

**EVALUATION OF THE EXPERIENCE  
OF THE  
CENTROS DE DESARROLLO  
EMPRESARIAL:  
Lessons Learned from  
CDE Rafaela-Esperanza in Argentina**

**and**

**EVALUATION TOOLKIT**

**Nexus Associates, Inc.**

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**Advisory Group for Small and Medium Enterprise (SDS/SME)**

**Sustainable Development Department**

**Inter-American Development Bank**

## FOREWORD

There has been a renewed focus on Business Development Services (BDS) in the international development community during the latter half of the 1990s. The Committee of Donor Agencies for Small Enterprise Development released preliminary guidelines for donor-funded interventions in 1998, and there has been a series of international conferences on the theme. The Bank organized an international BDS conference at Rio de Janeiro in March 1999.

During the 1990s, the IDB Group approved as much as 76 projects that fall under BDS category, many of which were MIF-funded (see IDB Group Support for Small and Medium Enterprise: Strategy and Activities 1990-1999). Among them, Enterprise Development Centers (EDCs) deserve a special attention because not only it has been replicated in a various countries but also its central idea of intermediating demand and supply of BDS has been shared by a number of other projects. It is indeed a key aspect that distinguishes the new generation of BDS from traditional supply-driven training projects.

SDS/SME undertook an evaluation of EDC Rafaela-Esperanza in Argentina to analyze the issues raised in BDS projects in general. On the one hand, there was a lack of comprehensive evaluation of this type. On the other hand, when evaluation was done, especially with focus on impact, it was difficult to extract practical lessons and tools that could be used for improving the design, supervision and management of the project. We prepared this evaluation report and accompanying evaluation toolkit with an idea of making them a good management tool.

We hope that the documents be useful in designing and monitoring BDS-related projects.

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Sustainable Development Department

# **Evaluation of the Experience of the Centros De Desarrollo Empresarial**

## **Lessons learned from CDE Rafaela-Esperanza in Argentina**

Prepared for:

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## 1 Executive Summary

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The Multilateral Investment Fund (MIF) was established in 1993 as a special fund administered by the Inter-American Development Bank (IDB) to accelerate private sector development and help improve the climate for private investment in Latin America and the Caribbean. One of the objectives of the MIF is to broaden the participation of smaller enterprises in the regional economy and improve their competitiveness in order to meet the challenges of increased globalization.

Over the past few years, IDB/MIF has provided financial support to various private, not-for-profit business development organizations in Argentina, Colombia, Costa Rica and El Salvador to help meet the diverse needs of small and medium-sized enterprises (SMEs).<sup>1</sup> While differences among these organizations exist, all are intended to improve the performance of participating companies as well as develop a thriving market for business consulting services.

The IDB/MIF is interested in learning more about the performance of these programs. This concern stems from both pressure to ensure that monies are well spent and a desire to strengthen programs to better meet the needs of SMEs in the future. To this end, IDB/MIF asked Nexus Associates, Inc. – an economics and management consulting firm that specializes in performance measurement and program evaluation – to conduct an evaluation of one center – the Enterprise Development Center (*Centro de Desarrollo Empresarial*) in Rafaela, Argentina.

This report presents the results of that evaluation. Based on a review of program data, results of two surveys, and two in-depth case studies, the principal findings of the evaluation can be summarized as follows:

- The EDC Rafaela-Esperanza has reached a significant percentage of the target population, providing a mix of services in direct response to expressed interest by SMEs in the region.
- Companies are satisfied with the services provided by the EDC Rafaela-Esperanza and, more importantly, have benefited from them.
- The EDC Rafaela-Esperanza has contributed to an expansion in the market for consulting services in the region.
- The EDC Rafaela-Esperanza has used available human and financial resources efficiently, but will need to modify its strategy to achieve financial self-sufficiency.

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<sup>1</sup> There are currently ten Enterprise Development Centers in operation with IDB/MIF support. These include one in Costa Rica, one in El Salvador, five in Colombia (Santa Fe de Bogota, Medellin, Cali, Barranquilla, and Bucaramanga) and three in Argentina (Rafaela, San Rafael and Mar del Plata).



There are several steps that the EDC Rafaela-Esperanza should consider taking to strengthen the organization. These can be grouped under three headings: target market, service mix, and operations.

- **Target market**

- ➔ **Expand the base of primary customers.** To date, the EDC Rafaela-Esperanza has been dependent on a relatively small number of companies for the bulk of its customer revenues. This places the organization in a vulnerable position; the ability of the EDC Rafaela-Esperanza to achieve its financial objectives is contingent on these companies continuing to purchase services. The center should take steps to diversify its customer base, developing solid relationships with other companies that have the potential to become stable and significant customers. This may entail having to extend operations outside of the current region. If it elects to do so, the organization should identify areas with a high concentration of larger manufacturing firms that are likely to purchase services from the EDC Rafaela-Esperanza. A detailed analysis of the market should be conducted prior to any expansion.
- ➔ **Focus greater effort on working with preferred customers.** The EDC Rafaela-Esperanza should continually consider ways to achieve greater impacts – higher income in the region through rising productivity and expanded sales – with *limited* resources. This will entail allocating resources to efforts that yield the greatest returns consistent with its broader mission. The EDC Rafaela-Esperanza needs to focus efforts on working with companies that have the potential to succeed based on their commitment to increased productivity and growth. Greater resources should be allocated to intensive work with these preferred customers with an emphasis on implementation.

- **Service mix**

- ➔ **Provide performance assessments.** The EDC Rafaela-Esperanza should develop an internal capacity to undertake assessments of individual companies in the region. Information gained through this process should guide the organization's interactions with particular firms as well as provide a foundation for the development of broad programs. Assessment tools should be based on objective data and, where possible, include national and international benchmarks. These tools should be designed to highlight the particular aspects of the business that merit improvement and motivate change by demonstrating the potential returns on various investments. The ability to undertake objective assessments should become a distinctive element of the EDC Rafaela-Esperanza's approach that is well recognized in the market.
- ➔ **Continue to focus on helping companies increase productivity, but also expand services related to strategic planning, market research and product development.** The importance of being able to make products better, faster and cheaper will intensify. This will generate an even greater need for the types of services that the EDC Rafaela-Esperanza is already offering, particularly those related to order fulfillment. However, based on analysis of important global trends, sustained profitability will increasingly be a function of the degree to which companies are distinctive, providing the right products in



the right markets. To this end, the EDC Rafaela-Esperanza should expand and/or develop new services related to strategic planning, market research and product development.

- **Place greater emphasis on one-on-one projects.** Projects with individual companies have been shown to yield greater impacts for companies, while also contributing higher margins for the organization. The EDC Rafaela-Esperanza should increase the number of one-on-one projects, focusing on the specific needs of particular companies. This will require extensive functional as well as industry expertise.

- **Operations**

- **Strike an appropriate balance between the use of internal staff and outside consultants to deliver services to SMEs.** The use of outside consultants has strengths and weaknesses. Intensive use of outside consultants greatly expands the range of expertise available to SMEs in the region and is central to one aspect of the organization's mission. However, the use of outside consultants comes with a price. The EDC Rafaela-Esperanza needs to pay for these services (which include profit), reducing its net earned revenues – a serious issue in the face of declining donor support. In addition, the use of outside consultants makes it more difficult to absorb the lessons of projects and build long-term customer relationships. The EDC Rafaela-Esperanza should offer certain services directly to SMEs using its own internal staff. It will need to decide which services should be offered directly and build internal capabilities accordingly. This decision should be informed by knowledge of what other, mainly private consultants, bring to the market. The EDC Rafaela-Esperanza should not duplicate services already offered by the private sector at an acceptable level of quality.
- **Monitor performance based on well-defined indicators of efficiency and effectiveness.** The report presents a great deal of data with respect to various performance indicators. The staff of the EDC Rafaela-Esperanza should review the report and decide which indicators it believes are most appropriate for the organization. Where possible, indicators should be standardized across all centers in Argentina and other similar centers in Latin America. While the EDC Rafaela-Esperanza currently collects most of the data required to calculate suggested performance indicators, staff (including coordinators) should be required to record the time devoted to core business processes as well as individual projects. Periodic reports should be prepared and reviewed with staff, calling attention to actions needed to improve performance on key dimensions, including effectiveness, outreach, operating efficiency and financial performance.
- **Develop alternative long-term funding sources.** The EDC Rafaela-Esperanza may decide that efforts to become entirely financially self-sufficient are subverting the basic mission of the organization. The justification for continued subsidies hinges on a determination of whether the effective demand for services at prices allowing for full cost recovery is below the level considered optimal from a social perspective. In this regard, SMEs may be unwilling to hire outside consultants at prevailing market prices due to



imperfect information. Moreover, even in a world characterized by perfect information and individually maximizing behavior, the level of investment in consulting services by SMEs at prevailing market prices may still be deficient from a social perspective due to externalities and equity considerations. If the organization decides that continued subsidies are required, it will need to take steps to secure long-term funding to help defray its structural operating deficits, particularly as IDB/MIF funding is phased out. It should begin to develop a strategy to secure ongoing funding from business groups, philanthropic foundations, multilateral organizations, or government agencies as soon as possible.

