

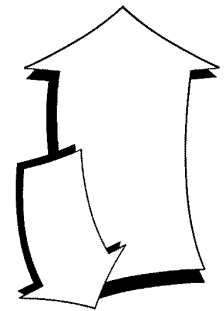
MANAGEMENT INFORMATION SYSTEMS BETWEEN SALVATION AND FRUSTRATION

Microfinance institutions (MFIs) are gluttons for information. From data on potential clients, to information on current and past loans, to statistics regarding the overall portfolio, MFIs confront the daily need to manage data in useful, efficient ways.

Every organization has devised systems for organizing data and generating reports which then guide decision-making. Some organizations maintain data in numerous different ways, using different systems, whether computerized or not. Other MFIs develop a system — invariably a computer-based system termed a Management Information System (MIS) or, simply, an Information System (IS) to highlight the fact that it's a tool for everyone, not just managers — to integrate all the organization's major functions. This achievement can greatly enhance productivity and improve institutional performance. At the same time, the process of developing an MIS can be exhausting, labor-intensive, and expensive.

The Small Enterprise Education and Promotion (SEEP) Network has witnessed the microfinance industry struggling with the best way to approach the IS challenge. SEEP joined forces with the Citigroup Foundation in 1998 to award grants in institutional development to ten MFIs. Five grantees focused on Information Technology (IT), and the prospects of employing a MIS. Many thanks go to Ruth Goodwin, a friend of SEEP, for the expertise and leadership she provided to the SEEP/Citigroup grantees during this period. As a direct result of her work, this issue of Nexus recounts the experience of the MIS grantees: Catholic Relief Services, Katalysis, Pro Mujer, Save the Children, World Relief, and their respective partners worldwide.

SEEP will continue to follow this topic, collecting case studies and information on reliable new designs, off-the-shelf systems, or IT breakthroughs. Please contact me at <seep@seepnetwork.org> to share your organization's experience with us. ❖



Dana de Kanter, Executive Director

What is a Management Information System? A Definition

“A management information system is the series of processes and actions involved in capturing raw data, processing the data into useable information, and disseminating the information to users in the form needed.

An MIS is not simply a computer program, and it involves more than just calculating numbers. Information management is first and foremost people communicating with one another about events that affect the work of their organization.

The chart of accounts, all the forms used by an institution — from receipts to loan applications to staff vacation requests — meetings, reports, policies and procedures, the staffing structure, job descriptions, the planning process, and, yes, the computer software — all these and more influence the flow of information in an institution and so, together, make up the management information system.

Why Implementing an IS Is an Intense Task...

Setting up a good information system may require restructuring the institution, reworking staff responsibilities (sometimes even staff qualifications, redesigning work processes and information flows, revising and rationalizing financial

Definition (cont'd on pg. 16)

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NEXUS, SEEP's newsletter is designed to inform members and other practitioners on the projects of the network, as well as serve as a vehicle for communication on NGO programs, training opportunities, resources, and issues relevant to institutions working both in the North and South.

NEXUS welcomes the suggestions and contributions of its readers. Please send letters, articles, copies of new studies, publications, videos, and your comments, questions, and announcements to:

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Pro Mujer Pondered: Customize or Buy Existing Software?

by Lynne Patterson



When Pro Mujer (Pro Woman International) received \$50,000 from the Citigroup Foundation through SEEP to develop a Management Information System (MIS) for use in Bolivia and Nicaragua, its goals included:

1. Integrating the loan portfolio and accounting systems
2. Improving the accounting system and financial statements
3. Creating the standardized reports required by clients, staff, donors, regulators and board members
4. Including performance indicators for the loan portfolio to measure program growth and productivity.

Following the process outlined in the CGAP **Management Information Systems for Microfinance Institutions: A Handbook**, Pro Mujer expected to move through the handbook's phases, namely:

Phase 1: Conceptualization. Pro Mujer would define its needs and assess the viable alternatives (improving and linking existing systems, buying off-the-shelf systems, creating our own system). The steps to be carried out during Phase 1 were: 1) forming the task force; 2) defining needs; 3) determining what is feasible; 4) assessing alternatives; and 5) reporting task force findings.

Phase 2: Detailed Assessment and Design. Pro Mujer would assess systems under consideration for purchase. If we decided to modify existing systems or to develop a custom system we would address design issues. The steps to be carried out during Phase 2 were: 1) performing a detailed assessment of software; 2) completing the design; 3) finalizing the MIS plan.

Phase 3: System Development and Implementation. Pro Mujer would develop (or refine or adapt) the chosen system and implement it. This would require: 1) developing software, 2) setting-up hardware, 3) preparing documentation, 4) configuring the system, 5) testing the system, 6) transferring the data, 7) initiating training; 8) running parallel operations.

Pro Mujer expected to carry out the three phases in one year's time. It wasn't that easy...

Accomplishments

The conceptualization phase took longer than planned. It took six months for Pro Mujer to define its information needs and assess the viable alternatives. During this time Pro Mujer carried out the following activities:

1. Formed the Task Force. Pro Mujer formed a task force responsible for conceptualizing the MIS. The task force consisted of key Pro Mujer Bolivian staff—the executive director, financial manager, MIS manager, and the credit operations supervisor. In addition, two consultants were hired to help analyze the information needs of the institution. The international consultant was an expert in the development and implementation of Management Information Systems. He analyzed Pro Mujer's existing system and participated in an international workshop held in La Paz to conceptualize the new MIS. A local consultant

Pro Mujer (cont'd on next pg.)

Pro Mujer (cont'd from previous pg.)

was hired to work with the Bolivian programmer to participate in the conceptualization of the new MIS and to oversee the actual programming of the new MIS.

2. Held Workshop to Define Information Needs. A three-day workshop was held in La Paz, Bolivia. Participants included Pro Mujer's executive director and administrator from New York, the country director and programmer from Nicaragua, and the Bolivian task force, four regional directors, head trainers and accountants. Prior to the workshop, staff in New York, Bolivia, and Nicaragua defined their information needs in preparation for the workshop.

The participants were divided according to positions held (directors, accountants, trainers, management). Each group analyzed all the reports produced by the current MIS to determine how to improve them. After each report was reviewed, the groups gave their observations, suggestions, and comments on how reports might be improved. In some cases, reports were combined; in other cases, reports were eliminated; and in a few cases, additional reports were designed.

