

FAMILY PLANNING MANAGEMENT TRAINING
MARKETING STUDY
TRAINING CENTER
COMPUTER DEPARTMENT
ASOCIACION DEMOGRAFICA COSTARRICENSE
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EXECUTIVE SUMMARY

During the past months, the Asociación Demográfica Costarricense has carried out a market study to determine the feasibility of establishing a Training Center for their Computer Department. The conclusions of the study are the following:

1. It is not feasible to try to compete with private sector firms already established in each country to give training in popular commercial software. The market in each country is saturated with courses at lower prices than the ADC could offer. Furthermore, organizations are not willing to send their staff out of the country for this type of training.

Two courses which the ADC could develop and offer are in the use of SPSS and in demography. Curiously, the course in the use of SPSS is given only in the universities, and is not offered on the open market, although we detected a demand, particularly in the quasi-public sector.

2. This being the case, in order to expand its training capacity in computer-related fields, the ADC would have to focus on very specialized courses which take advantage of their institutional focus. This means courses and applications specifically directed at family planning and demography, and probably implies that the courses be given infrequently and for a limited number of participants.
3. The principal market for courses and other specialized assistance appears to be the other family planning associations in the region. The ADC presently enjoys the advantage in terms of being more developed in its computerized information systems. This advantage could translate not only in training courses, but also in technical assistance toward establishing information systems in the other associations. It should be stressed that this advantage may only be temporary in nature: if it is not acted upon during the next couple of years, the other associations will probably develop their own systems using other sources of assistance.

Also in support of this conclusion is the fact that two donor agencies, USAID and IPPF, are very interested in improving the information systems of the various associations. They could be willing to provide funds for training and follow-up.

4. A secondary market for services of the ADC might be Ministries of Health in Honduras, Guatemala, and El Salvador. Funds are available to support course offerings in those institutions for which no local source of training exists.
5. For the moment, the social security sector appears to be very closed to possibilities for the ADC.
6. There are few indications that external funds will be available to sustain a significant expansion of ADC's training capacity in the

medium and long term. However, if the development of a few specialized courses for a limited number of participants were feasible, a limited expansion, taking advantage of available space at the ADC, would be justified.

7. One area of real potential for the ADC could be in "desktop publishing." The ADC has all of the elements to be able to utilize this technology, and its introduction would not only result in a better quality of publications, but also establish the ADC as an expert in this field. This may also be one area where the ADC could compete successfully with the private sector.

In response to these conclusions, we propose a program composed of four components. Below is a brief description of each one:

- Component 1: Development of New Courses. The two courses identified include one in the use of the SPSS program, and the other is in demography.
- Component 2: Creation of a Training Center. This would include the remodelling of the warehouse in order to provide space for a room to comfortably house up to four micro-computer systems. Also included is the purchase of four systems which could be expanded upon later if justified.
- Component 3: Direct Assistance to the other family planning associations in the region. Given the relatively advanced state of its information system, and the fact that the other associations are just entering this field, it would appear that the ADC could play a very useful role by taking advantage of its experience in helping the other associations. This assistance could take several forms, including courses and direct technical assistance in the establishment of information systems.
- Component 4: Desktop Publishing. Another completely new area for the ADC might be desktop publishing. This possibility has a great deal of potential for many reasons. First, it would save considerable work in up-dating materials for courses, as well as improving the quality and flexibility of the publications.

At the same time, if the ADC is able to develop its combined capacity for editing and computerized publishing, this area could generate resources from contracted publishing, and training to other organizations, particularly the other family planning associations, in the establishment of their own systems.

I. INTRODUCTION

The Asociación Demográfica Costarricense (ADC) was established 20 years ago to back family planning and demographic activities in Costa Rica. The ADC has coordinated and provided logistical support in the importing and distribution of family planning materials to the nation's institutions, chiefly the Ministry of Health and the Caja Costarricense de Seguro Social (CCSS). The ADC produces high quality materials promoting family planning, demographics and education in general. It also conducts scientific research in family planning and demographics. Throughout its history, the ADC has demonstrated professionalism and maturity.

To back all these activities, the ADC's Computer Center has developed a large number of computerized information systems, which have resulted in an increasingly efficient utilization of technology. Some years ago, the ADC put together its own computer center, using a mini-computer to process materials distribution and accounting data. As a second stage in their information systems development, data processing responsibilities were decentralized two years ago, and redistributed to the actual departments, with the backing and supervision of the Computer Department. All the systems which had previously been worked on the mini-computer were transferred or converted to accommodate utilization on micro-computers.

Simultaneously, data processing capabilities are being expanded to cover all the organization's needs. At this time almost all documents are put together via word-processor, many analyses are made using computer graphics, micro-computers have been taken advantage of in processing research data, and there is continued expansion in the area of managerial and administrative control. A library management system is to be added soon.

Another stage in their information systems development which has been contemplated and planned is the introduction of a RED system to link most of the micro-computers which are at the moment functioning independently. The capabilities of the equipment and programs will be used much more efficiently, and the activities of the different departments will improve.

With this change in technology and the decentralization component, the role of the Computer Center has undergone a significant change: users are responsible for routine data processing and the Center can concentrate on systems development and maintenance, assistance and training instead of data processing.

Internally, the Computer Center has conducted some 23 courses in various subjects related to the utilization of the programs currently in use. It has also received outside technical assistance, and the head of the center has participated, as an instructor, in the three computer courses at the University of Chicago. He periodically works with several family planning associations in the development of their information systems. At the end of 1987, the ADC gave two computer courses to persons from a variety of Latin American countries. It should be noted that the ADC, in collaboration with the Costa Rican firm TECAPRO, is at this time conducting a course in accounting and budgeting to persons from 15 countries.

THE PROJECT

As part of its mandate to provide backing to family planning and demographic programs, the ADC has been interested in taking advantage of its experience in the field of computerized information systems to help other organizations and individuals working in family planning and demographics in the region. Although there are many organizations offering similar training programs, the ADC has the advantage of offering not only examples and exercises which are directly related to family planning and demographics, but also complete systems, developed and tested in these fields.