## 2 Introduction

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The Multilateral Investment Fund (MIF) was established in 1993 as a special fund administered by the Inter-American Development Bank (IDB) to accelerate private sector development and help improve the climate for private investment in Latin America and the Caribbean. One of the objectives of the MIF is to broaden the participation of smaller enterprises in the regional economy and improve their competitiveness in order to meet the challenges of increased globalization.

Over the past few years, IDB/MIF has provided financial support to various private, not-for-profit business development organizations in Argentina, Colombia, Costa Rica and El Salvador to help meet the diverse needs of small and medium-sized enterprises (SMEs).<sup>2</sup> While differences among these organizations exist, all are intended to improve the performance of participating companies as well as develop a thriving market for business consulting services.

The IDB/MIF is interested in learning more about the performance of these programs. This concern stems from both pressure to ensure that monies are well spent and a desire to strengthen programs to better meet the needs of SMEs in the future. To this end, IDB/MIF asked Nexus Associates, Inc. – an economics and management consulting firm that specializes in performance measurement and program evaluation – to conduct an evaluation of one center – the Business Development Center (*Centro de Desarrollo Empresarial*) in Rafaela, Argentina. The study has two purposes: to document the results of the EDC Rafaela-Esperanza experience and to develop an evaluation methodology that can be replicated within other similar programs in Latin America and elsewhere.

The report address a series of questions raised by IDB/MIF concerning this and similar programs:

- To what extent has the EDC Rafaela-Esperanza been able to reach its target population?
- What types of services has the EDC Rafaela-Esperanza provided to companies? Why are companies interested in these services? Are companies satisfied with the services that they have received from the EDC Rafaela-Esperanza and associated consultants?
- Have companies benefited from these services? What types of services lead to the greatest impacts? Why?
- Has the EDC Rafaela-Esperanza contributed to an expansion in the market for consulting services in the region? What role has the EDC Rafaela-Esperanza played with respect to the strategy and operation of consultants?
- Has the EDC Rafaela-Esperanza used available human and financial resources efficiently?
- How effective has the EDC Rafaela-Esperanza been in achieving financial self-sufficiency?

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<sup>2</sup> There are currently ten Enterprise Development Centers in operation with IDB/MIF support. These include one in Costa Rica, one in El Salvador, five in Colombia (Santa Fe de Bogotá, Medellín, Cali, Barranquilla, and Bucaramanga) and three in Argentina (Rafaela, San Rafael and Mar del Plata).



- What steps should the EDC Rafaela-Esperanza take to improve its operations and place the organization in a better position to fulfill its mission?

The findings, conclusions and recommendations offered in this report are based on the following:

- Review of the original IDB/MIF Project Memorandum and other documents;
- Discussions with program staff and other stakeholders;
- Mail surveys of clients and consultants that have participated in the program;
- In-depth case studies of two exemplary companies;
- The author's prior extensive experience in working with similar types of programs.

Following this introduction, Section 3 presents a framework for the evaluation, highlighting the need to assess program effectiveness, efficiency and financial sustainability. Section 4 provides an overview of the EDC Rafaela-Esperanza, focusing on its mission and objectives, key operating principles, organizational structure and staffing, service mix, and client base. Sections 5 and 6 discuss the effectiveness of the organization in terms of improving the performance of SMEs and strengthening the market for business development services (BDS), respectively. Section 7 discusses the operational efficiency of the organization before turning to a discussion of the financial sustainability of the EDC Rafaela-Esperanza in Section 8. The principal conclusions of the evaluation are presented in the final section of the report.

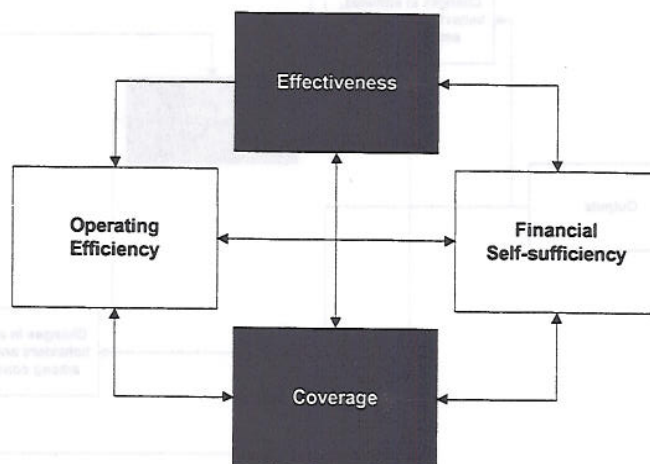
The report includes three appendices. Appendix A presents two case studies of exemplary companies with which the EDC Rafaela-Esperanza has worked over the past three years. Appendix B discusses the implications for other programs supported by IDB/MIF. Finally, Appendix C presents the two survey questionnaires used in the evaluation, along with forms used to collect internal operating data.



### 3 Evaluation Framework

Appropriate measurement systems need to be an integral part of the management process within all organizations. Figure 1 presents a framework for evaluating the performance of the EDC Rafaela-Esperanza, focusing on four strategic objectives: operating efficiency, financial self-sufficiency, internal operating efficiency, and effectiveness.<sup>3</sup>

Figure 1. Evaluation Framework



Like all other organizations, the EDC Rafaela-Esperanza needs to be concerned with its financial health, taking steps to make sure that revenues are sufficient to cover total variable and fixed costs. It also needs to ensure that its internal processes are efficient, minimizing waste and taking the maximum advantage of available resources, particularly staff time. To this end, the evaluation is designed to assess the operating efficiency and financial performance of the organization.

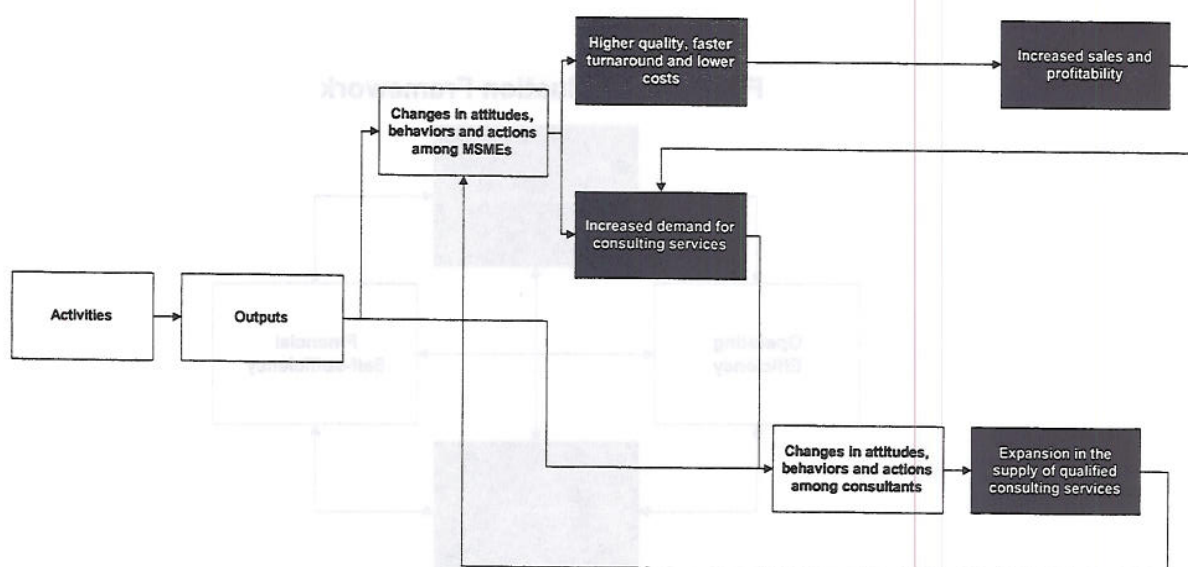
These two aspects of the framework deal with internal issues. However, they do not address the central mission of the EDC Rafaela-Esperanza. The organization was established to strengthen the market for business development services in the region and help SMEs improve their competitiveness. As such, the evaluation is also designed to assess the degree to which the organization has reached companies in the target population, resulting in improved performance and growth in the market for BDS services.

