

## ACCION PortaCredit: Increasing MFI Efficiency with Technology

### Introduction

Efficiency is critical for microfinance institutions (MFIs) to cover the high costs of offering microloans and make a profit. Therefore, MFIs are doing everything they can to reduce overhead expenses and streamline the loan application process, enabling them to serve the poor more cost-effectively.

Technology offers significant opportunities to MFIs to achieve breakthroughs in efficiency. One of the most promising MFI technologies currently available is ACCION's PortaCredit™, which speeds the loan application and approval process by enabling loan officers to collect applicant information on handheld personal digital assistants (PDAs) and directly upload the information into the MFI's central database.

*During my recent in-depth evaluation of ACCION's PortaCredit technology, I interviewed their technical staff and visited the MFIs implementing the technology. What I saw impressed me considerably. The technology takes time to implement, but when done it works and it works quite well. The most important evidence in my mind is that the operational staff love it and would never choose to go back to paper-based systems. I've been involved in PDA technology since the very beginning, and I've surveyed institutions around the world on behalf of CGAP, but ACCION's implementation is the most successful I've seen.*

– Chuck Waterfield, microfinance consultant,  
Consultative Group to Assist the Poor (CGAP)

In 1999, ACCION developed CrediPalm<sup>1</sup>, the first generation of the PortaCredit application, to respond to the need of MFIs in the ACCION network to increase operational efficiency. Software installed in the Palm Pilots of loan officers enabled them to collect client information in the field and then upload it to a central database. This innovation gave MFIs the ability to take and analyze loan applications, prepare documents and issue a loan more quickly and efficiently than the traditional paper-based loan process took.

Today, PortaCredit has been fully implemented at BanGente and Banco Solidario and is at various stages of implementation at BancoSol in Bolivia, FINAMERICA in Colombia, Caribbean Microfinance Limited (CML/MICROFIN) in Trinidad and Tobago, and Génesis in Guatemala.

<sup>1</sup> For clarity, we refer to the application as PortaCredit throughout this InSight, although it was called CrediPalm from its conception in 1999 until 2001.

The main goals of PortaCredit include :

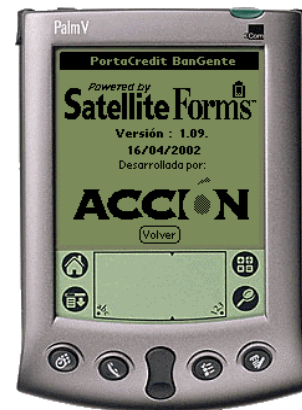
- To lower the operational costs of an MFI.
- To automate and standardize the credit application process.
- To increase the productivity of loan officers and other staff.

This document shares the achievements, challenges and lessons learned from ACCION's PortaCredit program based on our experience at Banco Solidario in Ecuador and BanGente in Venezuela. Although the product and its supporting technology base are constantly changing and improving, these initial results offer valuable lessons in the challenges that institutions face in implementing a PortaCredit program to automate their loan application process and the potential efficiencies and cost savings that can be realized through a well-planned program. This InSight reports on estimates of cost- and time-savings, gathered through retroactive interviews with management and staff of each organization.

PortaCredit is now operating successfully at Banco Solidario and BanGente, but the process of arriving at the final product was challenging on a variety of levels. This paper describes the technological (especially in the interface) and operational (particularly in garnering buy-in from key stakeholders) lessons learned during the development process.

### ***What is PortaCredit?***

PortaCredit software, illustrated on the right, is a series of interactive screens installed on the PDAs of loan officers that replicates and expands upon the paper-based microloan application. PortaCredit allows loan officers to use their PDAs to directly input information collected from applicants, make loan calculations, and pre-approve loans while at the client's business or home. When the loan officer returns to the branch office, he simply uploads the data to the MFI's central database. Loan officers can also use PortaCredit to organize their schedules and track client payment status.

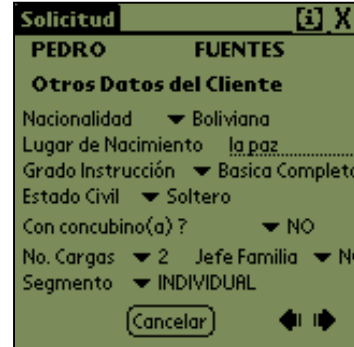


Besides replacing the paper-based loan application, PortaCredit does the important task of incorporating internal controls at the loan officer level. First, it ensures that every field within the loan application is complete before moving to the next screen, saving time that was previously spent tracking down incomplete information during the final credit approval process. Next, because the underwriting criteria of the MFI are incorporated into the PortaCredit program, applications that make it through the pre-approval filter are likely to ultimately be approved, and there is more consistency in loan approval criteria.