To respond to the possibility of offering external training services, a project was initiated in September 1987 financed by USAID's Regional Office of Population for Latin America. The purpose of this project was to improve the ADC's capacity to develop and sustain a financially self-sufficient training center. This center would provide training to the managers and administrators of the organizations involved in providing family planning services in the entire Central American region, in the appropriate uses and applications of micro-computers. It is hoped that the resulting increase in efficiency and effectiveness of management systems would thus increase the effectiveness of family planning services in the region.

The first step in this project was to conduct a market study to determine the feasibility of establishing such a center, and if it did not appear to be feasible, to put together a strategy to reach the final objective of using the ADC's existing capabilities in the field of information systems to increase the effectiveness of family planning programs in the region. This report presents the results and the conclusions drawn from the market study.

Any expansion which would support other sectors in Costa Rica, as well as other nations of the area, would necessitate an expansion of the infra-structure of ADC. Additionally, the current training services of ADC would be insufficient if the role of the institution was expanded; it would be necessary to contemplate a growing role for consultants and technical assistance in the development of these information systems.

II. METHODOLOGY

To determine the feasibility of putting together a permanent training center, a market study was conducted in three countries: Costa Rica, Guatemala and Honduras. In each country, three aspects were investigated:

1. Potential clients and type of service required,
2. Which training services already exist in each country, in other words, the competition,
3. Potential donors of funds for supporting a Training Center.

A brief questionnaire was designed for each of these components. These questionnaires were refined by the Research Division and the Computer Department of the ADC after limited testing in Costa Rica. They were later used for data collection in each country. Sample forms can be found in Appendix 1. To limit the cost of the study, all three components were researched simultaneously. Ten days were scheduled to complete the interviews in each country. With such time constraints it was not possible to contact all potential interviewees, but a sufficient amount of information was collected to be able to draw valid conclusions.

Later the results were codified, entered into a data base, tabulated and analyzed by the ADC's Computer Department to put together this report.

The team in charge of the study was composed of a two-person core from the ADC's Computer Department with the assistance of a consultant from the Family Planning Management Training Project (FPMT). Additionally, FPMT contracted two persons to assist with the interviews and the ADC provided secretarial and technical support.

The original completion date for this study was January 1988, but largely because of a series of courses which the ADC conducted, sponsored by the IPPF, it was not possible to complete the study until May 1988.

The forms were not taken to El Salvador, due to the fact that the local USAID office denied permission to conduct the activity in the given time period for security reasons. To partially make up for this lack of information, a number of telephone interviews were conducted with Salvadorian residents with a great deal of experience in the field of family planning.

III. COMPONENT I: POTENTIAL CLIENTS

Four main sectors were identified as being potential clients for training services:

1. Private organizations and associations working in the fields of family planning and demographics.
2. The public sector, principally the Ministry of Health in each country.
3. The Social Security systems in each country.
4. The commercial sector in each country, which includes any organization or individual involved in the sale and distribution of family planning materials and services.

To expedite the analysis, we will examine each sector individually.

SECTOR I Family planning associations.

In every country in the region, there is an institution similar to the ADC in terms of objectives, organization and size. At this time, each of the other institutions is in the initial stage of developing computerized information systems. Each has acquired, or is in the process of acquiring, with external assistance, a series of micro-computers, although none have very advanced software and none have trained their staff.

Specifically, ASHONPLAFA in Honduras has installed (but is not yet operating) a network of 7 IBM system-2s centered on a micro COMPAQ. Furthermore, they have an IBM XT, a 20 x 20 Bernovill fixed disk (with 20-megabyte cartridges), an Epson FX-286 printer (dot matrix), a Texas Instruments laser printer and a number of voltage regulators, filters, UPS's, etc. They acquired all this equipment with the technical assistance of three different American companies contracted by USAID. The experience derived from this assistance has been rather mediocre, as contact has been infrequent and follow-up irregular, and some of the consultants didn't even speak Spanish.

Actually, although ASHONPLAFA may have very impressive machinery, it is not used much at the moment. Until now it has mainly been used to process specific studies using statistics packets, and graphics to monitor certain aspects of their programs. Only one person has been put in charge of the system who has any previous experience with computers.

A year ago another consulting firm designed a new accounting system for ASHONPLAFA. At this time the system has been implemented manually, and they are quite interested in computerizing it. To explore the possibility, a number of members of ASHONPLAFA's staff attended a seminar by the IPPF, to analyze an accounting packet sold by a Cost Rican firm, TECAPRO. Apparently the program could be adapted to include the existing accounting system. If in the end they decide to buy the packet, the ADC and TECAPRO will provide assistance with use and implementation. Later, other modules can be added such as accounts receivable, scheduling and issuance of checks.

The training plan calls for putting together courses internally for the staff in handling the more common software such as word processing and Lotus 123. They are interested, however, in working with the ADC in terms of organizing their computer department and training in the use of specific administrative modules.

APROFAM of Guatemala is in a similar situation to Honduras' ASHONPLAFA. They have a number of computers including a mini and several brands of micro-computers. The systems are new and not well developed and training is required in the use of the more common commercial packets: Word Star/Word Perfect (12 persons require training), dBase III (8 persons), Lotus 123 (8 persons), Super Project (5 persons), and SPSS (3 persons).

Furthermore members of the APROFAM staff also attended the seminar which promoted the accounting packet, and it is entirely possible that they will acquire it, in which case they would be needing the same kind of assistance as ASHONPLAFA.

In terms of computerization, APROFAM of El Salvador is even less developed. They are in the process of buying 5 micro-computers and receiving technical assistance from the resident consultant of an information systems project financed by USAID. Basic training is included with the purchase of the hardware. The USAID consultant, however, did express interest in collaborating with the ADC, but a visit will have to take place in order to discuss details.

We believe this sector offers many opportunities to utilize ADC's services. Though it is a small sector, composed of only three other organizations, it is both the most accessible and the most relevant. The focus for this sector could be, beyond courses, the development of entire information systems.