The twin objectives of improved SME competitiveness and a stronger market for BDS services can be considered in more detail using what is known as a program logic model. A program logic model relates activities to desired outcomes. It provides a succinct statement of what the program is trying to accomplish and how it will accomplish it, detailing specific *causal*

<sup>3</sup> This framework can be applied to all EDCs and similar programs. The evaluation framework is detailed in a companion report – “Enterprise Development Center Evaluation Toolkit.”

mechanisms. Figure 2 presents a program logic model for the EDC Rafaela-Esperanza based on a review of the original Project Memorandum, written reports and discussions with staff of the EDC Rafaela-Esperanza and IDB/MIF.

**Figure 2. Basic Program Logic Model**



The EDC Rafaela-Esperanza undertakes *activities* to help SMEs define their needs, determine an appropriate course of action, identify qualified consultants, negotiate contracts with external consultants, oversee services delivered by consultants through different programs and/or projects, and pay for consultant services. In regard to the latter, the EDC Rafaela-Esperanza subsidizes the cost of service delivery – in general, customer-paid fees do not cover the full cost of services. The principal *outputs* of these activities are new and repeat customers that complete programs/projects provided through the EDC Rafaela-Esperanza.

Participation in these programs is expected to result in changes in attitudes and behavior of SMEs. The most immediate effect is greater demand for services provided by private consultants. As discussed in more detail below, it is also anticipated that companies will take specific actions to modify one or more business processes such as strategic planning, product development, marketing and sales, and order fulfillment as a direct result of their participation in programs/projects provided through the EDC Rafaela-Esperanza. These process changes are expected to yield improved performance in terms of higher quality, faster turnaround time and lower costs. This in turn is expected to result in higher sales and profitability within participating SMEs.

The demand for consulting services is expected to increase as SMEs gain greater experience in using consultants and have the financial wherewithal to retain them. In addition, it is anticipated



that the supply of consultant services in the region will increase as consultants come to recognize the potential of this market.

Specific elements of the program logic model are described in the following sections along with an assessment of the degree to which the EDC Rafaela-Esperanza has been able to achieve stated objectives.

#### 4.1 The EDC Rafaela-Esperanza was established to help boost the competitiveness of small and medium-sized manufacturers in the region.

The EDC Rafaela-Esperanza began operations in May 1997. The center defines its mission as the following: to improve the competitiveness of businesses in the region by developing mechanisms for Enterprise Modernization based on the identification of needs and providing services to satisfy these needs.<sup>5</sup> The center covers an area consisting of the Departments of Castellanos and Las Colonias in Santa Fe Province and the Department of San Juan in Córdoba Province.

The EDC Rafaela-Esperanza operates based on a set of core principles. These can be summarized as follows:

- **Focus on small businesses.** Small firms account for the bulk of enterprises in the region. The original Project Memorandum prepared by IDBMIF noted that small businesses were becoming less competitive in the face of increased globalization and found it difficult to secure consulting services. The document presented an initial assessment of the market in Rafaela-Esperanza. It indicated that there were 2,554 firms operating in the region in 1990, 98 percent of which were classified as small businesses (under 100 employees). Of these, 600 were deemed most likely to demand services ("Nucleo Central").
- **Charge for services as a path to self-sufficiency.** The EDC Rafaela-Esperanza charges companies for most of its services. The importance of having companies pay at least part of the cost of services was recognized in the original Project Memorandum. Customer-paid fees were seen as being central to the ability of the center to become financially self-sufficient. In addition, charging for services was viewed as imposing the kind of market discipline needed to ensure the quality of services.
- **Rely on outside consultants for needed expertise.** At times, the EDC Rafaela-Esperanza staff provide business and technical assistance based on their own expertise; however, the more typical approach is to contract with outside consultants to provide services to one or more companies. Consultants are selected through a competitive bid

<sup>5</sup>The IDBMIF had already approved similar business service center programs in Costa Rica and El Salvador.  
<sup>6</sup>"Mejora la competitividad de las empresas de la región, brindando y vinculando con instrumentos de Modernización Empresarial a partir de la detección de sus necesidades y la provisión de servicios acorde."



## 4 Overview of the EDC Rafaela-Esperanza

In March 1995, the IDB/MIF announced approval of \$8,475,000 in non-reimbursable financing to support the creation of a network of enterprise development centers in Argentina to strengthen the competitiveness of small enterprises. The total cost of the four-year program was projected to be roughly \$11.4 million, with local counterpart funding totaling approximately \$2.9 million.<sup>4</sup> The proposed budget was divided among three regional centers based in the cities of Rafaela (Santa Fe province), Mar del Plata (Buenos Aires province), and San Rafael (Mendoza province). As noted above, this evaluation focuses solely on the center in Rafaela.

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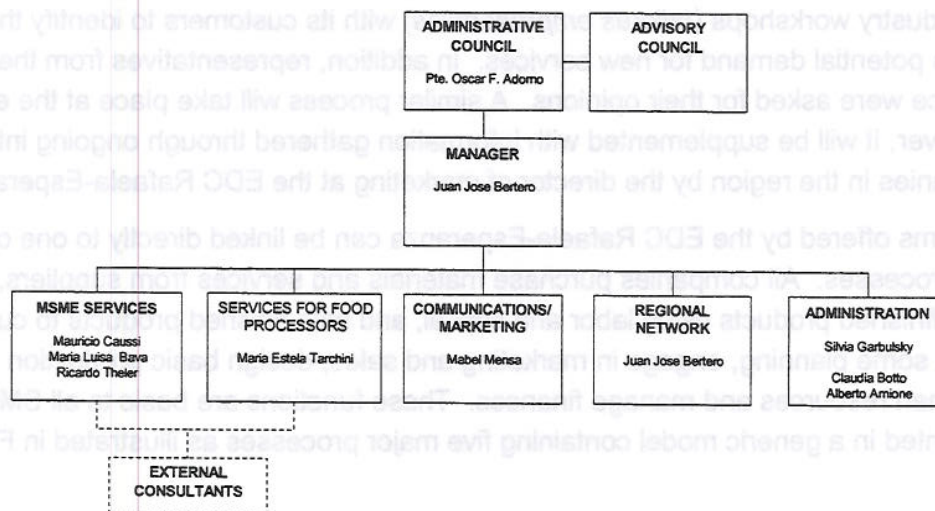


process. The use of outside consultants is seen as a way to avoid the need to build a large staff, avoid potential duplication of services, and promote the growth of private consultants in the region. The reliance on private consultants is central to the basic model adopted by enterprise development centers. The model assumes that the EDC will serve as an intermediary between private consultants and SMEs, brokering services as needed by companies.

- **Partnership with key organization in the region.** From the beginning, the organization has enjoyed the active support of other key institutions in the region, including Centro Comercial e Industrial del Departamento Castellanos; Cámara de Comercio Exterior; Fundación para el Desarrollo Regional; Centro Industria, Comercio, y Afincados del Departamento Las Colonias; Cámara de Industriales Metalúrgicos de Rafaela y el Departamento Castellanos; Asociación de Industriales Metalúrgicos de San Francisco; and Municipalidad de Rafaela.

The center operates with a small staff of approximately eight full and part-time personnel as shown in Figure 3. Staff are responsible for the ongoing management of the center, identification of needs, development of programs and individual projects, and marketing of services. There are two units that are responsible for service delivery: SME Services and Services for Food Processors. The latter focuses exclusively on companies involved in food processing – a major industrial sector in the region.