Finally, PortaCredit allows loan officers to present different repayment scenarios to clients using the Financial Simulation Module (described below) based on different loan terms. This increases customer satisfaction as applicants are able to see how a change in loan size, term or interest rate will affect their payment size.

PortaCredit's screens are organized as modules that guide users through the loan application. The screens reflect the unique loan application of each MFI, but generally include the following modules:

- Application Module (depicted here): Registers clients in the system and checks their credit status at the credit bureau, if available.
- Financial Assessment Module: Analyzes and evaluates a client's payment capacity.
- Negotiation Module: Helps determine the loan terms and conditions during the pre-approval phase.
- Guarantees Module: Defines the necessary collateral or other terms and conditions.
- Financial Simulation Module: Builds possible scenarios regarding loan terms, interest rates and payment frequency to demonstrate possible repayment scenarios to the client.
- Electronic Agenda: Helps loan officers schedule visits to prospective or existing clients, optimizing time management and work routing charts.
- Newsletter: Provides daily communication from the management of the MFI to each loan officer regarding institutional news, such as a changes in interest rates or methodology modifications.



### The Process of Implementing PortaCredit

ACCION and BanGente began to design the PortaCredit application in March of 2001, and rolled it out to the entire institution in February of 2002. ACCION introduced PortaCredit at Banco Solidario in March 2002. Currently PortaCredit is used by all loan officers at both BanGente and Banco Solidario (over 200 loan officers in total), and all new loan applicants and renewed clients are entered into the system through PortaCredit.

The main considerations in implementing PortaCredit at an MFI can be broken into two broad categories: technological and operational. Technological issues refer specifically to the interface and the hardware used. Operational issues refer mainly to how various staff (management, loan officers, the information technology department and back office staff) have responded to and internalized the new technology.

#### *Technological Issues*

Technological challenges were some of the most difficult to resolve due to their costly nature and the high level of expertise needed to address them. The most significant technological problem at both BanGente and Banco Solidario has been with the synchronization and interface between PortaCredit and the institutions' central databases. A second technological issue has been in choosing the most appropriate PDAs and understanding how to budget for the new technology.

#### Synchronization and Interface

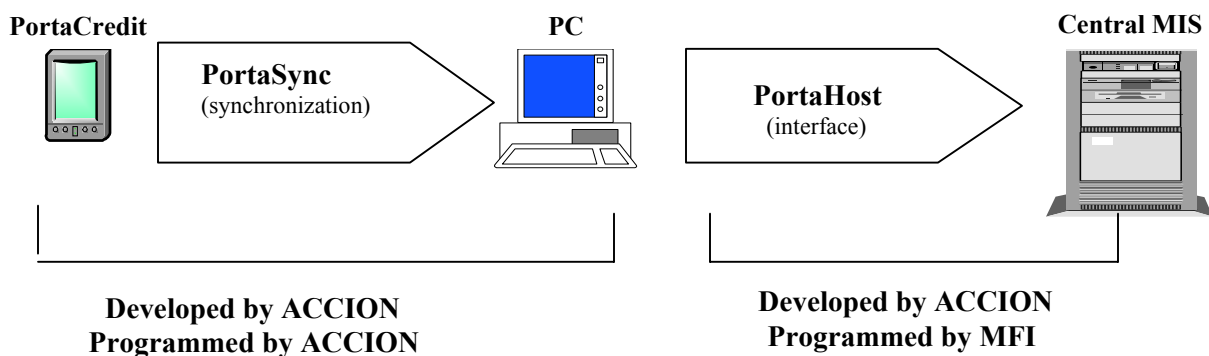
The most time-consuming problem confronted by the PortaCredit team was the interface between the PDAs and the institution's management information system (MIS). The interface must be

programmed so that PortaCredit exactly mirrors the construction of the central database. That is, each and every field of data collected through PortaCredit must be directly linked with a corresponding field within the main system. Therefore, if there are any changes to the main system due to a change in methodology or an upgrade in technology, the PortaCredit interface must be re-programmed as well. It is therefore critical that the institution's methodology and systems are firmly in place before beginning the PortaCredit process.

Since its inception in 1999, PortaCredit has evolved into a highly specialized and functional tool. The synchronization between the PDAs and PCs and the interface between the PCs and the institution's central MIS (illustrated in Figure 1) has progressed as improvements have been made to the available technology. The synchronization between the PDA and the PC must be straightforward and smooth. More important, the complicated interface between the PC and the MFI's central database must be programmed accurately.

To ensure consistency among PortaCredit programs across a variety of MFIs, ACCION is responsible for developing and programming the synchronization tool, PortaSync. Because the interface requires greater customization (depending on the level of complexity of the PortaCredit application, the difference in quality and lay-out of the MFIs' management information system, and the different lending methodologies of each MFI) ACCION wrote general programming instructions for PortaHost, but each MFI is responsible for actually programming the interface.