SECTOR II Public Institutions

There is a growing tendency in Central America to computerize many of the functions of public institutions. Most of these institutions are large and segmented; frequently they feature their own computer department. Much of the computer training is done internally. However, we presented in Figure 1 a summary of the courses, and the number of participants who need training in those institutions for which internal training is not currently available.

It can be noted that there is some interest in learning about common software. In reality the number of persons who ought to receive training is much larger, but Figure 1 does not include those persons who will receive internal training.

In addition to this, in several cases interviews were conducted with several departments within one institution, and the results were added up on Figure 1. These numbers should not be interpreted as representative of all the persons who ought to receive external training, given that it was not possible to visit all the departments of every institution.

In the case of El Salvador, the Ministry of Health is initiating its own computerization program and will require substantial training. Most of this training will focus on the use of common software and will be provided by local firms and consultants.

Another important characteristic of public institutions is that they generally have limited budgets, especially to finance this kind of training. However, most have access to external funds which could be utilized for this purpose. This will be discussed later.

To summarize, although most of the training carried out by public institutions is done internally due to their size, there are "holes" which have to be filled one way or another. Unfortunately for the ADC, because these are state-run institutions, local contracting is preferred where possible.

FIGURE 1: PERSONS REQUIRING OUTSIDE INSTRUCTION

COUNTRY	INSTITUTION	WORD PROCESS	DBASE III	LOTUS 123	SMART	MANAGE. PROJ.	SPSS	DEMO- GRAPHICS
Honduras								
	Minis. of Health		7	5			10	
	Minis. of Educ.		12	12				
	Office of Statistics and Census		2	2				
	SECPLAN (Minis. of Planning)					3	10	
	SANAA (Dept. of Water)		1					
	Nat. Assembly of Welfare	4	4	4		1	2	
Guatemala								
	Minis. of Health	3	9	6			3	
	Institute of Statistics and Census							2
Costa Rica								
	Minis. of Health		5		5		5	
	Institute of Soc. Population Studies				8		8	

SECTOR III Social Security Institutions

Interviews were conducted with the Social Security institutions in all three countries visited. The Honduran Instituto de Seguro Social is not a potential client, as they function only with main frame and mini computers.

Until now the Costa Rican CCSS has mainly used very large computers, but they are considering the purchase of micro-computers to be used in their 126 clinics and hospitals. Their policy on training is not very well defined, but given the characteristics of the institution, a number of probable alternatives can be extrapolated.

First of all, the Computer Department usually develops its own applications. This tendency will probably continue, although there is some interest in specific packets such as Lotus 123 and SPSS. Given the fact that they are thinking of training up to 600 persons, it would be logical for them to develop their own internal training program. On the other hand, there is a preference to contract private firms to carry out much of their work, but it is improbable that any single firm would have the kind of established capacity to do this volume of work.

We believe it is always possible that the CCSS could contract companies like the ADC to help with this enormous task, but their expansion plans have barely begun to be formulated. The best that could happen in this case could be for the ADC to have a specialty it could offer the CCSS in case they continue with this enormous computer system development.

The situation in El Salvador and Guatemala with respect to the Social Security systems is similar to that in Costa Rica. In the case of Guatemala, large computers are already in use and they are thinking of acquiring micro-computers. No decision has been made, however, and none is expected in the immediate future.

Seguro Social de El Salvador is at this time receiving assistance from the same consultant as the Ministry of Health. Apparently they are in the process of buying some micro-computers. As in the case of the Ministry of Health, basic training is included in the purchase of the equipment, but a visit is desirable to define the possibility of collaboration with the ADC.

To summarize, we do not believe that this sector offers many possibilities for the ADC's services. It would be worth-while to stay in contact with the Caja de Seguro Social in Costa Rica just in case a small opening does appear internally; however, it is likely that most of their training will be done internally. It could also be useful to explore possibilities directly with Seguro Social de El Salvador whenever an opportunity should arise.

SECTOR IV The Private Sector

A number of private sector firms having at least peripheral interests in family planning, demographics or health were researched. The sample obtained was not very large, given that the other sectors and components of the study received priority within the time limits imposed for data collection. We believe, however, that the sample is valid enough to give some indication of this sector's characteristics and to evaluate the possibility of the ADC's providing services to the sector.

We visited some 20 firms including private hospitals, pharmacies, laboratories and other representatives of the sector. Of the 20, only 10 had micro-computers. It would seem that at the level of small companies such as pharmacies, computers are not yet widespread.

Of the 10 firms identified as having micro-computers, 3 conduct at least part of their training internally. The smallest firm providing internal training had staff of 65 persons, reinforcing the hypothesis that a

significant number of persons have to be in need of training to justify internal training.

Following this line of reasoning, the vast majority of private firms such as pharmacies and clinics are small, and whatever training will be conducted via self-teaching or through external courses. In any case, the simple truth is that micro-computers have not yet reached this sector.

The following needs for external training were identified among the firms which featured established micro-computers:

WORD PROCESSING	9
LOTUS 123	10
PROJECT MANAGEMENT	2
DBASE III	12
SPSS	3

This means there is apparently a market for training in the use of these programs within the private sector. The key question, then, is whether the ADC can penetrate this market.

One problem which was identified was that with the exception of dBase III and Lotus 123, there is not much overlap of desired programs. There are, for instance, persons who want to learn word processing, but each company tends to choose a different package. Among the nine potential clients who wanted training in word processing, there were four different packages.

The same occurs with graphics and project management programs. There are many different programs, each with its pros and cons, and for this reason it would be difficult to stimulate a course in any one program without a fairly broad user base.

Finally, although they had a need for training, only 5 of the 10 firms with micro-computers had a training budget. We tried to identify the scale of these budgets for coming years, but predictably this information could not or would not be released.

In the two cases which responded to inquiries regarding amounts, they indicated that they would have the equivalent of about US\$1,300 per year over the next three years. This is adequate for providing about one person per month's worth of training per year, which does not represent a strong base for the ADC.

We came to the conclusion that generally the private sector is not a suitable market for the ADC. This conclusion was reinforced by findings from the second component of the market survey, the investigation of the competition.