This process was arduous and long. Each level of staff analyzed the reports on the basis of its information needs. As groups pooled their insights the totality of the new MIS emerged more clearly for everyone to appreciate and understand. Having representatives from New York and Nicaragua enriched the process as well. Their participation was important as the new MIS was meant to meet the needs of all of Pro Mujer's offices, and to standardize policies, procedures, reporting.

The groups analyzed both the accounting and loan portfolio reports. They documented the existing policies and procedures, and

defined the information needs and flows which were later diagrammed by the task force. They also assessed leverage points and key decision-making points in the system.

The international and local consultants asked questions and moved the process forward when it got bogged down. They urged participants to consider the future needs of Pro Mujer for at least the next five years based on the expected rate of growth, changes in financial products, new financial products, issues of centralization and decentralization, and changes in workflow.

3. Prepared the information needs report. The information needs report was prepared by the task force with the help of the local consultant. It took the task force three months longer than planned to produce the specifications for the new system based on the analysis of information needs done by country program staff reviewed at the La Paz workshop. This report described Pro Mujer's credit system and included an information flow chart, as well as the general characteristics the system should have.

The SEEP grant enabled Pro Mujer to bring staff from all of its offices together in La Paz at the start of this project. Prior to the meeting, staff had met in each country to assess their informational needs and submitted the conclusions to the task force in Bolivia. The MIS workshop became a vehicle for strengthening cross-country teamwork and institution building.

4. Detailed Assessment of Software. The task force next turned its attention to assessing available loan portfolio and accounting systems to determine their fit with Pro Mujer's information needs. In assessing accounting systems, the task force took into account the maximum number of digits for numbers, ability

Only when we had clear specifications, could we evaluate existing software and determine the gaps between the software and our requirements, and estimate the cost for modifying the software.

to change formats, ability to make foreign exchange conversion, and any differences in date format. It also considered such issues as masking accounts, ease of moving from one accounting period to another, password access, relevant auditing information, and manuals.

In assessing portfolio systems the task force considered product account numbering, disbursement policies, repayment scheduling, interest calculations, fee calculations, indexing issues, penalty calculations, links to savings, rescheduling and write-off procedures. Finally, the task force considered linking the computerized accounting and portfolio systems so that all transactions entered in the portfolio system are automatically reflected in the accounting system.

5. Identifying the Software. After comparing these programs with Pro Mujer's specifications, SAF2000 was identified as the best program for Pro Mujer. The assessment of different software packages took six months, much longer than expected. However, the careful analysis which has taken place during phase one and two, increase the likelihood that the MIS Pro Mujer finally develops will meet our needs for at least the next five years.

Conclusions

The critical decision Pro Mujer faced was whether or not to develop our own customized in-house system or to purchase an existing software

Pro Mujer (cont'd on pg. 6)

How the World Relief Network Standardized and Improved Its MIS

by Tom Goering



In late 1997 members of the World Relief Network (WRN) concluded that our Management Information System (MIS) was inadequate. WRN MIS was non-standardized, overly complex, less than user friendly, insufficiently documented, and vulnerable to disruption.

In March 1998 World Relief received a SEEP/Citigroup Foundation MIS capacity building grant to develop a plan to standardize and improve the WRN MIS. By grant's end, World Relief intended to decide if the WRN should purchase a commercial system, significantly enhance its currently under-utilized CLAMS (Community Loan and Monitoring System) software, or develop a completely new system. In addition, World Relief committed to examining the role of newer technologies and their applicability to microfinance management information systems.

World Relief concluded that the best solution for the Network's needs was to improve CLAMS by addressing its weaknesses and implementing significant program enhancements and updates. This conclusion was made after a thorough evaluation of the MIS use and needs of three representative Network members, a review of existing commercially available software, and an appraisal of several other organizations' management information systems.

By spring 2000, the new CLAMS software was installed in four countries, and two more countries are slated for installation. New streamlined interfaces and software capabilities addressed many of the locally identified weaknesses of the old software.

Our in-depth evaluation highlighted multiple arguments for a less standardized MIS.

While still early in the process, initial results of the new software installation include more timely data entry and information, and additional reporting capabilities. Partner programs have found it easier to enter information and have additional summary information available. Further, the new electronic data transfer capability has improved the flow of information between partners and World Relief, and helped in the remote support of field installations.

Changing Our Mind

The original project objective of one standardized MIS for the entire WRN turned out to be unrealistic and too ambitious. Our in-depth evaluation highlighted multiple arguments for a *less* standardized MIS. These arguments included differences in: 1) technological environments; 2) methodologies and practices; 3) staff skill levels and capabilities; and 4) program size and sophistication. World Relief concluded that a simple, well-designed MIS would benefit and be utilized by most but not all Network members.

World Relief decided that the best way to create a simple but well-designed MIS was to modify and enhance CLAMS. This strategic direction leverages past learning and minimizes future risk by capitalizing on past CLAMS development work. CLAMS' relatively simple data entry

interfaces and minimal data entry requirements strengthen its appeal. A more complicated piece of software that would reduce trust in the capabilities and advantages of computerization is not needed.

In addition to significant enhancements to the software, World Relief concluded that improved training and documentation would address some of the reasons for the present under-utilization of CLAMS. For example, CLAMS contains a built-in report writer that can quickly summarize database information. Non-HQ staff rarely use this because it is not well understood. Additional training would address this.

World Relief also recognized the need to improve users' general computer skills. A newly hired MIS specialist/trainer will provide improved instruction on CLAMS and help coordinate other on-site computer training.

During the project several CLAMS fixes and enhancements addressing system weaknesses and future capabilities were identified. This list includes bug fixes, enhanced best practices measures, branch data entry capabilities (to be grouped up at country HQs), and improved delinquency measures. In addition, easier and better-documented installation procedures will be implemented. Streamlined data transfer schemes are being developed to allow easier program monitoring from remote locations.

Furthermore, World Relief developed a new, easier-to-use and more flexible tool that allows users to

World Relief Network (cont'd on next pg.)

World Relief Network (cont'd from previous pg.)

summarize program performance at various reporting levels — the entire program, a region, a promoter, or an individual bank. Ad-hoc reports can now be generated through easier access to summarized data.