**Figure 3. Organizational Structure**



As noted above, external consultants contracted by the EDC Rafaela-Esperanza are used to deliver services to businesses in the region according to the plan established by the center. There are two classes of consultants employed by the center. Senior consultants with substantial expertise in required fields are retained on a competitive basis to provide training and/or technical assistance to individual firms or groups of companies. These senior



consultants have primary responsibility for specific projects. In addition, the EDC Rafaela-Esperanza hires junior consultants known as "coordinators" to assist on projects. Working out of the EDC's offices in Rafaela and Esperanza, coordinators are responsible for maintaining contact with companies that are participating in projects, monitoring their progress and providing ongoing assistance. The strategy of using coordinators has two objectives. First, it is seen as a means to increase the supply of qualified consultants in the region over time by providing on-the-job training to individuals who may choose consulting as a career. Second, since coordinators are hired on a project basis, it enables the EDC Rafaela-Esperanza to minimize fixed costs by paring down the number of full-time, permanent employees on the organization's payroll.

#### **4.2 The EDC Rafaela-Esperanza has instituted a series of programs to meet the needs of companies in the region.**

The EDC Rafaela-Esperanza has established a number of initiatives designed to enhance the competitiveness of businesses in the region. Each year, the organization offers a series of programs/projects that are intended to address the needs of companies and improve their performance across different dimension of their business. The decision to undertake particular programs/projects is based on inputs from the business community and the Advisory Council.

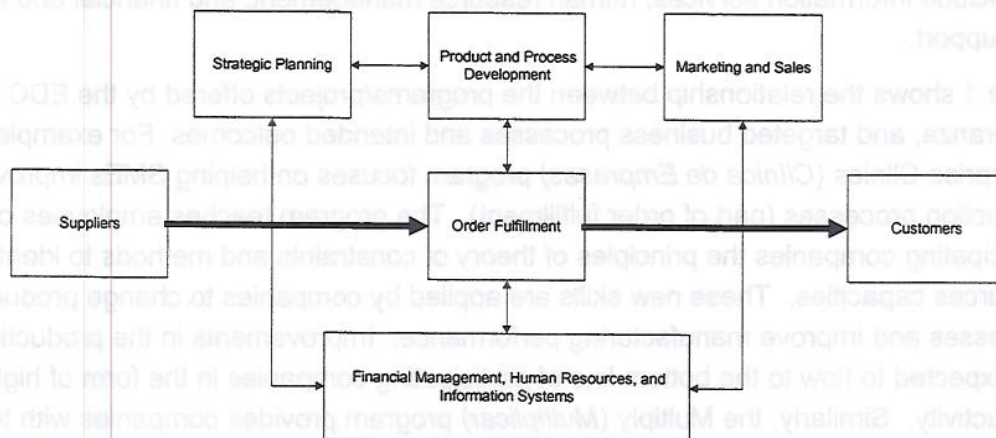
The programs offered in the first year of operation resulted from a need assessment carried out by the Ministry of Production of Santa Fe Province. Some of these programs, such as those dealing with ISO 9000, were based on existing services provided by participating chambers of commerce. In developing the plan for year two, the EDC Rafaela-Esperanza conducted a series of industry workshops (*talleres empresariales*) with its customers to identify their needs and assess potential demand for new services. In addition, representatives from the chambers of commerce were asked for their opinions. A similar process will take place at the end of this year; however, it will be supplemented with information gathered through ongoing interviews with companies in the region by the director of marketing at the EDC Rafaela-Esperanza.

The programs offered by the EDC Rafaela-Esperanza can be linked directly to one or more business processes. All companies purchase materials and services from suppliers, transform inputs into finished products using labor and capital, and ship finished products to customers. All firms do some planning, engage in marketing and sales, design basic production processes, handle human resources and manage finances. These functions are basic to all SMEs and can be represented in a generic model containing five major processes as illustrated in Figure 4.<sup>6</sup>

<sup>6</sup> While the model focuses on manufacturing, it is applicable to companies that provide services as well. Service firms also undertake strategic planning, product development, marketing and sales, order fulfillment, and various support processes.



**Figure 4. Core Business Processes**



Specific elements of these processes can be summarized as follows:<sup>7</sup>

- **Strategic planning.** Firms take steps to determine how they will compete successfully in chosen markets and generate an acceptable return on investment. This includes efforts to formulate business strategies and provide coherent leadership to ensure that strategies are implemented as planned. In developing strategies, companies draw on information obtained from marketing and sales as well as other functions within the enterprise. Changes in strategic plans have implications for many, if not all, other processes within the firm.
- **Product development.** This process centers on activities that firms undertake to develop new products and associated production processes. While most SMEs are producers of intermediate goods and do not have responsibility for product design, they all need to figure out how products can be made within their own plants. Moreover, manufacturing in the region is not limited solely to low-cost commodity producers; there is a significant and growing number of technology-intensive companies that produce unique products of their own design.
- **Marketing and sales.** All companies need to market and sell their products in order to stay in business. This process includes activities undertaken by companies to assess market opportunities, identify customer requirements, position the firm and/or products in the market, and obtain new orders from customers.
- **Order fulfillment.** This process represents the core ongoing activities of the firms with respect to fulfilling orders for products and maintaining customer relations. It includes production planning, procurement and in-bound logistics, production, testing and quality assurance, and after-sales customer service.

<sup>7</sup> The business process model is based on the project team's extensive experience working with manufacturing companies as well as a thorough review of the relevant literature. In particular, we drew on models developed by the European Network for Advanced Performance Studies (ENAPS), European Foundation for Quality Management (EFQM), U.S. Department of Commerce Malcolm Baldrige Quality Award, and the American Productivity and Quality Center (APQC).



- **Support processes.** These processes support all other activities across the firm. They include information services, human resource management, and financial and administrative support.

Table 1 shows the relationship between the programs/projects offered by the EDC Rafaela-Esperanza, and targeted business processes and intended outcomes. For example, the Enterprise Clinics (*Clínica de Empresas*) program focuses on helping SMEs improve their production processes (part of order fulfillment). The program teaches employees of participating companies the principles of theory of constraints and methods to identify critical resources capacities. These new skills are applied by companies to change production processes and improve manufacturing performance. Improvements in the production process are expected to flow to the bottom line of participating companies in the form of higher productivity. Similarly, the Multiply (*Multiplicar*) program provides companies with training and technical assistance related to the safety, orderliness and cleanliness of the workplace. The program consists of seven, two-hour meetings over a five-month period. The program is based on the Japanese technique known as the "Five-S's". These include "seiri" – organization – sorting and weeding out unnecessary items, and classifying and organizing everything else; "seiton" – orderliness – storing all items where they belong so they can be found quickly; "seiso" – cleanliness – keeping tools and equipment clean and in good working order; "seiketsu" – standardized cleanup – maintaining a clean work environment as a standard practice; and "shitsuke" – discipline – adhering to standard procedures and employing good work habits. These are intended to lead to increased productivity.

In contrast, programs such as Commercialization (*Comercialización*), International Fairs (*Feria Internacional*) and Consultancy in Foreign Trade (*Consultoría Externa en Comercio Exterior*) focus on the marketing and sales process by helping companies identify new market opportunities and develop plans to capture greater sales inside and outside Argentina.

Finally, some programs are directed toward changes in attitudes or behavior within firms, rather than specific business outcomes such as increased sales and/or profitability. For example, the EDC Rafaela-Esperanza offers a variety of programs oriented to management of human resources – Formation of Facilitators (*Formación de Facilitadores*) and Formation of Human Resources Developers (*Formación de Formadores en RRHH*) and Organizing Training (*Organizar la Capacitación*) – these are oriented toward general organizational development issues in the SMEs. While they may eventually have an impact on sale and productivity, these programs are not aimed directly at these objectives.