**Figure 1: PortaCredit's Synchronization & Interface**



Initially, the interface between the PC and the central MIS was programmed using Satellite Forms 3.1® software, a rapid application development (RAD) software tool that allowed users to customize applications that run on their PDAs and synchronize with a central network. However, Satellite had systemic weaknesses – slow synchronization and limited programming capabilities. These weaknesses were resolved by introducing a C++ high productivity language (CodeWarrior) using PortaHost™. As the link to the central database, PortaHost greatly improved the application's performance with faster data processing and the capability for programmers to provide in-depth, replicable instructions within the programming language.

Furthermore, while the original technology only managed working capital loans, PortaHost can accommodate multiple loan products. The new platform also incorporates the three scorecards

(selection, segmentation and collection) used by ACCION's Credit Scoring tool<sup>2</sup>, further contributing to the MFIs' efficiency.

Because PortaHost is programmed by each individual MFI according to its specific lending methodology, ACCION created a template detailing the general lay-out of PortaHost's link with the main system to standardize the interface. The specifications outline PortaHost's structure and formula calculations (e.g., how to calculate interest rates). Using ACCION's model as a guide, the programmers at each MFI must ensure that the information collected through PortaCredit mirrors the data in the main MIS, and that the two systems are linked together smoothly by PortaHost.

ACCION's experience at Banco Solidario illustrates some major technological challenges of PortaCredit. At first, each synchronization took more than 20 minutes, which created a major bottleneck. In response, the IT team spent long hours re-programming the interface. Working through these glitches required the commitment and dedication of the ACCION and Banco Solidario project team and especially Banco Solidario's IT department. These issues are further discussed in the section below on Operations.

#### Choosing the Appropriate Hardware

Each MFI should plan to acquire, deliver, use and replace PDAs at a reasonable cost. Besides the natural wear and tear on PDAs, they are also prone to being stolen and lost. Since PortaCredit becomes the loan officer's main working tool, contingencies should also be made so that daily activity is not completely dependent upon the PDA in case of loss or theft. Users report that PDAs need to be replaced approximately every 14 months. It is important to budget for this, since each new PDA costs approximately \$150.

In selecting which PDAs to use, ACCION's team adopted the OS/Palm technology primarily because of its low cost and convenience. Furthermore, Palm Pilots and other PDAs offer batteries that last up to one month, unlike Windows CE devices or notebook computers which depend upon shorter-lived batteries. PDAs are also equipped with a relatively simple remote synchronization that requires only a modem to connect. Furthermore, Palm PDAs offer a variety of ancillary software that loan officers can use for basic information needs, such as scheduling and contact management.

#### ***Operational Issues***

The early introduction of PortaCredit to field personnel – including agency managers, the IT department and loan officers – is critical to the successful adoption of the technology. The experiences of Banco Solidario and BanGente have differed in this regard, and both offer important lessons in PortaCredit's successful roll-out.

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<sup>2</sup> ACCION's Credit Scoring tool provides MFIs with a tool to objectively rate prospective borrowers and calculate the risk of extending credit to them. Banco Solidario has also incorporated the Credit Scoring tool into PortaCredit, enabling loan officers to automatically generate a credit score for each client.

### Loan Officers

Among all of the functions at the MFI, it is most important to garner buy-in from loan officers when rolling out PortaCredit. Beyond the challenge of mastering the hardware itself, which was relatively easily managed, one of the core challenges has been to create among loan officers the willingness, enthusiasm and capacity to change. Without their full engagement, understanding and support of PortaCredit, the program would not have succeeded. Loan officers at both institutions had to overcome their reservations in using PortaCredit.

From the beginning, loan officers saw that the technology would not replace them, and that its purpose was to help them in their work by saving them time, facilitating calculations and improving their ability to negotiate loan terms with clients. By the time PortaCredit was rolled out, more stringent incentives were also put in place, including rejecting any application not collected through PortaCredit. As a result, loan officers took ownership of the technology far in advance of its actual implementation, and understood the importance of using it in registering new clients. In-depth training programs prepared loan officers for the changes in operations that have occurred with PortaCredit.

At both BanGente and Banco Solidario, loan officers have been satisfied with PortaCredit because it allows them to work with up-to-date information regarding clients and prospective clients. Loan officers can create a directory of prospective pre-qualified clients; a list of clients inquired upon at the credit bureau enabling loan officers to continue with the credit evaluation process; and a list of clients who are in the loan renewal stage. PortaCredit also shows delinquency information organized by loan maturity as well as information on principal balances, and balances in loan interests and delinquency interests.

Loan officers can also better organize their daily workplan using the electronic agenda that replaces the traditional route chart. During each client visit, loan officers are able to provide the client more complete and trustworthy information on payment and credit conditions by using the financial simulator.