The evaluation of other organizations' management information systems and of two existing off-the-shelf software packages helped support the decision to improve CLAMS. The two evaluated packages contained many of the same problems of the Network's existing system. These commercial applications had interfaces that were complex or that were bloated with unneeded features. As well, local support was not available in many of our Network countries. Finally, there was no easy or inexpensive way to customize features on a country-by-country basis.

Six other MFIs were visited and their MIS experiences were reviewed. Most were using systems that had been developed in-house and were customized for their organization's needs. MFIs that had used outside software developers to modify existing commercial software experienced significant delays and bottlenecks in the development process.

Finally, World Relief examined two technological solutions to data automation and MIS streamlining. Hand held computing devices, particularly the widely available and extremely successful Palm Pilots, have a high potential for changing the way MFIs collect data. These computers allow data collection and computerization at the point of loan repayment, with a subsequent syncing up to a master database at the branch office. This means of data entry addresses issues of low numeracy and promoter accuracy.

We would like to highlight three "Lessons Learned" in particular:

LESSON LEARNED

Assessing Current System

"As a result of comparing, contrasting, and documenting the strengths and weaknesses of three partner institutions, we concluded: 1) The level of support and acceptance of MIS is connected to the level of local expertise; 2) An organization is less open to change if its current system is working; and 3) It's essential to invest in a sufficient level of computer support."

— *World Relief Network*

Defining Needs: Assessing the Current System

The project coordinator compared, contrasted and documented strengths and weaknesses of three different management information systems — Honduras' regional package, Cambodia's in-house Lotus-based system, and Mozambique's CLAMS system.

The level of support and acceptance each MIS received was directly connected to the level of computer expertise at that site. Where there was a local MIS champion or department, the MIS was more accepted and was perceived as working better. As a result, it is very important to invest in a sufficient level of computer expertise. It was observed that when people don't understand, they tend to struggle along with what they do know, or give up on trying to learn how to get around the bottlenecks. When frustration levels peak, users and management are likely to want to replace the entire system, thinking the next system has to be better.

Each system had tradeoffs in terms of support and capabilities. The Cambodian Lotus-based system worked well in providing needed managerial information, but had few

cross checks for inadvertent data changes. The MIS had a simplistic password protection scheme. The Honduran system, which was developed by an outside regional software group, was unable to be further enhanced or customized. After their in-house technical resource left the organization, staff was no longer able to modify custom links into their accounting system. In Mozambique, CLAMS was relatively flexible in terms of loan product definitions, but also suffered from diminished support and a programming staff that was not always available.

LESSON LEARNED

Staff Capabilities

"After reviewing staff capabilities, we identified this issue as one of the key limiting factors for each organization. We concluded: 1) Education! Education! Education! 2) Keep interfaces simple and data entry requirements minimal; and 3) Redouble focus on maintaining solid paper MIS trail."

— *World Relief Network*

Feasibility — Staff Capabilities

The project coordinator observed local staff capabilities and the potential for recruiting MIS experienced personnel in each of the countries he visited.

In countries with a history of war, like Mozambique, or recent uprisings where educated people have fled the country, like Rwanda, recruiting and keeping MIS-skilled people is next to impossible. Because of this, computer/MIS positions often are filled with non-computer-trained managers who have been trained in the specific tasks involved in running the MIS. As a result, local staff was unable to envision what an MIS could do for them.

World Relief Network (cont'd on pg. 6)

World Relief Network (cont'd from pg. 5)

World Relief concluded that some design issues and decisions would need to be made at the Network HQs level. Feedback from future end users should still be gathered.

Making the software interfaces straightforward and streamlining the data entry process to accommodate generally low staff skill levels will decrease and simplify training needs. Having many screens and options increases the likelihood of errors and the need for additional support.

Feasibility — Technology

The technological infrastructure and environment of Network countries was documented and two non-traditional technologies, Palm Pilots and bar codes, were reviewed. Palm Pilots are handheld computing devices widely used as a mobile information platform for businessmen who travel extensively. Their availability, light weight, minimal power requirements, and flexibility make them an attractive tool to help collect repayment information.

World Relief concluded that the Palm Pilot has significant potential to streamline and strengthen the data entry process. The Palm Pilot allows one to collect data remotely. It has

LESSON LEARNED

Modifying Software

“An in-depth review of how present software was being used or underutilized noted the strengths and weaknesses of various systems. We concluded: 1) The under-utilization of software is sometimes an education issue; 2) When users don't understand, they are likely to give up on the software; and 3) Pertinent and easily accessible reports are key elements of a successful system.”

— *World Relief Network*

the advantage of having a wide acceptance with millions of units sold, a stable operating system and strong development support from its manufacturer, 3Com. It does not have a keyboard to enter data, but instead relies on a stylus pen and a shorthand “graffiti” character set. Palm Pilots run 30 hours on two AAA batteries. Some of the more basic models can be bought for between \$150 and \$200.

The Palm Pilot itself does not have a powerful CPU. As a result, it is best used as a data collection tool, with payments being entered with the stylus. The data would be entered in the

field as loans are repaid and then “uploaded” to a PC at the branch office. The PC MIS would update the individual's records which would then be downloaded to the Palm Pilot for the next week's bank visits. Unresolved issues include questions as to the durability of the Palm Pilot, battery cost, and battery life expectancy.

Finally, World Relief examined the use of barcoding technology and determined that it would not be appropriate. World Relief visited an MFI that was using bar codes as a device to help call up a particular client's repayment window. Loan repayment slips were barcoded, and when scanned, brought that bank's record up without entering any keyboard commands. World Relief determined that using barcodes for entering actual repayment information would be difficult because of the potential of differing repayments from week to week. Most programs have a flexible savings component. The inherent inflexibility of barcode technology decreased its attractiveness. Bar codes work best in an environment where repetitive information is constantly being entered.

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Pro Mujer (cont'd from pg. 3)

package. We would not be able to answer this question until we had specified clearly and with great detail our own information needs at all levels of the institution. Only when we had clear specifications, could we evaluate existing software and determine the gaps between the software and our requirements, and estimate the cost for modifying the software.

