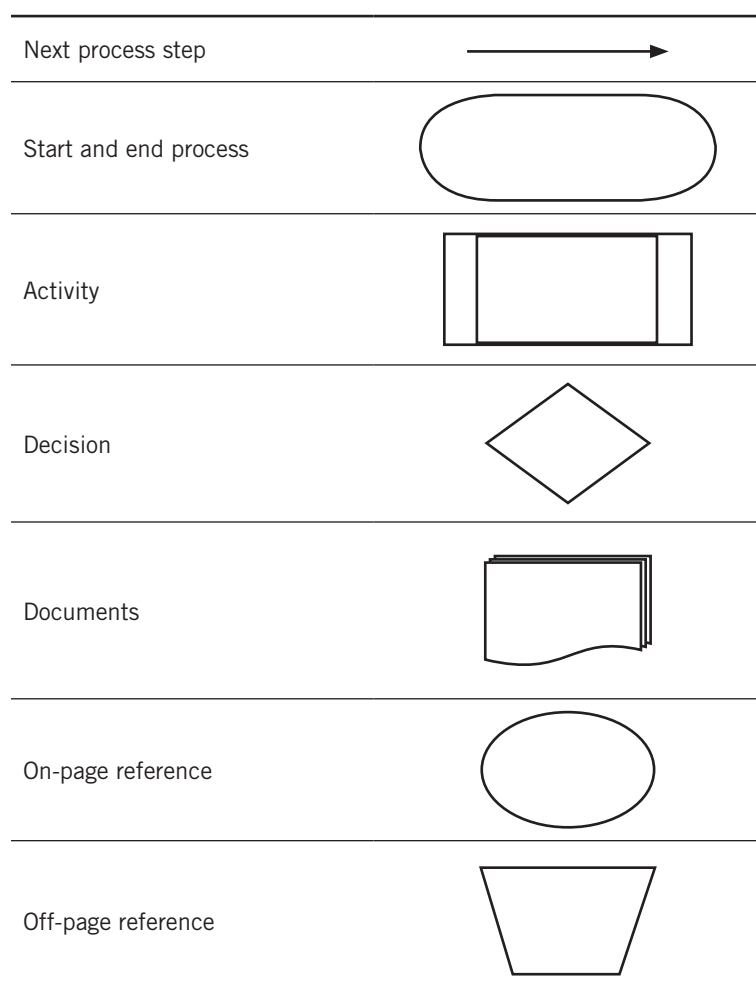


Figure 5. Process Map 2: Disbursement of Repeat Loans



Key: Abbreviations and Symbols Used in Figures 4 and 5

Abbreviations	Description
CA	Community Association
CAB	Community Association Board
CP	Credit Promoter
CAT	Community Association Treasurer
CCI	Credit Committee—Institutional Level
CCCA	Credit Committee—Community Association
CCSG	Credit Committee—Solidarity Group
FCM	Focal Center Manager
FC DE	Focal Center Data Entry
GL	Group Leader
HBVR	Household and Business Verification Report
RP	Recruiting Promoter
SG	Solidarity Group



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ABOUT SEEP:

SEEP is an international network of institutional and individual members committed to reducing poverty through the power of enterprise. Its over 70 institutional members are active in 139 countries and reach over 25 million microentrepreneurs and their families. SEEP promotes professional standards of practice in microfinance and enterprise development, conducts capacity building activities for its members and other practitioners, creates and disseminates publications for application in the field, and serves as a center for collaboration on a broad range of sector-related issues.

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