IV. COMPONENT II: The Competition

Included here was an investigation of the firms in each country presently offering computer training, because the ADC, especially in the case of basic courses, would be competing in a free market. In the three countries we visited, 29 firms were identified as offering courses in the use of commercial micro-computer software. Additionally, 3 firms in Honduras have branch offices outside the capital, in San Pedro Sula, and another 4 or 5 companies offer training in El Salvador.

The courses offered are summarized in Figure 2. From this table it can be observed that the firms are quite evenly distributed among the countries, i.e. 9 to 10 firms in each country offer basic computer training.

The focus of the market can be deduced from the types of courses offered. The most popular programs are Word Star, Lotus 123 and dBase III. Another requisite for operating a computer is knowledge of the operative system, which is offered by 10 firms. We are inclined to think that in some cases, notions of the operative systems are featured in the introductory course.

Of course, each firm has developed its own courses, which accounts for disparities in the total number of hours for each type of course illustrated in Figure 3. In any case, it can be observed that the courses are formulated in terms of hours, normally between 25 and 30 depending on the firm and the course.

Not immediately apparent in Figure 3 is the fact that almost all these courses presume to serve a market of persons who are already working, distributing course work over several days a week in two-hour sessions, often times in the evenings after normal office hours.

Also omitted from Figures 2 and 3 are a number of courses identified at the computer technician level. These tend to cover a number of additional topics quite apart from the use of the aforementioned software, and schedules reach practically full-time levels for 6 to 12 months. Many of the firms also offer courses in computer programming, but these were not included in this study.

It can be concluded from this discussion that the market for basic courses in the use of popular software is already fairly well saturated in each country. This not only makes it difficult for the ADC to compete locally, but also makes it unlikely that persons seeking this type of training will travel abroad to obtain it.

Moreover, one should consider another factor which could influence the market: cost. In order to compare courses and prices between the three countries, we generated Figure 4 which demonstrates the range of prices in dollars per course per hour. For some reason, cost per hour is generally higher in Honduras than in Costa Rica and Guatemala. In any case, to enter the market, the ADC would have to offer courses at a competitive price, that is, depending on the course, approximately US\$8.00 per hour. All this presumes constant quality standards, which is probably not the case but which is not distinguishable within the market.

It is difficult to compare the ADC's course costs with the prices of

courses in Figures 2 to 4, given that the ADC's courses are not daily, for one or two hours, but rather are given full time in one or two week increments. The ADC does not have the installed capacity to carry out this type of course, which also influences cost.

We did attempt a comparison, however, in Figure 5. The first scenario attempts to present the actual costs of offering courses at the ADC. It is apparent that, due to a number of factors, cost per hour comes out significantly higher than the competition. As was mentioned earlier, given that the types of courses offered are different, one should be careful in drawing conclusions from this data. Factors which represent a negative influence are discussed below in detail.

To summarize, it can be concluded that the market to provide training in the use of popular programs is fairly well saturated, and that the ADC should probably not try to compete directly with existing firms.

FIGURE 2: NUMBER OF COMPANIES OFFERING COURSES

COUNTRY	TOTAL COMPANIES	INTRO.	MS-DOS	WORD STAR	WORD PERF.	LOTUS 123	SMART	DBASE III	SUPER PROJ.	ADMIN. PACKETS
Guatemala	9	7	2	8	1	9	0	9	0	0
Honduras	10	3	4	5	2	4	0	4	0	1
Costa Rica	10	5	4	4	0	5	1	4	0	2
Total	29	15	10	17	3	18	1	17	0	3

FIGURE 3: AVERAGE HOURS PER COURSE

COUNTRY	INTRO.	MS-DOS	WORD STAR	WORD PERF.	LOTUS 123	SMART	DBASE III	ADMIN. PACKETS
Guatemala	29	5	27	15	34	0	35	41
Honduras	14	14	25	25	24	0	30	30
Costa Rica	22	10	16	0	18	24	32	24
Weighted Average	11	24	22	27	24	33	33	

FIGURE 4: AVERAGE COST PER HOUR IN DOLLARS

COUNTRY	INTRO.	MS-DOS	WORD STAR	WORD PERF.	LOTUS 123	SMART	DBASE III	ADMIN. PACKETS
Guatemala	2.39	7.40	3.23	4.93	2.45	0.00	2.21	2.00
Honduras	3.50	3.86	6.56	11.25	7.06	0.00	6.39	3.33
Costa Rica	2.99	8.24	4.63	0.00	5.34	4.19	3.49	7.71
Average	2.95	7.34	4.66	8.09	5.50	4.19	3.85	5.72
Minimum	0.53	2.78	1.00	4.93	1.00	4.19	1.00	1.21
Maximum	4.19	20.00	11.25	11.25	11.67	4.19	2.33	12.92

FIGURE 5: ESTIMATED COMPARISON OF COURSE COSTS IN ADC

	Scenario I		Scenario II		Scenario III	
	Monthly	Weekly	Monthly	Weekly	Monthly	Weekly
<u>Salaries:</u>						
Manager	880	220	880	220	0	0
Trainer	616	154	616	154	616	154
Secretary	422	106	422	106	0	0
Total:	1,918	480	1,918	480	616	616
<u>Equipment Rental</u>	4,000.00	4,000.00	2,285.71	2,285.71	0.00	0.00
<u>Equipment Depreciation</u>	0.00	0.00	600.00	150.00	600.00	150.00
<u>Location Rental</u>	1,100.00	275.00	400.00	100.00	400.00	100.00
<u>Computer Materials</u>	3,100.00	775.00	3,100.00	775.00	1,500.00	375.00
<u>Office Equipment</u>	1,300.00	325.00	1,300.00	325.00	600.00	150.00
<u>Transport</u>	1,600.00	400.00	1,600.00	400.00	700.00	175.00
<u>Misc.</u>	3,000.00	750.00	3,000.00	750.00	1,500.00	375.00
Total:	14,100.00	6,525.00	12,285.71	4,785.71	5,300.00	1,325.00
Grand Total:	16,018.40	7,004.60	14,204.11	5,265.31	5,916.00	1,479.00
<u>Cost per Participant:</u>	1,144.17	500.33	1,014.58	376.09	986.00	246.50
<u>Cost per Hour/Part.</u>	28.60	12.51	25.36	9.40	24.65	6.16