It became clear to us early on that we did not want to be in the software business for a variety of reasons. Pro Mujer has limited capacity to develop

MIS systems. The Bolivian programmer responsible for developing our current system lacked the knowledge and skill that would enable him to create a more powerful MIS. We also wanted to ensure technical support for other country programs using the new MIS. By outsourcing this function we have access to a larger pool of technical assistance.

Almost half the year was spent analyzing our own information needs and developing the specifications which could then be submitted to MIS vendors for analysis. The other

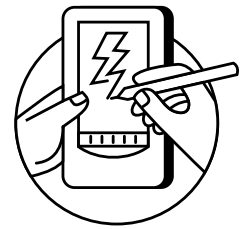
half year was spent assessing different software programs and finally selecting the one that best met our needs.

We are not finished yet. We expect it to take at least one more year to work with the software company we selected to adjust their system, try it out, run parallel systems, iron out any problems we encounter, and then train staff to put the program in operation. Pro Mujer is confident that the result will be program growth and productivity.

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Using Handheld Computers to Enhance Field Operations

by *Chuck Waterfield*



Microfinance is rapidly becoming a competitive marketplace, where the successful MFIs will be those that provide superior client service and do a better job of analyzing and monitoring credit risk — achieving both of these challenges while simultaneously lowering operating costs. What sounds like a contradiction can in fact be achieved by using the latest in handheld computer technology.

This new class of computer, the PDA or Personal Digital Assistant, is most commonly represented by the Palm, formerly known as the Palm Pilot, which has over 80% of the market. Its size (small enough to fit in a shirt pocket), and its cost (starting at \$150 in the U.S.) lead one to believe it to be limited in capacity, little more than an electronic calendar and phone book. Yet, these devices are actually powerful computers, capable of carrying a database with every scrap of information a loan officer might need to work with her clients.

By developing software to manage the information-gathering process, the PDA can be used as the sole means of collecting and inputting information on clients, completely replacing every paper-based form currently used in the institution. Once back at the office, this new information can be easily and quickly transferred to the main MIS where it can be consulted by others within the institution. During this same “synchronization” process, new data on clients, such as loan repayment status is downloaded into the PDA for the officer’s later perusal, replacing the paper-based reports currently carried by field staff.

“If someone were to give me a million dollars to write the perfect MIS, I wouldn’t take it. I don’t think it can be done.”

Chuck Waterfield, IS Expert

Benefits of this new technology include:

- Improved service: Clients benefit from quicker loan processing time, and loan officers get quick answers to their questions, such as the amount clients owe if they want to pay off their entire loan.
- Improved loan analysis: The software eliminates basic math errors, takes advantage of effortless credit scoring and statistical comparisons, and can apply sophisticated automated logic when analyzing financial indices.
- Improved loan officer productivity: The technology dramatically speeds up loan analysis. All mathematical calculations are done automatically, and all information is available instantly for easy consultation.
- Improved institutional efficiency: No re-keying of data is required; all data is input directly in the PDA and automatically transferred into the MIS.
- Additional useful features: Staff can carry all policy manuals for quick reference; inter-office memos and email can be downloaded daily; mapping software is available; data can be transferred to the head office directly from the PDA via modem.

Note the PDA software does not replace the lending methodology, but automates it. Thus software needs to

be customized for each institution to

reflect every detail of its lending methodology and to synchronize the data with the institution’s main MIS. In the past 18 months my company has developed Palm loan processing software for three MFIs — Compartamos (Mexico City), EDYFICAR (Lima, Per´), and ADOPEM (Santo Domingo). All three are large-scale institutions involved in urban-lending methodologies employing detailed loan analysis, making this technology a appropriate choice. The new technology has less potential impact on productivity for institutions with very simple loan analysis procedures.

The software running on the PDA does not replace the institution’s existing MIS, but works in conjunction with it. All three institutions have found it a challenge to adapt their current MIS to communicate smoothly with the increased amount of data. This part of the process has taken longer than the actual development of the Palm software itself. The process requires a good MIS department, with staff that understands the existing MIS and is able to modify the existing data tables and develop a few new data consultation screens and reports.

Thus, PDA-based systems are not a “simple” solution to implement. Like any other information technology, they take longer to implement than initially expected. But when done well, they can have a dramatic impact on large-scale institutions with stable methodologies and a well-functioning MIS.

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Safeguarding Against MISmanagement and MIStakes: Katalysis Partnership's Approach

by *Dennis Macray*

Katalysis Partnership, based in Stockton, California, has a network of seven microfinance NGOs in Central America, with 20,000 active clients and \$4 million in its outstanding loan portfolio. Katalysis provides technical assistance through a regional field office in Tegucigalpa, Honduras.

Katalysis used a grant from SEEP/Citigroup Foundation to implement a 10-step capacity-building

practices, creating an institutional environment that will allow effective use of MIS as a valuable program management tool.

Katalysis and its partners have advocated an integrated capacity-building approach with focus upon core management areas before successful use of MIS can occur. The 10-step MIS preparation process includes:

1. Securing partner in-house MIS expertise
2. Introduction to MIS preparation package
3. Diagnostic: Financial Controls
4. Diagnostic: Credit Management
5. Diagnostic: Administrative Controls
6. Diagnostic Review: Capacity & Processes
7. Software Identification and Adaptations
8. Training for Partner Staff and MIS Managers
9. MIS Installation and Implementation
10. Monitoring, Evaluation, and Documentation

Emphasizing Capacity

Within the microfinance industry there is strong emphasis on identifying the most appropriate and effective hardware/software. While this is important, our experience in working with institutions at different levels of growth has taught us that it is crucial to pay close attention to the overall institutional capacity. The essential areas requiring scrutiny and training prior to the installation of computerized financial management systems are detailed in our 10-step process. We believe that a key challenge for

We believe that a key challenge for the microfinance field is the creation of solid institutions that take full advantage of sophisticated MIS

the microfinance field is the creation of solid institutions that take full advantage of sophisticated MIS with the ultimate goal to better serve clients and reach operational and financial self-sufficiency.

By testing our package with institutions at different levels of development we are further able to apply it to our work with additional partners in new countries. The implementation of the 10-step process has tested the effectiveness of our approach and signaled changes that need to be made before we take it to new partners.