**Table 1. Business Process Focus and Intended Outcomes<sup>8</sup>**

Program	Business Processes					Business Outcomes	
	Business strategy formulation	Marketing and sales	Product development	Order fulfillment	Support services	Increased sales / exports	Increased productivity
Human Resources ( <i>Recursos Humanos</i> )							
Best Practices In Manufacturing II – Food Industry ( <i>Buenas Prácticas en Manufactura II – Alimenticia</i> ):							
Calibration of Inspection, Gauging and Testing Equipment – Food Industry ( <i>Calibración De Equipos De Inspección, Medición Y Ensayo- Alimenticia</i> )							
CDE Information ( <i>CDE Información</i> )							
CDE Subcontracting ( <i>CDE Subcontratación</i> )							
Commercialization – Commercial Plan ( <i>Comercialización – Plan Comercial</i> )							
Commercialization – Salesman ( <i>Comercialización – Vendedor</i> )							
Commercialization – Techniques ( <i>Comercialización – Técnicas</i> )							
Consultancy in Foreign Trade ( <i>Consultoría Externa en Comercio Exterior</i> )							
Course of Technological Auditors ( <i>Curso de Auditores Tecnológicos</i> )							
Electro-Pneumatic Maintenance ( <i>Mantenimiento Electroneumático</i> )							
Enterprise Clinics ( <i>Clínica de Empresas</i> )							
Formation of Facilitators ( <i>Formación de Facilitadores</i> )							
Formation of Human Resources Developers ( <i>Formación de Formadores en R.R.H.H.</i> )							
How Does the Market Evaluate My Products? – Food Industry ( <i>¿Cómo Evalúa el Mercado Mis Productos ? – Alimenticia</i> )							
International Fair ( <i>Feria Internacional</i> )							
International/National Commercial Mission ( <i>Misiones Comerciales Internacionales / Nacionales</i> )							
Management – Sales System ( <i>Gestión Empresarial - Sistema De Cobranzas</i> )							
Mechanical Maintenance ( <i>Mantenimiento Mecánico</i> )							
Multiply I ( <i>Multiplicar I</i> )							
How to Organize Training in My Company ( <i>Cómo Organizo la Capacitación en Mi Empresa</i> )							
Problems in Industrial Processes ( <i>Problemas en los Procesos Industriales</i> )							
Strategic Planning ( <i>Planeamiento Estratégico</i> )							
Team Leadership ( <i>Conducción De Personal</i> )							

<sup>8</sup> The information presented in the table is based on a review of program literature and discussions with the EDC staff.

Program	Business Processes					Business Outcomes	
	Business strategy formulation	Marketing and sales	Product development	Order fulfillment	Support services	Increased sales / exports	Increased productivity
Technical Assistance in ISO 9000 (Asistencia Técnica en ISO 9000)							
Technical Assistance in Quality (Asistencia Técnica en Calidad)							
Technology of Flour and Derivatives – Food Industry (Tecnología de las Harinas y Derivados – Alimenticia)							
Total Productive Maintenance (Mantenimiento Productivo Total)							



## 5 Impact of the EDC Rafaela-Esperanza on Customers

### 5.1 Since its inception the EDC Rafaela-Esperanza has worked with more than 600 companies.

According to data provided by the EDC Rafaela-Esperanza, 616 companies have participated in projects undertaken under the auspices of the EDC Rafaela-Esperanza since its establishment in 1997.<sup>9</sup> This suggests that the organization has reached approximately 20 to 25 percent of the broadly defined target population as identified in the original Project Memorandum.<sup>10</sup>

Consistent with its mission, it appears that the organization has worked primarily with SMEs – more than 90 percent of customers have 100 or fewer employees as shown in Table 2.<sup>11</sup> At the other end of the spectrum, some customers are quite large – five companies have 1000 or more employees according to data maintained by the EDC Rafaela-Esperanza.

Table 2. Breakdown of Customers by Employment Size Class

Number of Employees	Number of companies	Percentage of companies
1 to 5 employees	93	24.6%
6 to 19 employees	92	24.3%
20 to 49 employees	95	25.1%
50 to 100 employees	62	16.4%
More than 100 employees	36	9.5%
Subtotal	<u>378</u>	<u>100.0%</u>
Missing	238	
Total	<u>616</u>	

<sup>9</sup> This covers the period from the beginning of May 1997 through the beginning of September 1999.

<sup>10</sup> It is not clear what percentage of the core market (*nucleo central*) has been reached due to lack of specificity in the original document. More than 60 percent of the businesses in the core market were not classified by industry. In addition, it is important to note that this does not account for turnover among companies in the region since 1990. New companies are established each year, even as others cease operations.

<sup>11</sup> The database maintained by the EDC Rafaela-Esperanza includes a field to record the level of employment within companies served by the program. However, of the 616 companies included in the database, only 378 have employment data. The lack of data for 39 percent of customers makes it difficult to present an accurate profile of the entire customer base.

These companies span a wide range of industries, albeit with some concentration in metalworking, food processing, services and furniture.<sup>12</sup> As shown in Table 3, at least 40 percent of the EDC Rafaela-Esperanza's customer base falls within these four broadly defined sectors. It is also important to point out that the organization also provides services to institutions as well as private consultants in keeping with its mission to improve the delivery of business services to companies in the region. These sectors were not identified in the original Project Memorandum.

**Table 3. Breakdown of Customers by Industry**

Industry Sector	Number of companies	Percentage of companies
Metalworking	106	29.8%
Food processing	71	19.9%
Services	41	11.5%
Furniture	31	8.7%
Institutions	26	7.3%
Consultants	20	5.6%
Auto parts	10	2.8%
Other	51	14.3%
Subtotal	<u>356</u>	<u>100%</u>
Missing	260	
Total	<u>616</u>	

## 5.2 Companies have participated in a variety of projects conducted primarily on a group basis.

As noted above, the 616 customers have participated in approximately 192 projects to date. The pattern of demand reflects the interests of companies in the region as well as the decision of the EDC Rafaela-Esperanza regarding the availability, timing, pricing and promotion of certain types of projects.

The EDC Rafaela-Esperanza classifies projects under three broad categories: innovation and development, improvement and modernization, and globalization. Approximately 40 percent, 45 percent and 15 percent of the 192 projects undertaken to date fall under each of these categories, respectively. These figures are comparable on an engagement basis after adjusting for the number of companies participating in different types of projects. Innovation and

<sup>12</sup> The database maintained by the EDC Rafaela-Esperanza includes a field to record the industry of companies served by the program. However, the database does not contain industry information for 223 customers. In addition, 37 companies are categorized as "varios." Here again, the lack of data for almost 42 percent of customers makes it difficult to present an accurate profile of the entire customer base.



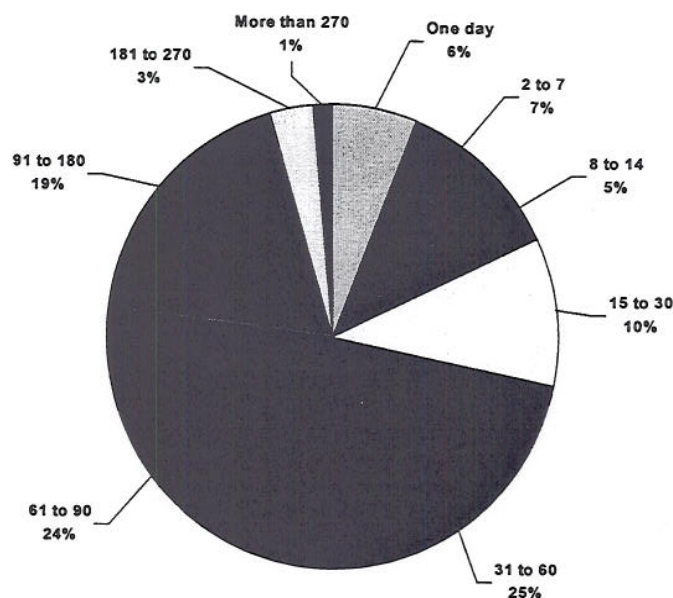
development, improvement and modernization, and globalization, account for 32 percent, 47 percent and 21 percent of customer engagements, respectively.

Certain projects are designed to follow a logical sequence. For example, the EDC Rafaela-Esperanza offers a series of projects related to ISO 9000. These begin with an overview of the standard and continue on through different stages of implementation. Each of these stages is treated as a separate project with companies electing to participate as warranted. The entire ISO 9000 series entails seven different projects.