Parameters:

- Scenario I
- * One-week course of 40 hours with 14 participants
 - * All machines rented by the month (minimum)
 - * Place of execution rented
- Scenario II
- * Same as Scenario I
 - * 4 rented systems
 - * Depreciation of the 3 owned systems
 - * Place of execution maintained by the depreciation
- Scenario III
- * One-week course of 6 participants
 - * 3 owned systems
 - * Place of execution maintained by the depreciation

V COMPONENT III: Potential Donors

Funding sources to support the training in the medium and long term will be required, particularly if it does not appear that the ADC can compete with existing training firms. To try to determine availability of funds, we interviewed most of the donor agencies which function in the three countries visited. The organizations we researched were the following:

FIGURE 6: DONORS

	COSTA RICA	HONDURAS	GUATEMALA	EL SALVADOR
United Nations Development Program		X	X	
USAID	X	X	X	X
Pan American Health Organization	X	X	X	X
UNFPA		X		X
UNICEF		X		
Central American Bank of Economic Integration	X	X		
Inter-American Bank of Development		X		
Social Security Dept.	X			
Institute of Social Population Studies	X			
IICA	X			
General Dept. of Statistics	X			
International Planned Parenthood	X			

There are other potential funding sources, particularly bilateral agencies, but we believe this sample suffices to indicate possible funding sources and scale. The possibility of making funds available for training depends largely on each organization's policy and program focus. Each one's position should then be briefly examined.

It is important to note that in the best of cases, organizations can only project disposable funds until the termination of their present projects. Seen in this light, it is impossible to predict far enough into the future to guarantee that the ADC would have the funds to be self-sufficient.

Normally, UNDP does not directly carry out projects, but rather provides funds to one of its executive agencies (UNICEF, Pan American Health Organization, UNFPA, etc.). Exceptionally they could contract someone for a limited time to conduct training, but it would have to be prompted by a request from a local organization, such as the Ministry of Health. If one of the executive agencies of the United Nations is already present within the requesting local organization, they would prefer to channel funds through the agency. Thus the possibility that UNDP would fund training directly is very limited.

The PAHO is present in all the health ministries of the region, but they chiefly provide technical assistance, and they have no funds, especially to support an organization with a history of USAID funding.

On the other hand, UNFPA and UNICEF have projects in use in the region (UNFPA in El Salvador and UNICEF in Honduras). These projects have training funds, and representatives of each organization have expressed interest in discussing the possibility of collaborating with the ADC. They indicated a preference for utilizing local resources, but were the ADC to offer something necessary which would be unavailable locally, that would be considered. They specifically spoke of a course in demography rather than sending participants to the USA.

USAID also has projects in all the countries. In Costa Rica they were instrumental in creating the ADC itself, but they recently decided to channel family planning materials directly to the Caja de Seguro Social and the Ministry of Health for distribution. The local mission has indicated it would not back this project.

In Honduras, USAID has a large project with the Ministry of Health which will be renewed in December until 1994. This project will focus heavily on the development of computerized information systems, but given that the ministry has its own computer department, and given the presence of a number of technical assistants, it is unlikely that the ADC will be needed.

USAID/Honduras also backs to a significant extent ASHONPLAFA, the family planning association in Honduras. As mentioned above, ASHONPLAFA is in the process of computerizing its information systems. Representatives of USAID said they would be funding a limited amount of training (1 - 2 people) in the next two or three years.

The same situation exists in El Salvador and Guatemala. USAID backs family planning associations and could be a source of limited funds should the ADC offer something unavailable locally in those countries.

The Banco Centroamericano de Integración Económica funds mainly construction projects and does not have funds for training. The BID's policy in all the countries they work in is to support training programs only when they themselves organize, control and supervise them.

INCAP receives funds through a variety of sources, and they are included in the list of donors only because they may buy services for their own organization. They are specifically interested in demographics.

The IPPF is actively involved in stimulating the establishment of computerized administrative systems in all Latin America. This focus will be maintained during coming years, and it is entirely possible that they will ask the ADC to provide other courses and/or technical assistance to other organizations in the region having opted for the accounting package. Later, other modules could be introduced covering for example: accounts receivable, scheduling and issuance of checks.

In spite of the ADC's having demonstrated that they are capable of organizing international courses, it is very unlikely that the IPPF will sponsor more than one course of 1 - 2 weeks per year in the future.

With respect to the other organizations we contacted, no realistic funding sources were identified which could support this training program.

To summarize, there are few funding sources to support large scale training. Some services could be provided to the other family planning associations in the region through IPPF and USAID. It may also be possible to take advantage of funds available through USAID, UNICEF and UNFPA to support training in Honduras, Guatemala and El Salvador. These funds, however, would be limited and used only towards activities not locally available. We identified no other funding possibilities.

VI OTHER CONSIDERATIONS

Supplementary to the main findings of the study is a series of considerations which could influence decision-making with respect to the project. They relate chiefly to the ADC's situation.

First it is important to point out that the ADC's role must necessarily change. Their main role had always been up to now one of channeling the distribution of family planning materials. This role no longer exists.

In the future, the ADC will probably put much greater emphasis on educational programs of various sorts. This presents a double focus: actual classes relating to demographics and family planning, and publications to support and supplement these classes.

Until now, the ADC borrowed facilities to conduct classes, but this is becoming increasingly difficult. To solve this problem, they are thinking of taking advantage of the warehouses which are no longer needed to house family planning materials. If this idea becomes a reality, one room could be used exclusively to conduct computer training.

Although the ADC has managed to successfully conduct international computer courses, there are some serious obstacles. Given that the ADC does not have equipment exclusively for training purposes, it has been necessary to borrow it from other ADC departments who also need this equipment to carry out their normal duties. They also have rented equipment locally.