In the process of step 7, Katalysis and its partners identified an existing MIS which appeared to meet their needs. They visited an MFI using the system to do a more in-depth assessment. They selected the system, provided by Soft Corporacion, a regionally-based company headquartered in Guatemala.

Advantages of this system include: Software and support in the local language, reasonably priced for NGOs, qualified staff with regional financial sector experience, excellent recommendations and results, and a system capable of meeting needs for portfolio management and accounting.

A major challenge at that stage was encouraging the lead partner to fully assess the system and identify the actual causes of reported errors

Katalysis (cont'd on pg. 11)

LESSON LEARNED

In-house Support

“The lack of qualified software managers who will work for MFI salaries is a major challenge. To address this, we have made in-house MIS expertise a requirement and are committed to identifying funding for this need. All partners are committed to aggressively hiring the most qualified applicants.”

— *Katalysis*

process to prepare four microfinance institutions for successful installation and effective use of computerized MIS. Katalysis applied the 10-step pre-installation process to four of its seven Central American Partners: ODEF (Organization for Women's Enterprise Development) and FAMA (Family and Environment) in Honduras; PROCOMES (Projects for Community Development) in El Salvador; and MUDE (Women in Development) in Guatemala.

Diagnostics and re-engineering activities prepared the organizations in the areas of human resource development, institutional policies, accounting procedures, and compliance with industry standards and best

Essential Prerequisites for Project Implementation	
A. Strategic Planning and Business Planning Joint workshop for Partners: Strategic Planning and Projections; partner consultations and business plan elaboration	1-2 months
B. Program Methodology Joint workshop for partners: Application of key indicators; Microcredit best practices diagnostic and introduction to impact analysis	1 month
C. Human Resources Assessing partner capacity and staff development needs; Identifying and/or securing financial management expertise; Applying best practices for staff training, development, and incentive programs	1 month
10-Step MIS Preparation Project	
1. Partner In-house MIS expertise Identifying and/or securing permanent in-house MIS expertise at each partner organization.	1 month
2. Introduction to MIS Preparation Package A joint workshop to introduce process and data collection required for successfully preparing the partner for MIS installation.	2 days
3. Diagnostic: Financial Controls Identification of current controls and optimal practices; Evaluation of all activities related to financial accounting, cash flow, budgeting, internal and external account management, and operations.	1 week
4. Diagnostic: Credit Management Evaluation of portfolio quality and performance; Loan payment and recovery mechanisms; Policies and credit management controls.	1 week
5. Diagnostic: Administrative Controls Identification of current controls and institutional capacity, including information flow; Governance and oversight; Revision of administrative policies and manuals.	1 week
6. Diagnostic Review: Institutional Capacity and Processes Workshop for partners to identify and assess their institutional capacity and processes; Changes to institutional process or controls finalized, facilitated jointly by Katalysis and MIS software provider.	1 week
7. Software identification and adaptation Based on diagnostics, MIS software provider will develop appropriate system and/or adapt the flexible package with changes for individual partner organizations.	1 month
8. Training Intensive course for partner administrative and credit staff in the appropriate use and management of MIS; Opportunity for design changes and process changes prior to installation.	1 week
9. MIS Installation and Implementation Parallel with current financial management system at each partner; for these partners the Soft Corporation of Guatemala has been contracted and separately funded by CGAP.	1-2 months
10. Monitoring, Evaluation, and Documentation Katalysis and partners jointly monitor institutional and portfolio performance on monthly basis, evaluate program development, and document the lessons learned and appropriate application of the 10-step process according to institutional development stage and requirements of the partner.	2-3 months

Save the Children Found that Time Flies When Developing a New MIS

by Mark Edington

Save the Children, working with its microfinance partner Al Majmoua in Lebanon, embarked on the development of a new Management Information System (MIS) in April 1999 with assistance from SEEP and the Citigroup Foundation. Our goal is to build an integrated loan portfolio and accounting MIS that Save the Children (SC) can use in microfinance programs worldwide.

We see the development of an integrated MIS as essential to large scale microfinance programs. Our intention has been to develop a new financial MIS to back-up institutional growth and the expansion and decentralization of operations at a national level.

Specific objectives for the new MIS include the following characteristics:

- ❑ Simple to use (reducing training costs and increasing productivity)
- ❑ Reliable (stable operating environment and programming language)
- ❑ Integrity of data (including audit trail and summary file of transactions)
- ❑ Secure (passwords for different levels)
- ❑ Flexible (able to run in different environments including PC, network, client-server and able to cope with decentralized branches)
- ❑ Informative (track client loan history and different loan products)
- ❑ Fast performance (able to cope with data from large scale programs)
- ❑ Language (consider other language options including Arabic)
- ❑ Multi-functional (integrated with accounting, providing cash-flow projections with the capacity to track results against targets, and manage cash and till transactions at the branch level)

LESSON LEARNED

Time

“Take your initial estimate and triple it: While documenting existing procedures you often realize that procedures need revising, and projecting future needs often requires much discussion about future products and strategies which may require extensive strategic planning.”

— *Save the Children*

System development was divided into several phases including parameter design, testing, training, finalization, and roll-out. The whole process was originally expected to extend over a twelve-month period, ending in April 2000. Instead, we now know the project won't be completed for yet another year. Based on a revised work-plan, the project will extend until March 2001.

System development, and specifically the two preliminary design phases labeled preliminary analysis and design and prototyping, took longer than expected for the following reasons:

- The initial work-plan established was unrealistic and general. Save the Children and Al Majmoua underestimated the time needed to:
 - Fully research other existing MIS options
 - Conduct a search for potential software developers
 - Chose the software developer
 - Negotiate terms with the software developer
- More time was required for analysis and feedback between the two key players, Al Majmoua and the company with whom we contracted, CDC Systems. Microfinance

software development is a challenging initiative requiring an iterative process. CDC needed to fully understand Al Majmoua's current operations, and the two entities had to agree on how to work together.

- Al Majmoua is designing a future-looking system. It was therefore essential for the team to examine alternative long-term possibilities for the institution's new financial products, guarantee mechanisms, and business analysis system in order to design a flexible structure that can incorporate multiple solutions and parameters. For example it was decided that Al Majmoua will rely on three guarantee mechanisms: personal, asset, and leasing. Each type of guarantee requires specific information flow, paperwork, and back office support that should be accounted for in the design of the MIS system.
- MIS development is one project among many in Al Majmoua requiring teamwork among the management team. Staff had to readjust their work schedule and coordinate to work together on the MIS development.