The vast majority of projects (76 percent) have been conducted on a group basis, typically with five to seven participating companies with each company paying on the order of \$720 to participate in each project.<sup>13</sup> However, some projects have considerably more participants. Roughly 10 percent of projects involve more than 30 companies; according to data provided by the EDC Rafaela-Esperanza, one project – Industrial Alliances (*Salon de Enlaces Industriales*) – had 102 participating companies.

The size of the typical project, as measured by total project expenses, is approximately \$6,600.<sup>14</sup> However, as shown in Figure 5, there is significant variation in project size, ranging from less than \$500 to more than \$40,000. In a similar vein, some projects are completed within one week; others last more than nine months as illustrated in Figure 6. The average is approximately 70 calendar days from the date of project initiation to completion.

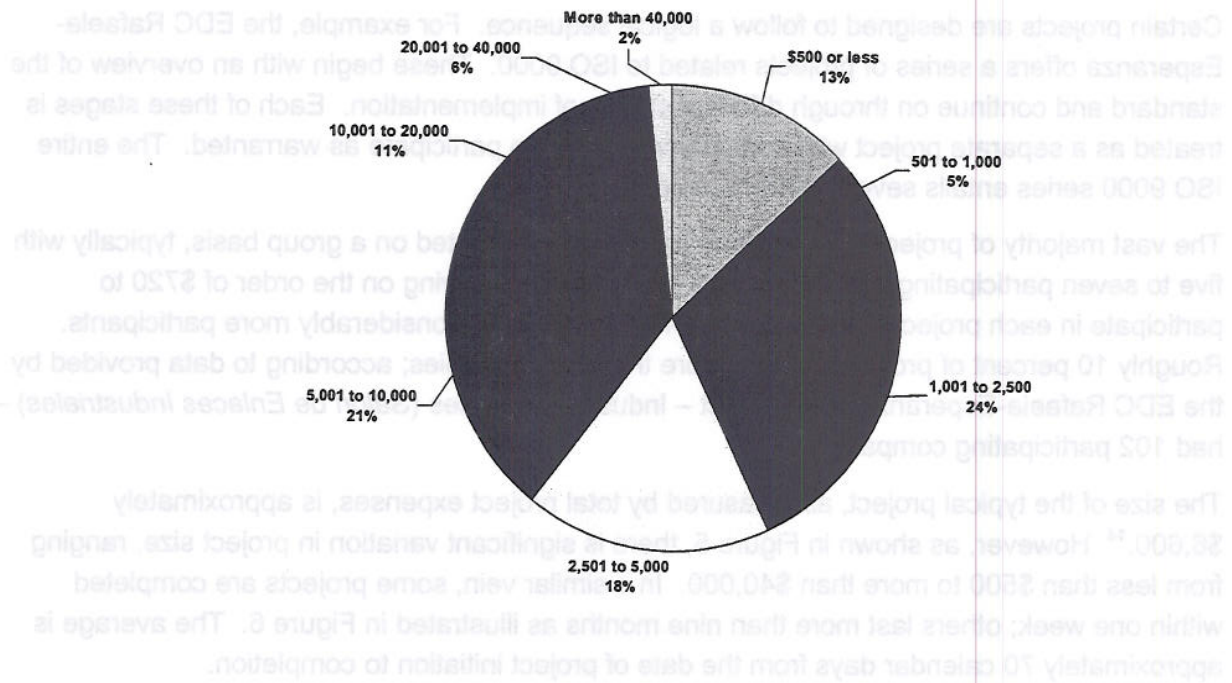
**Figure 5. Project Duration (Calendar Days)**



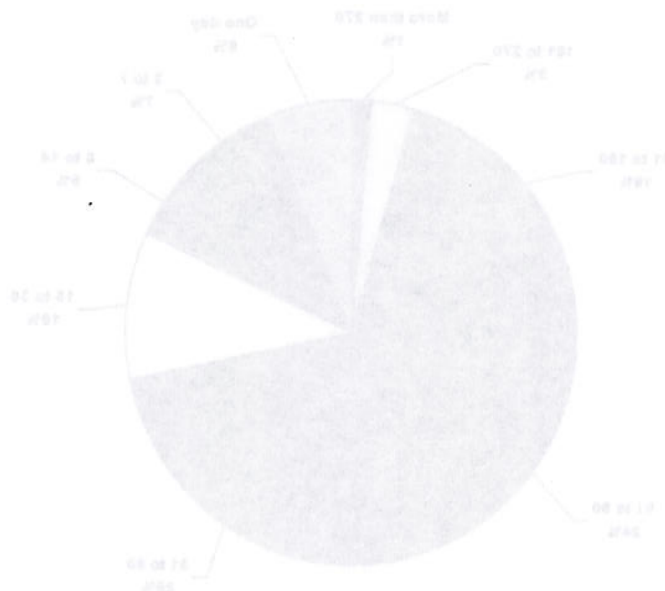
<sup>13</sup> The estimate is based on the amount invoiced. However, approximately six to eight percent of receivables from 1997 and 1998 remain outstanding.

<sup>14</sup> Total project expenses include fees paid to outside consultants and coordinators plus any direct project expenses.

**Figure 6. Project Size (Total Project Expenses)**



**Figure 5. Project Duration (Calendar Days)**



<sup>14</sup> Total project expenses include fees paid to outside consultants and coordinators plus any direct project expenses.  
<sup>15</sup> The estimate is based on the amount invoiced. However, approximately six to eight percent of receivables from 1997 and 1998 remain outstanding.



### 5.3 Customers are satisfied with services provided by the EDC Rafaela-Esperanza.

As shown in Figure 7, customers are generally pleased with the services provided by the EDC Rafaela-Esperanza.<sup>15</sup> Approximately 95 percent of the companies that responded to the survey reported that they were “very satisfied” or “satisfied” with the EDC services. Less than two percent of respondents (three companies) voiced any degree of dissatisfaction.<sup>16</sup>

Figure 7. Client Satisfaction



Client satisfaction is also reflected in the extent to which companies return to the EDC Rafaela-Esperanza for additional services. Roughly 41 percent of customers have participated in more than one project since the inception of the program. In fact, as shown in Figure 8, a significant percentage of customers have called on the organization for a variety of services. Six percent of customers have participated in more than five projects and two percent have participated in more than six projects. One company has participated in 22 different projects over the course of the past two years.

An analysis of the data demonstrates that larger firms are more likely to undertake additional projects than smaller companies.<sup>17</sup> In addition, not surprisingly, the number of projects undertaken by particular companies is also a function of the time that has elapsed since their

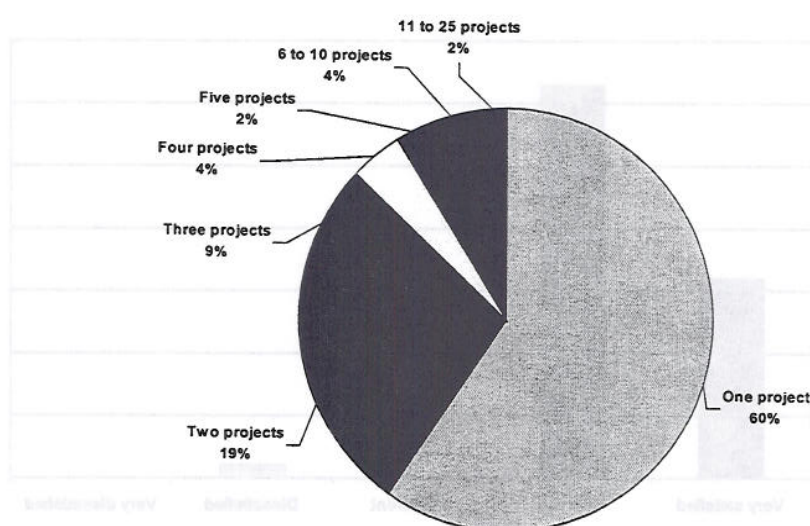
<sup>15</sup> The survey was sent to 395 companies that participated in one or more projects between January 1, 1998 and September 15, 1999. Of these, 203 returned completed surveys for an effective response rate of 51 percent.