In the case of relatively large courses requiring 10 micro-computer systems, three complications arise. First, on the Costa Rican market, it is almost impossible to rent 10 computers with the necessary

specifications from the same supplier. Second, although they are only needed for one or two weeks, they are only rented out for one-month intervals. This obviously entails a significant increase in the cost of the course. Finally, without a more or less constant volume, it is tedious to pick up, install, and return the rented equipment.

The ADC's publications are of two sorts: materials used with the courses, and educational materials and brochures relating to family planning. With the former, stencils are usually prepared, and any change results in another stencil having to be prepared. They are mimeographed, which produces work of mediocre quality, where drawing and illustrations cannot be incorporated. The latter are high quality, but as they are produced in color offset, they are expensive.

If the ADC is seriously thinking about emphasizing its educational functions, it would be important to improve the quality and perhaps lower the cost of publications. This could apparently be achieved through a computerized "desk-top publishing" system. This publishing system is new and does not exist either in other family planning associations, or in many other firms. To take advantage of this technology, two competencies are required: computer skills, and capacity for writing and editing. The ADC is in a unique position in that both these competencies are already well-developed.

VII CONCLUSIONS

Taking into account all the considerations discussed above, the following conclusions can be drawn:

1. It is not possible to compete with private firms already established in each country to provide training in the popular commercial software. The market for each country is saturated with courses whose prices are lower than the ADC's could be. Furthermore, almost no one is willing to send people abroad for this type of training.

Two courses that the ADC could develop and conduct would be in the use of SPSS, and one or more courses in demographics adapted from those which are currently offered in the universities.

2. This being the case, to expand training capacity in computer related fields, the ADC should concentrate on very specialized courses which take advantage of their institutional focus. This means courses and applications which would be specifically directed at family planning and demography. The probable implications are that the courses would be infrequent and would serve a limited number of participants.

3. The main market for courses and other forms of specialized assistance seems to lie with the region's other family planning associations. The ADC has the advantage at the moment in terms of having better-developed computerized information systems. This advantage could translate not only to courses, but also to technical assistance in establishing information systems for other associations. It should be noted that this advantage may be only temporary: if it is not acted upon within the next two years, the

other associations will probably develop their own systems using other sources of assistance.

This conclusion is further supported by the fact that two donor agencies, USAID and IPPF, are interested in improving the information systems of the various associations. Funds for training and follow-up could be provided by these agencies.

4. A secondary market for the ADC's services might be the Ministries of Health in Guatemala, Honduras and El Salvador. Funds are available to support training in those institutions if no local training services exist.

5. At the moment, there do not seem to be possibilities for the ADC to work with the Social Security sector.

6. There are few indications that external funds will be available to sustain a significant expansion of ADC's training capacity over the medium and long terms. However, if the development of a few specialized courses for a limited number of participants were feasible, a limited expansion taking advantage of available space at the ADC would be justified.

7. The area of great potential for the ADC could be desk-top publishing. The ADC already has all the elements needed to utilize this technology; its introduction would not only increase the quality of publications, but would also establish the ADC's expertise in the field. This is, moreover, one area where the ADC could possibly compete successfully with the private sector.

VIII PROPOSED STRATEGIES

From these conclusions, a number of strategies are suggested which mutually reinforce each other and represent an expansion in the activities and capabilities of the ADC in the field of computers. As these strategies are independent from one another, they will be discussed individually.

COMPONENT 1 Development of New Courses

First it would be worth considering the creation of two new courses: one for the use of SPSS, the other in demographics. The main market for these courses would be the public or quasi-public institutions and other organizations which focus on social research. To simplify the development of the SPSS course and minimize complications, the first course could be limited to Costa Rican participants, and expanded to participants of the other countries according to demand.

For Costa Rican participants, the ideal situation would be to have a proper training center, which would allow for a daily two-hour course schedule to attract the highest possible number of participants. In the case of other countries, the most feasible plan would involve carrying out courses in intensive blocks.

After developing at least a rough sketch of the course, letters could be sent describing contents, schedules, etc. to Ministries of Health, Planning, Education and others, to statistics and census offices and to whomever else could possibly be interested. Proposals should also be sent to donor institutions, particularly to those which indicated that they would be willing to fund such courses, especially, UNFPA, UNICEF and USAID.

COMPONENT 2 Creation of a Training Center

The fact that the ADC has no facilities or equipment to conduct courses is an obstacle to course organization and scheduling flexibility, and involves an increase in work and cost. On the other hand, since most of the courses will be specialized and/or conducted abroad, it does not seem cost-effective to establish a large and complex training facility.

To compensate, to fill the needs of small courses of up to six participants, and also to facilitate the occasional large course, we suggest that the warehouse be remodelled to include two training rooms. The first would be relatively small and its purpose would be exclusively to train persons in the use of computers. It should be sufficiently spacious to comfortably house three computer systems and other necessary furniture and equipment.

The other room would be a multi-purpose conference room where the ADC could hold its other courses, conferences, etc. which could also be used for courses featuring more than six participants.

The training center could acquire four micro-computer systems and the necessary peripherals. Course participants would use three of the systems, and the instructor would use the fourth. This equipment would be permanently installed in the small room to be used in courses with few participants. In case there should be a need for additional space and equipment, as for larger courses, it could be transferred to the larger conference room and supplemented with rented equipment. If the purchase of additional systems were justified, these could be added later on.

To get an idea of the economic effects of establishing a small computer center, we compared the costs of present courses with two other scenarios in Figure 5.

In Scenario 2, we assumed the same course for 14 persons as in the first case, but situated in the ADC's conference room. Four systems would still have to be rented, for one month, and there would be a slight depreciation of ADC's own equipment. However, the locale would cost nothing, apart from janitorial costs. Under these conditions, costs per hour would be reduced by 20%.

There are obviously many other considerations. For instance, the handling of the course and the placing of the ADC staff would be facilitated, but such a course in the ADC locale complicates room, board and transportation arrangements for the participants. It may be more efficient to carry out international courses at a hotel, saving the significant cost of renting three systems and would simplify the acquisition of the rest.