Today, as a result of a lengthy and comprehensive thinking process Al Majmoua gained insight into its future operational strategy and products structure as well as first-hand experience in the development of an MIS system for microfinance operations. A solid and flexible system is being designed that takes into account alternative growth scenarios for Al Majmoua in the medium and longer-term.

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Why Isn't There Standard MIS Software?

"No consensus has yet emerged in the microfinance community on an ideal MIS, partly because of the lack of standards. There is no WordPerfect or Lotus 1-2-3, a program an institution can order, install, and use for 80-90 percent of its information needs. After more than 10 years of efforts the field has not yet settled on a short list of promising candidates, or even a handful of programs that work well under certain circumstances..."

With all the custom software institutions have had developed there is no shortage of accounting and loan portfolio software. But this customized software generally fails to perform up to expectations — and often fails to work at all. And even a loan tracking program that functions acceptably in one institution tends to fail when transferred to another, because of the difficulty of adapting an MIS for the first institution to the needs of the second.

Among the most important difficulties in transferring software systems for one institution to another are:

- Different definitions in the calculation of financial ratios
- Complexities introduced by variations in methodology

LESSON LEARNED

Staff Time

"Do not underestimate the time that microfinance staff will have to spend with the software developer. Al Majmoua's management team has devoted at least 50% of their time over the last few months. Also, you must have a full-time counterpart that is 100% dedicated to working with the developers."

— *Save the Children*

- Myriad techniques for handling portfolio issues (calculation of interest rates and penalties, links between savings and loans, determination of delinquency)
- Local language issues
- Issues related to scale and centralization or decentralization
- National banking and accounting requirements
- Individual preferences of management or MIS staff
- Lack of local, reliable firms to implement systems and provide ongoing technical support

Because of these and many other complications, most experts believe that no single MIS package can be expected to meet everyone's needs."

— *Management Information Systems for Microfinance Institutions: A Handbook* ❖

Katalysis (cont'd from pg. 8)

(human versus software) and dismiss false rumors of MIS errors. By encouraging the partner to visit the MFI using the system, actual problems were identified and the partner was better able to recommend the MIS package to other partners.

Since our partners are adapting a commercial software package, there have been no major problems with the hardware and software. However, we have had many challenges in the pre-installation process due to external conditions. For example, securing in-house MIS expertise and ensuring that appropriate infrastructure (electricity, building security, room temperature) are in place to support the new MIS have been significant hurdles. Under this project we have learned that some of the most critical areas are the external factors which challenge the MIS process.

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How Options Compare

Option	Advantages	Disadvantages
Purchasing an off-the-shelf system	<ul style="list-style-type: none"> • Low to medium cost • Likely to operate relatively error free • Short time frame for implementation 	<ul style="list-style-type: none"> • Dependent on outside technical support • Unlikely to fully match institution's policies and procedures • Cannot be modified as institution changes
Modifying an existing system	<ul style="list-style-type: none"> • Likely to operate relatively error free • Medium time frame for implementation • Can be closely adapted to institution's policies and procedures 	<ul style="list-style-type: none"> • Medium to high cost • Dependent on outside technical support • Future modifications costly
Developing an in-house system	<ul style="list-style-type: none"> • Likely to operate relatively error free • Medium time frame for implementation • Can be modified to match institution's changes 	<ul style="list-style-type: none"> • High cost • Will require debugging • Long development time frame

Catholic Relief Services Used Grant to Co-Finance MIS Business Venture

by William Farrand

CRS submitted a funding proposal to SEEP and the Citigroup Foundation for the development of microfinance software in February 1998. The software, A3-PARTNERS, is aimed at facilitating the accounting process of microfinance activities via user-friendly applications that will enhance auditing and monitoring, and allow CRS and other NGO partner agencies to achieve a greater level of cost-effective operation and sustainability in microfinance. The project was completed this year.

For many years, poverty lending program managers have explored options for suitable portfolio management systems with little success. Adequate, commercially-available software to perform these tasks has been difficult, if not impossible, to find. The SEEP/Citigroup Foundation grant was dedicated to developing appropriate software.

The overall purpose of the proposed grant activity was to co-finance the development of a software product (A3-PARTNERS) with Seattle-based Caylx Software to provide CRS counterpart and like agencies with a cost-effective productivity tool of excellent quality and stability for managing the financial and microcredit operations of their organizations, thereby enhancing options for reaching scale and self-sufficiency. The proposed product was tested initially at CRS counterpart agencies in Central and South America.

Work at the four Beta sites also demonstrated that many NGOs need up-front consulting on accounting practices and procedures, especially development of the Chart of Accounts. Certain practices must be brought into line with microfinance best practices, and generally accepted accounting principles and standards, prior to software installation and training.

It should be noted that A3-PARTNERS integrates SEEP impact indicators into its reports.

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What CRS and Caylx Software Came Up with...

by Howard Bing

A3-PARTNERS provides MFIs with a powerful, flexible suite of integrated, Microsoft Access-based software applications designed to manage their accounting and microfinance activities. It offers sophisticated functionality and a simple, standardized interface that minimizes user costs and maximizes productivity. Applications are easily modified and maintained, as the source code for each accounting application is provided under the terms of the software license.

The development of the A3-PARTNERS software is the result of a cooperative effort by CAYLX Software (www.caylx.com), Catholic Relief Services (www.catholicrelief.org), and Citigroup Foundation (www.citigroup.com). Training, installation and ongoing support services are provided by CAYLX offices worldwide, in conjunction with the company's global

network of independent, regional consultants.

The A3-PARTNERS System

MFIs can license Loan Portfolio as a standalone system or as part of a larger system that also includes General Ledger/Banking and Accounts Payable applications. Regardless, all installations automatically include a System Manager application to establish user profiles and security, an integrated end-user report writer and a language translation facility.

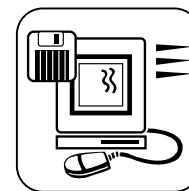
The system must include Microsoft Word, Microsoft Excel, and a browser program to display A3-PARTNERS online help information.