Most important, loan officers have found tangible time savings. For example, prior to using PortaCredit, loan officers at BanGente dedicated one full day each week to administrative tasks. Staff has since been reoriented to make use of the additional time available from the increased efficiency. Time previously spent on administrative processes (such as inputting client data into the system, producing and filing forms, correcting forms that had been incorrectly filled out in the field, and manual control in fulfilling loan policies) is now invested in customized client service, sales and performing follow-up with existing clients.

### IT Department

While the buy-in of the loan officers is critical to the ongoing success of PortaCredit, the information technology (IT) department creates the underlying structure and therefore drives the success at the earliest stages of the project. ACCION's different experiences at BanGente and Banco Solidario highlight the importance of buy-in from a dedicated IT department when implementing PortaCredit.

As mentioned in the technology discussion earlier, the IT department's ability to program the interface between PortaCredit and the main MIS system are necessary for the success of the



project. It is therefore key to identify a high-level member of the IT team to champion the effort. Besides making sure that the programming stays on track, this person must have an in-depth understanding of the IT system itself in order to ensure that PortaCredit exactly mirrors the central MIS, and that the interface between the two results in the smooth flow of information from one system to the other.

BanGente's IT department staff bought into the project at the outset because they were part of the process from the planning phase. A high-level manager within the IT department was invaluable in his commitment to the project.

Conversely, because Banco Solidario's IT function was outsourced to a third party when the PortaCredit project began, there was less commitment by the programmers. Because the IT department was not engaged in the process from its genesis and was not central in the decision-making process, the programming phase of the project took several months longer than expected. Furthermore, when technological complications with the interface arose, the IT professionals were unable to take on a problem-solving role as their understanding of and commitment to the overall project was limited. Since then, an internal IT department has been established, greatly improving the situation.

#### Management

Buy-in from management on the highest level is also imperative to the success of PortaCredit. Management, along with the ACCION team and loan officers, came up with the initial design. Management is fundamental to the process as they give final sign off on any technological and operational change that takes place as a result of PortaCredit. Both BanGente and Banco Solidario management placed the implementation of PortaCredit as a high priority within the institution, designating sufficient resources (both human and financial) to its roll-out.

#### Data Entry Staff

With the implementation of PortaCredit, data entry staff were re-assigned to other, more high-value tasks. While they were often required to work extra days during particularly busy times, the time freed up by PortaCredit has instead allowed them to take on new responsibilities. Foremost, data entry staff has taken on customer service responsibilities, with the goal of increasing customer satisfaction and client retention. Additionally, data entry staff now oversees the synchronization between the PDAs and the MFI's central MIS.

### **Results To-Date**

#### *Personnel*

Estimates suggest that loan officers are able to disburse a new loan in nearly half the number of cumulative hours it took using the traditional application and disbursement methodology. Loan officers also report that PortaCredit saves allows them to provide a renewed loan to a repeat client in nearly one-fifth fewer hours. As discussed above, loan officers are free to solicit new clients and follow-up with their existing clients with the time they save.

Banco Solidario's back office staff report that they have decreased the time dedicated to the lending process by almost one quarter. This is largely due to the elimination of the need to manually enter loan information from the hand-written applications into the institutional database.

According to informal field reports, PortaCredit is paying off for branch managers as well. The improvements in data collected through PortaCredit (more complete and accurate information) facilitate the loan approval process and decrease the time spent searching and waiting for missing data, which reportedly saves branch managers significant time.

### ***Office Supplies***

Both BanGente and Banco Solidario report impressive cost-savings in their non-salary operational costs. For example, BanGente reports savings of up to 20 percent due to the elimination of office supplies such as paper, copiers, toner and file folders. Files that were previously made up of hundreds of sheets of paper are now neatly – and cost-effectively – stored within the loan officer's handheld computer and the MIS. Banco Solidario reports that paper costs have decreased by more than five percent since implementing PortaCredit.

### **Next Steps**

Going forward, ACCION will continue to increase MFI efficiency while improving the flexibility of the PortaCredit technology. In 2004, ACCION is implementing PortaCredit at BancoSol in Bolivia, CML/MICROFIN in Trinidad and Tobago, FINAMERICA in Colombia and Génesis in Guatemala. In each case, ACCION will collect baseline data on time invested to take, input and process a typical loan application in order to quantify the efficiencies realized. Thus, by early 2005, ACCION expects to conduct a full cost-benefit analysis of PortaCredit.



This report was written by Susana Barton, vice president of Latin America Operations and Carlos del Busto, MIS consultant at ACCION International. Thanks to Mario Fonseca, Juan Alberto Almonacid and Luis Orlando Cárdenas for sharing their experiences in implementing PortaCredit at BanGente and Banco Solidario.

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