Scenario 3 of Figure 5 intends to estimate the cost per hour of conducting a course for six participants in the ADC locale. In this case, less participation on the part of the ADC staff is required and costs for equipment and locale are minimal. Thus cost per hour goes down to US\$6.16, which easily falls within the range of costs featured on the free market. This cost does not include the time needed to develop the course, which is not insignificant when one is dealing with a specialized course which is not to be repeated many times.

To summarize, it appears that a small training center would be advantageous, particularly including economic benefits.

COMPONENT 3 Direct Assistance to Other Associations

Given the relatively advanced state of its information system, and the fact that the other associations are barely entering this field, it appears that the ADC could play a very useful role by utilizing its own experience to help the other associations. This assistance could come in several forms, including courses, and direct technical assistance in the establishment of information systems.

First of all, it would seem logical that the project provide funds for direct assistance to the associations. Assuming a request from each of these, periodic one-week visits with each association could be considered. The first visit would be to establish plans and terms of reference for future assistance; to acquire basic knowledge of the local system, its objectives and the person involved; and to begin to help with organizing their systems. Later, follow-up could be conducted every three months during the first year and every six months in the second and third years.

Part of the follow-up could come in the form of courses. If after the initial visits, some training need is identified in all three associations, the course could be put together in Costa Rica. If the needs can be better addressed locally, the course could take place in each country.

Courses could include the initial instruction in the basic software, perhaps actually using each association's equipment.

At the same time there should obviously continue to be collaboration with the IPPF in the development of administrative systems, the end result of which would be another yearly two-week course. This work would be a direct and logical extension to the aforementioned assistance.

Another area completely new for the ADC could be that of desk-top publishing. This possibility has a lot of potential in a number of ways. The ADC already has many of the elements necessary for such courses; it also is improving the quality and flexibility of its publications. At the same time, if the ADC is able to take advantage of its capacity for publishing and computation, the work could generate funds and provide assistance to other organizations.

What is required to develop such a capability is a system which is exclusively devoted to this activity. Tentatively, the system includes the following:

- * One IBM-compatible computer with the 286 processor, 40-megabyte hard disk, 1.2 megabytes of RAM.
- * One large 15" monitor (1280 X 800 pixels) capable of showing entire pages with the appropriate graphics card.
- * An electronic "mouse" to place the cursor.
- * Scanner equipment to reproduce photos.
- * Light-sensitive board and pen to draw directly on the screen.
- * One laser printer.
- * Energy-source protection equipment.
- * The appropriate software, which includes microsoft windows and pagemaker.

This whole system could be located in another room of the remodelled warehouse, or on the second floor with the publications department. This technology is not easy to master, but with close collaboration between the publications and the Computer Department, within a few months it could be well taken advantage of.

IX WORK SCHEDULE AND BUDGET

We are not at this time presenting a detailed schedule, as many future activities depend on how initial activities develop. Broadly, the strategy would be to focus on the development of SPSS and demographics courses in 1988, and to have these courses refined as of 1989. This leaves time for the warehouse to be remodelled, and for the purchase of the necessary equipment.

The specific, immediate activities which could be initiated upon approval are the following.

COMPONENT 1

1. Development of the SPSS course.
2. Development of a demographics course.

COMPONENT 2

1. Contract an architect to design the remodelling of the warehouse. Construction to follow.
2. At the appropriate time, select the necessary furniture.
3. Initiate the purchase of the equipment. This can be done jointly with component 4, or separately.

COMPONENT 3

1. Initiate visits to the other associations to establish a work schedule for technical assistance for each one.
2. Take advantage of these visits to establish contacts with potential clients for the two new courses, and with the donor agencies.

COMPONENT 4

Request assistance in developing specifications and purchasing the equipment.

To sustain the project's activities, we present a tentative budget to estimate for the various components described in Section VIII, not taking into account the cost of this study. The suggested amounts are estimates, as is the fund flow, and we hope to periodically revise this budget according to the project's development and the costs sustained. It would be good to clarify certain implicit details of this budget.

COMPONENT 1

- * US\$ 10,000 are included to develop courses which have not yet been identified.
- * Scholarship funds were reduced, given that along the suggested strategy, it is believed that there will be funds available from donors to supplement these amounts.
- * We included funds for computer rentals, given that the Training Center will not purchase additional systems until justifiable.

COMPONENT 2

- * The cost of a complete renovation is unknown, but the amount of the budget represents a contribution towards the total cost of establishing an adequate locale for the Training Center.
- * The purchase of four systems is contemplated for the first year, and funds were budgeted in case expansion is justified over the following years.

COMPONENT 3

- * The exact amount of money needed for this activity is not known, but several trips per year to each association have been budgeted.

PROPOSED ESTIMATED BUDGET

	<u>1988</u>	<u>1989</u>	<u>1990</u>	<u>TOTAL</u>
COMPONENT 1: CURRICULUM DESIGN AND TRAINING				
A. Course Development	10,000	5,000	5,000	20,000
B. Participant Training	20,000	30,000	30,000	80,000
C. Admin. Systems Design	5,000	2,000	2,000	9,000
D. Equipment Rental	<u>5,000</u>	<u>10,000</u>	<u>10,000</u>	<u>25,000</u>
Subtotals	40,000	47,000	47,000	134,000
COMPONENT 2: ESTABLISHMENT OF TRAINING CENTER				
A. Building Renovation	20,000			20,000
B. Furniture	5,000			5,000
C. Equipment and Software	<u>25,000</u>	<u>10,000</u>	<u>15,000</u>	<u>50,000</u>
Subtotals	50,000	10,000	15,000	75,000
COMPONENT 3: CONSULTANCIES TO OTHER FAMILY PLANNING ASSOC.	8,000	25,000	25,000	58,000
COMPONENT 4: DESK-TOP PUBLISHING				
A. Equipment	12,500	3,000	2,000	17,500
B. Technical Assistance	5,000	3,000	2,000	10,000
C. Materials	<u>3,000</u>	<u>5,000</u>	<u>5,000</u>	<u>13,000</u>
Subtotals	20,500	11,000	9,000	40,500
SUPPORT				
A. Strategic and Financial Planning	12,000			12,000
B. ADC Center Staff Support	4,000	10,000	10,000	24,000
C. Project Management	<u>14,000</u>	<u>10,000</u>	<u>8,000</u>	<u>32,000</u>
Subtotals	30,000	20,000	18,000	68,000
SUMMARY				
Component 1	40,000	47,000	47,000	134,000
Component 2	50,000	10,000	15,000	75,000
Component 3	8,000	25,000	25,000	58,000
Component 4	20,500	11,000	9,000	40,500
Support	30,000	20,000	18,000	68,000
TOTALS	<u>148,500</u>	<u>113,000</u>	<u>114,000</u>	<u>375,500</u>