System Features

All A3-PARTNERS applications are designed around a set of common design principles and a consistent

user interface. Features of this A3-PARTNERS interface include:

- Multi-user environment with an intuitive, menu-driven navigation facility
- Context-sensitive online help and a comprehensive, online user manual
- Multi-language facility manages an unlimited number of user-interface languages, with a specific default language established for each user
- Multi-company/organization capabilities maintain separate databases and operational parameters for a virtually unlimited number of organizations, and optionally combine general ledgers to create a single, consolidated reporting entity
- Multi-currency reporting capabilities maintain currency conversion



A-3 Partners (cont'd on next pg.)

A-3 Partners (cont'd from previous pg.)

rate history and generate reports and financial statements in any user-defined currency. (For an additional charge, the application can process loan disbursement and payment transactions in multiple, user-determined currencies and automatically generate exchange gains and losses.)

- System-wide availability of comment fields to record notes about specific application data - a late repayment record, business plan or a loan application, for example
- Microsoft Access-based report writer that produces ad hoc reports and inquiries and reports to supplement the predefined reports in A3-PARTNERS applications
- Interactive database search capability
- Detailed audit trails include lists, journals, on-screen inquiries, and reports
- Enforcement of referential integrity rules to safeguard data
- Add/change/delete security implemented (by user) at organization, application and program levels
- Optional integration with word processing, spreadsheet, and report writing software products
- Permits current-period, prior-period and future-period postings
- Applications close independently of other applications in the system
- Flexible, user-definable account number format consists of up to 40 characters total and includes up to five separate components with user definable component lengths and separator character. The first segment establishes the specific asset, liability, revenue or expense account (e.g., cash, computer equipment, loans receivable, interest income, depreciation expense); additional components can be used to maintain data for projects, funds, and branches, for example.

Loan Portfolio

Loan Portfolio automates management of group and individual loan portfolios- including, among others, village banking, solidarity group, and Grameen bank replication methodologies-and provides the information and the flexibility to effectively manage risk.

- Processes loan- and savings-related activities for group, individual and internal account loan portfolios
- Minimizes user workload and maximizes productivity by defaulting transaction entries from standardized templates wherever possible, and emphasizing exception-based processing
- Disburses loans by computer-generated or manually written checks, vouchers, or cash
- Maintains detailed data on borrowers, standardized loan products, active loans and loan history
- Manages a database of borrower-related social impact information
- Provides over 25 reports, performance indicators and financial analyses
- Produces preprinted forms for field activities
- Calculates loan and interest loss reserves
- Supports declining and flat interest calculation methods
- Writes off uncollectable loans
- Optionally accrues interest during month end close
- Integrates with General Ledger, including the bank account management facility

General Ledger/Banking

General Ledger compiles data from all integrated applications, continuously. It translates this data into custom financial statements, management reports and operational analyses. The application also serves as the basis for financial auditing and

The development of the A3-PARTNERS software is the result of a cooperative effort by CAYLX Software (www.caylx.com), Catholic Relief Services (www.catholicrelief.org), and Citigroup Foundation (www.citigroup.com)

accountability, account number validation and other sophisticated processing capabilities throughout the system.

- Processes simple and compound journal entries and recurring entries
- Maintains account balance and budget data
- Provides management and accounting reports
- Includes a financial statement generator
- Includes a facility for bank account management and preparation of bank reconciliations

Accounts Payable

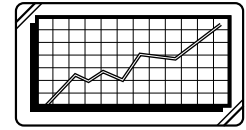
Accounts Payable governs management and payment of business expenses. The data is used to generate sophisticated transactional analyses and payables reports and inquiries.

- Processes vendor invoices and hand- and computer-generated checks
- Maintains data regarding vendors and payment terms
- Provides reports of vendors, checks and payables information
- Integrates with General Ledger, including the bank account management facility

For more information, connect to the product Web Site: www.a3partners.com or the company Web Site: www.caylx.com ❖

CARD Bank: Managing MIS in a Fast Growth MFI

by Lorenza G. de Torres



Established in 1986 by a group of development practitioners, CARD Bank in the Philippines became determined to improve its MIS ten year later, when we dreamed of reaching one half million rural poor.

CARD started with a manual MIS supported by an old typewriter and a battery-operated calculator. By 1996, CARD reached around 6,800 members in nine branches located in five provinces included three islands. At this point, CARD made a commitment to expand geometrically by 2002. To achieve our ambitious goals, management, operations, and accounting staff defined the need to improve data recording, processing, and reporting for timely information analysis in order to improve efficiency while expanding our reach.

The process of customizing a MIS began in May 1997 and wasn't completed until April 1999. Improvement

started by developing a Loans Monitoring System (LMS) and simultaneously utilizing a locally developed software program known as the Rural Banker and Savings System.

The CARD LMS relieved our Technical Officers (TO) from a staggering recording and documentation load. Efficiency has improved, demonstrated by the fact that our senior TOs now handle at least 300 members each. Using General Ledger software and a Savings Account System has facilitated improved performance among our administration and finance staff who no longer have to work regular overtime!

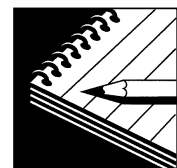
Thus, CARD expansion has been facilitated. From 6,844 members in 1996 to a total of approximately 30,000 as of March 2000, amounting to an average of 594 new members per month. With this expansion we are meeting a level of financial

sustainability. Now that we are growing, Government Regulators are beginning to consider supporting the program technology for the national poverty alleviation program. Because CARD has established the microfinance technology proven to be of real help to the rural poor, assisting a greater number of rural poor will have an impact on the Philippine economy. This goal required a well functioning MIS.

We keep on improving our MIS to fully attained our dream of reaching out to greater numbers of poor families within the framework of financial self-sufficiency. Our next step is the integration of systems and networking CARD's over-all operations — a very big project, but a must in order to fulfill the development contribution of microfinance.

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Reflections from the Field: Think Hard Before You Try to Build Your Own!



Nexus talked to Andrew Mainhart, co-chair of the 1999 SEEP Annual Meeting MIS Workshop, who has worked extensively in the field of software development and project management for MFIs.

Q: What is the first piece of advise you would give to an MFI considering a new Information System?