<sup>16</sup> Caution should be exercised in extrapolating survey results to the total population of firms served by the EDC Rafaela-Esperanza. For example, it is conceivable that non-respondents are more likely to be dissatisfied with services than companies that took the time to complete the questionnaire. The opposite case may also be possible. There is no reliable way to discern how non-respondents would have answered the question.

<sup>17</sup> The finding is based on a simple ordinary least squares (OLS) regression with the number of projects undertaken by companies as the dependent variable. The explanatory variables included the number of employees and the number of days since the start date of the first project undertaken by companies. Both variables were found to be statistically significant.

first project with the EDC Rafaela-Esperanza. Put another way, it takes a while – somewhere on the order of 200 days – for companies to return to the EDC Rafaela-Esperanza for additional projects. This had implications for the rate of growth of the organization, particularly in the early stages of development. During the first six to nine months of operation, the EDC needed to rely almost entirely on new customers. Thereafter, it was possible to secure follow-on work with existing customers as they completed projects and were ready to move on to new areas. As noted above, a significant percentage of projects take three or more months to complete.<sup>18</sup>

**Figure 8. Percentage of Customers Undertaking One or More Projects**



Finally, roughly 61 percent of respondents to the customer survey indicated that they could not have obtained the services provided by the EDC Rafaela-Esperanza from other organizations. The remaining firms reported that it was possible to obtain similar services elsewhere. This is fairly consistent with responses to another question in the survey. Approximately 30 percent of companies reported that they used consulting services during the past three years without any involvement of the EDC Rafaela-Esperanza. These companies averaged two engagements over the three-year period with an average total expenditure of approximately \$12,600 (median – \$6,000). Those companies that used consultants on their own tended to be larger. The average employment within these firms totaled 182 workers (median – 30). In contrast, those companies that had not used consultants had an average of 31 people on their payroll (median – 15).

<sup>18</sup> The 200-day lead-time between projects may also be related to the stage of development of the organization. As companies gain greater experience working with the EDC Rafaela-Esperanza, the time between projects may shrink. In addition, the EDC Rafaela-Esperanza may want to consider offering short-term projects with tangible, albeit limited, impacts to demonstrate the benefits of participation. This could include, for example, projects that focus on narrow technical problems faced by individual firms.



This finding supports the original motivation for the program. It demonstrates that smaller firms are less likely to use consultants in the absence of services provided by the EDC Rafaela-Esperanza. As a corollary, it also suggests that the EDC Rafaela-Esperanza has been successful in promoting the use of consultants among companies that had no prior experience. This is supported by responses to another question in the survey. Approximately 73 percent of the SMEs that completed the survey responded that their experience with the EDC Rafaela-Esperanza made them more likely to hire consultants in the future.<sup>19</sup>

While the vast majority of companies that responded to the survey were satisfied with the services that they received, some offered suggestions on how these services might be improved in the future. These suggestions tended to fall into two categories. Some called for lower prices, perhaps based on a sliding scale depending on company size. Others indicated that greater emphasis needed to be placed on implementation, geared to the particular conditions within different companies.

#### **5.4 Customers have undertaken needed changes and improved their performance.**

In order to increase their profitability and rate of growth, companies need to change their behavior and/or take specific actions with respect to critical business processes. In this regard, it is important to note that 81 percent of the respondents to the customer survey indicated that they changed their operations as a direct result of the services provided through the EDC Rafaela-Esperanza. Further analysis demonstrates that the probability of a company reporting changes is a function of the nature of services that they received. Significantly, companies that participated in one-on-one projects were more likely to report changes than companies that participated in group projects, *all other things being equal*. The duration of projects and the elapsed time since the first project also increase the probability of companies reporting changes. However, while positively related, neither the size of the company (employment levels), nor the amount invoiced, was found to be statistically significant. The latter can be explained by the fact that the cost of participation is born partly by IDB/MIF.<sup>20</sup> As a result, the customers' ability and/or willingness to pay for services do not affect the nature of services received.

The changes that companies made as a result of the services that they received through the EDC Rafaela-Esperanza were manifest in different processes within the firms. Table 4 shows the percentage of companies that stated that they observed changes in specific processes. Given the types of programs/projects offered by the EDC Rafaela-Esperanza, it is not surprising that most of the changes relate to modifications in the production process (part of order fulfillment). For example, more than half of respondents indicated that they altered processes related to the safety and health of workers. Similarly, 49 percent and 44 percent of respondents reported that they reorganized production and/or changed their quality systems as a result of

<sup>19</sup> Approximately 16 percent of companies that completed the survey responded "no" to this question and 11 percent did not respond.

<sup>20</sup> To date, customer-paid revenues have only covered 76 percent of the variable costs, including consultant fees and direct project expenses.



the services that they received, respectively. A much smaller percentage of respondents reported changes in processes related to marketing, sales, and product development. This finding is consistent with the overall mix of services offered by the EDC Rafaela-Esperanza, which tend to focus on order fulfillment as opposed to these other processes.<sup>21</sup>

**Table 4. Immediate Effects – Business Processes**

<b>Process</b>	<b>% of Respondents Observing Change</b>
<b>Worker safety and health</b>	53%
<b>Organization of production</b>	49%
<b>Quality systems</b>	44%
<b>Production processes</b>	38%
<b>Administrative systems</b>	30%
<b>Formulation of business strategies</b>	24%
<b>Management of human resources</b>	22%
<b>Market research</b>	20%
<b>Sales plan</b>	19%
<b>Purchase of raw materials and parts</b>	18%
<b>After-sales customer service</b>	18%
<b>Product distribution</b>	13%
<b>Advertising and promotion</b>	13%
<b>Product design</b>	10%

In general, companies that responded to the customer survey indicated that the changes made in processes yielded performance gains with respect to improved quality, reduced cost, and faster turnaround as shown in Table 5. The everyday mantra of manufacturing – make it better, faster and cheaper – centers on increasing the efficiency of operations, or put another way, raising productivity. Productivity increases when companies are able to charge premium prices based on distinctive products or services, reduce purchased inputs, and/or reduce the amount of labor required for a given level of output. This can occur through a number of different paths. Efforts by manufacturers to improve quality – reducing defects and minimizing customer rejects – can lead to productivity gains. Similarly, the steps that companies may take to shorten lead time – reducing setup times, reducing machine cycle times, and reorganizing plants for better work flow – can also lead to higher productivity. Companies may also take steps to reduce costs directly by redesigning products for better manufacturability, substituting different materials, changing the ways in which specific jobs are done, or eliminating redundant labor. Again, these actions can boost productivity. Higher productivity drives costs out of the product,

<sup>21</sup> The decision to focus on order fulfillment, including quality control and production processes, was taken by the EDC Rafaela-Esperanza following an assessment of needs. In addition, it should be noted that participation in specific projects is voluntary. Companies express their demand for specific services through participation in specific projects. The relatively high number of companies participating in projects that address issues related to order fulfillment is an expression of the relative demand for services that focus specifically on this process.



enabling companies to compete more aggressively in contested markets. It can also be the source of greater profit, making it possible for companies to earn a higher return on their investment.

**Table 5. Intermediate Outcomes – Improved Performance**

Process	% of Respondents Observing Change
Reduction of defects, rework and customer rejects	39%
Reduction in costs	32%
Reduction in manufacturing lead time or delivery time	29%
Increase in productivity <sup>22</sup>	28%
Compliance with standards and regulations	28%
Expansion in the number of customers	27%
Reduction in absenteeism or accidents	11%
One or more intermediate outcomes listed above	78%

Sixty-eight percent of 203 companies that completed the survey indicated that they improved their competitiveness as a direct result of services provided by the EDC Rafaela-Esperanza.<sup>23</sup>

Roughly 26 percent of respondents stated that their competitiveness was *not* improved; another 5 percent did not respond to this question.

Companies were also asked to indicate how improved competitiveness was reflected in their overall business performance. As summarized in Table 6, of the 203 companies that completed the survey, roughly 45.8 percent indicated that their sales and/or profitability increased as a direct result of the services provided by Rafaela-Esperanza. Slightly more than 10 percent of respondents indicated that services resulted both in higher sales *and* profitability. Roughly 54.2 percent responded that neither their sales nor profitability increased due to the services received.<sup>24</sup> However, some of these companies noted improved competitiveness in terms of enhanced “company image” and the development of new customers. These results need to be considered within the context of the economic crisis facing companies in Argentina during this time frame.