ANNEX I

QUESTIONNAIRES UTILIZED

QUESTIONNAIRE TYPE 1
DONORS
GRANT AVAILABILITY FUNDS

1. Country: Guatemala Honduras El Salvador Costa Rica
2. Institution: _____
3. Telephone: _____ 4. Telex: _____ 5. Post. _____
6. Interviewer: Adrian Mageña Hernán Caamaño Edward Harbottle
7. Interviewee: _____
8. Position of Interviewee: _____

COMPUTER PROJECT	INSTRUCTION				FORECASTED TOTAL FOR EXTERNAL INSTRUCTION				
	INT		EXT		88	89	90	91	92
	Y	N	Y	N					
_____	1	2	1	2					
_____	1	2	1	2					
_____	1	2	1	2					
_____	1	2	1	2					
_____	1	2	1	2					
_____	1	2	1	2					
_____	1	2	1	2					
_____	1	2	1	2					
_____	1	2	1	2					
_____	1	2	1	2					
_____	1	2	1	2					
_____	1	2	1	2					

QUESTIONNAIRE TYPE 2
 NATIONAL COMPUTER SCHOOLS
 SURVEY OF COURSES IN MICROCOMPUTER OPERATION

1. Country: Guatemala Honduras El Salvador Costa Rica
2. Institution: _____
3. Telephone: _____ 4. Telex: _____ 5. Post. _____
6. Interviewer: Adrian Mageña Hernán Caamaño Edward Harbottle

7. Interviewee: _____
8. Position of Interviewee: _____
- Advisor Secretary Office worker

9. What is the average number of participants per course: _____

Open courses offered	Code	Duration in hours	Times per year	Price (local currency)
INTRODUCTION	01	_____	_____	_____
MS-DOS	02	_____	_____	_____
WORD STAR	03	_____	_____	_____
WORD PERFECT	04	_____	_____	_____
LOTUS 1 2 3	05	_____	_____	_____
SMART	06	_____	_____	_____
DBASE III	07	_____	_____	_____
SPJ	08	_____	_____	_____
ADMIN. PACKAGE	09	_____	_____	_____
_____	—	_____	_____	_____
_____	—	_____	_____	_____

11. Number of courses offered this year: _____

QUESTIONNAIRE TYPE 3
PRIVATE INSTITUTIONS - OBJECTIVE POPULATION

1. Country:

Guatemala	Honduras	El Salvador	Costa Rica
-----------	----------	-------------	------------
2. Institution: _____
3. Telephone: _____ 4. Telex: _____ 5. Post. _____
6. Number of Employees: _____
7. Interviewer:

Adrian Mageña	Hernán Caamaño	Edward Harbottle
---------------	----------------	------------------
8. Interviewee: _____
9. Position of Interviewee: _____
10. Does your organization have computerized information systems or are you thinking of installing them in the future?

Y
N (end of interview)
11. What type of computer(s) do you actually possess?

1. Main frame	Y	N	NONE
2. Mini computer	Y	N	NONE
3. Micro IBM or compatible	Y	N	NONE
4. Other brand of micro-computer	Y	N	NONE
5. None	Y	N	NONE
12. What type of computers are you going to acquire? (You can answer more than one.)

1. Main frame	Y	N	NONE
2. Mini computer	Y	N	NONE
3. Micro IBM or compatible	Y	N	NONE
4. Other brand of micro-computer	Y	N	NONE

13. Which of the following programs do you actually use or are you considering using? If currently using it, what is the brand?

TYPE OF PROGRAM	BRAND	# OF PERSONS TO TRAIN	INTERNAL COURSES?
Word Processing			Y N
Data Base			Y N
Spread Sheet			Y N
Project Management			Y N
Graphics			Y N
Statistics Packages			Y N
High Level Languages			Y N
Others			Y N

14. How many persons will you be able to train in the programs you have or are thinking of acquiring? (Put the answers in the third column of question 13.)

15. Will you be giving courses internally using your personnel as trainers?

Y
N (skip to question 19)

16. For which of the packages mentioned in question 13 does your organization offer internal courses? (Put the answers in the fourth column of question 13.)

17. What is the maximum time that a key person in your organization would be able to be absent in order to take a course?

of Days _____

18. Does your company prefer employees to take computer related courses outside the organization?

Y
N (skip to question 22)

19. How much money do you feel it would be possible to spend per year for this type of training over the next 3 years? _____

20. Assuming the existence of a beneficial one-week course for an official from your organization, what is the maximum amount your organization would be willing to spend (in dollars), including matriculation, materials, accomodations and transportation for a course in Costa Rica?

\$_____

21. Would you like to receive details about the information systems that the ADC has developed?

Y
N

22. What topics would you like to receive information about?

1. Accounting	Y	N
2. Financial Analysis	Y	N
3. Inventory	Y	N
4. Personal Systems	Y	N
5. Investigation	Y	N
6. Other _____		

ANNEX 2

TENTATIVE LIST OF EQUIPMENT FOR THE TRAINING CENTER

Quantity	Description
4	CPU IBM-AT compatible, with 286 processor and 1.2 Megabyte RAM, Hard disk of 20 Megabytes.
4	12" Color monitors
4	EGA Graphics cards
4	Epson FX-286E Dot matrix printers
2	500-watt UPS's