AM: Everyone even thinking about Information Systems for Microfinance should read the CGAP "Handbook for Management Information Systems for Microfinance" by Chuck Waterfield and Nick Ramsing. The DFID Springfield Report on MIS in Microfinance (Mark Havers &

David Ferrand) and the USAID MBP Framework for evaluating Information Systems in Microfinance which I prepared are also must reads.

I want to point out that I use the term Information Systems or IS as much as possible, not MIS or Management Information Systems. Unfortunately, most MFIs are not ready for complex MIS. They require basic information and therefore basic Information Systems. Accounting and Loan tracking software is basic software, not management specific.

Q: Having worked in this field for many years, what is your opinion of the effort many MFIs make to develop

a unique Information System for their organization?

AM: There are several integrated off-the-shelf packages available in most regions on a commercial basis. This "build your own" mentality generally leads to huge costs and effort and rarely have I seen it end up in outright success.

The problem is that most institutions do not have the knowledge or resources to build a system or maintain one over the long-run. In addition, finding skilled resources in most developing countries is an enormous issue. Its hard enough hiring Credit

Andrew Mainhart (cont'd on next pg.)

How Much Will It Cost?

Some organizations find that setting-up a MIS proves to be more costly than expected which is why it is important to work through an evaluation framework that helps the MFI determine if a particular MIS is cost-effective. The following measurement criteria for pricing a MIS is drawn from **Management Information Systems for Microfinance: An Evaluation Framework** by Andrew Mainhart available through the Microenterprise Innovation Project at: <http://www.mip.org/pubs/mbp-def.htm>.

At the 1999 SEEP Annual Meeting, Mr. Mainhart, made four key points regarding the cost of software, including the obvious: 1) Software costs money!; 2) MFIs and donors must understand the cost components in developing or buying software; 3) Support costs for microfinance are high; 4) Microfinance software is not a commodity despite the “Microsoft Effect” to the contrary. ❖

Topic	Definition	Measurement Criteria
Pricing and Costs	A consideration of all costs associated with purchasing, installing, modifying, up-dating and operating the system.	<ul style="list-style-type: none"> • Base price and pricing structure (licensing policies, etc) • Customization and/or development costs • Additional costs for computer and network hardware • Additional costs for source code • Maintenance and technical support fees and charges • Administrative costs (internal) • Installation and training costs • Documentation costs • Conversion costs (due to moving from old to new system) • Costs of future upgrades and new releases • Overall costs per user and costs per information system staff • Price appropriate to level/complexity of functionality • Overall value proposition (functionality as function of cost)

Andrew Mainhart (cont'd from previous pg.)
Officers, let alone good software programmers. There seems to be a rather large assumption that good software is easy and cheap to build and support ad infinitum. I'm here to say, that is a totally wrong assumption. Building high-quality computer software requires an enormous amount of effort, skill, tenacity, attention to detail, and MONEY!

Q: Is there an analogy for MFIs in the experience of commercial banks, which have been developing Information Systems a lot longer?

AM: To use commercial banks in developing and developed countries as an example is misleading. I have been inside many of these banks and while it is true they often have custom built software, most are in the process of moving to off-the-shelf

products for basic items such as loan tracking, deposit monitoring, and accounting — as fast as possible. In general banks around the world grew up during or existed before the advent of computerization; and therefore, were forced in many ways to build, because there simply wasn't anything out there. Now there are a multitude of products. If microfinance wants to learn the same hard lesson in the same way, so be it. But my point of view is that we should learn from the commercial bank mistakes: mistakes to which they will often openly admit.

Q: Are donors well enough educated on this issue?

AM: Donors should pay more attention to the process of software development. I find it a bit appalling, in fact, that we go around the world

shouting the praises of “Sustainability” and financial/accounting soundness, and in the next breath say in one paragraph or one glib phrase “implement a MIS”. It isn't that simple—in fact it is that hard. If I boil Microfinance or financial services of any kind down to its most basic level it is nothing more than INFORMATION and RELATIONSHIPS. MFIs manage information. Without it they fail; without it there is no SUSTAINABILITY. We need to train the managers of MFIs on the Software Development Process — how do they decide what they need (and don't need) and how do they take those requirements and ensure they get a final product that meets those needs?

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Definition (cont'd from pg. 1)

policies, investing in computer technology, and more. Information is at the core of any organization's work, so it shouldn't be surprising that introducing a new information system can affect an organization to its core.

It is the daunting demands of this process that explain why most microfinance institutions have a weak system — they are unable to devote the energy and attention it takes to establish a good one. But managers of institutions that have made the investment — who now have access to reliable and timely information — generally say that it was one of the best decisions they ever made.”

This excellent resource is quoted throughout Nexus with thanks to its authors.

Management Information Systems for Microfinance Institutions: A Handbook by Charles Waterfield and Nick Ramsing, February 1998 is sponsored by CGAP, the Consultative Group to Assist the Poorest. This handbook is available for purchase from Pact Publications, 274 Madison Avenue, Suite 1304, New York, NY 10016 USA; Tel. 212-532-8516; Fax 212-532-4554; Email books@pactpub.org; Website <www.pactpub.com> or as a free download from <www.worldbank.org/html/cgap/cgap.html>. ❖

Time Will Tell...

“Developing a new, custom MIS is a massive effort. Designing and developing the core, or most essential, routines of a moderate system can take a minimum of six months of programmer time. Debugging the system and completing all the non-core features (a wide variety of reports, error correction routines, user-friendly features) usually take at least another six months of programmer time.

“Programmers often want to leap immediately into system development. But if the system is not well-conceived beforehand, the development can take much longer, with major elements of the system needing to be reworked...The importance of following systematic process of needs assessment and system design cannot be overemphasized.”

Linking Accounting and Portfolio Systems

“Many people expect a computerized portfolio system (which tracks individual client accounts) and a computerized accounting system (which tracks activity at a more aggregate level) to be seamlessly linked — so that all transactions entered in the portfolio system are automatically reflected in the accounting system.

“While computer software and operating systems have made linking portfolio and accounting systems easier, it is expensive and the link requires maintenance. An institution looking for a low-cost, flexible system that does not require programmer maintenance should not expect to link accounting software with the portfolio system.”

— *Management Information Systems for Microfinance Institutions: A Handbook*