<sup>22</sup> The survey defined productivity as the “volume of production per employee or hour.”

<sup>23</sup> The sentiment that the EDC Rafaela-Esperanza helps companies improve their competitiveness was shared by 98 percent of the consultants that responded to a survey.

<sup>24</sup> These figures compare favorably to other similar centers in the United States. For example, in a survey of 12,000 companies (effective response rate of 75 percent) that received services from centers affiliated with the NIST Manufacturing Extension Partnership (NIST/MEP) between July 1996 and June 1998, approximately 17 percent of respondents reported that their sales increased as result of these services.



**Table 6. Final Benefits – Overall Business Performance**

Increased profitability?	Increased sales?		
	Yes	No	
	Yes	No	
Yes	10.3%	16.3%	26.6%
No	19.2%	54.2%	73.4%
	29.5%	70.5%	100.0%

In an effort to estimate the *magnitude* of the EDC Rafaela-Esperanza's impact on overall business performance, companies were asked to provide data on sales, exports, cost of purchased inputs, payroll and employment in 1998 and 1999. They were then asked to indicate what these values would have been in 1999 in the absence of the EDC Rafaela-Esperanza services. Unfortunately, very few companies were willing to provide this data. Only 21 companies provided all of the required sales data; fewer still – just a handful – provided data on the other requested items.<sup>25</sup>

Together, the 21 companies that reported sales data indicated that the services provided by the EDC Rafaela-Esperanza increased their sales by a total of \$1.14 million with a mean of approximately \$54,000 and a median of \$27,000. Overall, this represented an eight percent gain from the level expected if the companies had *not* received services. The additional sales generated by these companies translate into increased profits of \$57,000, assuming a net profit margin of five percent. The additional profit earned in 1999 represented a 28 percent return on the \$42,000 that these companies invested in services obtained through EDC Rafaela-Esperanza.

Two companies provided sufficient data to calculate a widely used measure of productivity – value added per employee. Value added is equal to sales less the cost of purchased inputs, or equivalently employee compensation plus profit and other returns to capital. In one case, the EDC Rafaela-Esperanza was responsible for boosting labor productivity by \$2,444 per employee, 32 percent above the level expected if the company had *not* received services. In the other case, value added per employee was \$4,646 or 51 percent higher than it would have been in the absence of services provided by Rafaela-Esperanza.

Similarly, another two companies provided data needed to calculate the change in profits in 1999 due to their involvement with the EDC Rafaela-Esperanza.<sup>26</sup> In one case, profits were roughly \$61,100 or 73 percent higher than they otherwise would have been; in the other case, profits were \$59,000 or 20 percent higher. These two cases illustrate an important concept in evaluating the impact of the EDC Rafaela-Esperanza and other similar organizations. As shown

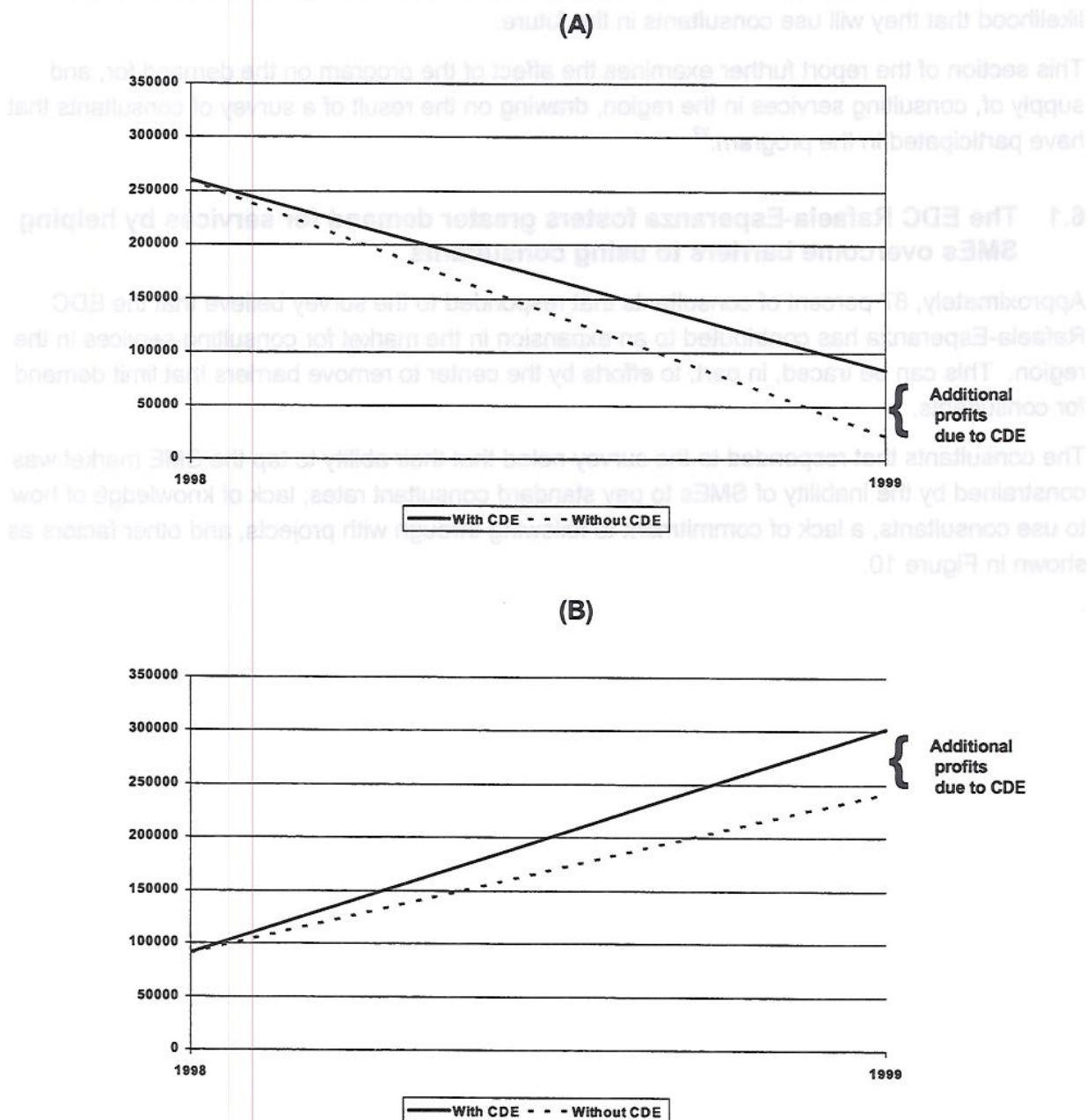
<sup>25</sup> As a result, it is impossible to estimate the return on investment in the overall program from the perspective of EDC Rafaela-Esperanza.

<sup>26</sup> Profits are defined as sales less the salaries, wages and the cost of purchased inputs. This is roughly equivalent to profits before taxes, interest and depreciation.



in Figure 9.A, one of the companies actually experienced a significant decline in profits between 1998 and 1999; however, the decline would have been worse in the absence of services provided by the EDC Rafaela-Esperanza. The other company (Figure 9.B) saw a dramatic increase in profits during the same period, made even greater as a result of the EDC Rafaela-Esperanza. Therefore, it is critical that evaluations try to determine the counterfactual – *what-would-have-been* – rather than rely on simple before-after studies.

**Figure 9. Examples of Impact on Annual Profits**



## **6 Impact of the EDC Rafaela-Esperanza on the Consulting Market**

As noted above, the original Project Memorandum noted that the principal objective of the EDC Rafaela-Esperanza and other centers is to help foster a dynamic market for business services in their respective regions. The discussion in the previous section provided evidence that supports the contention that the program has been successful in spurring demand. Most of the companies that have participated in the program have not used consultants in the past. Moreover, the vast majority indicate that their participation in the program has increased the likelihood that they will use consultants in the future.

This section of the report further examines the affect of the program on the demand for, and supply of, consulting services in the region, drawing on the result of a survey of consultants that have participated in the program.<sup>27</sup>

### **6.1 The EDC Rafaela-Esperanza fosters greater demand for services by helping SMEs overcome barriers to using consultants**

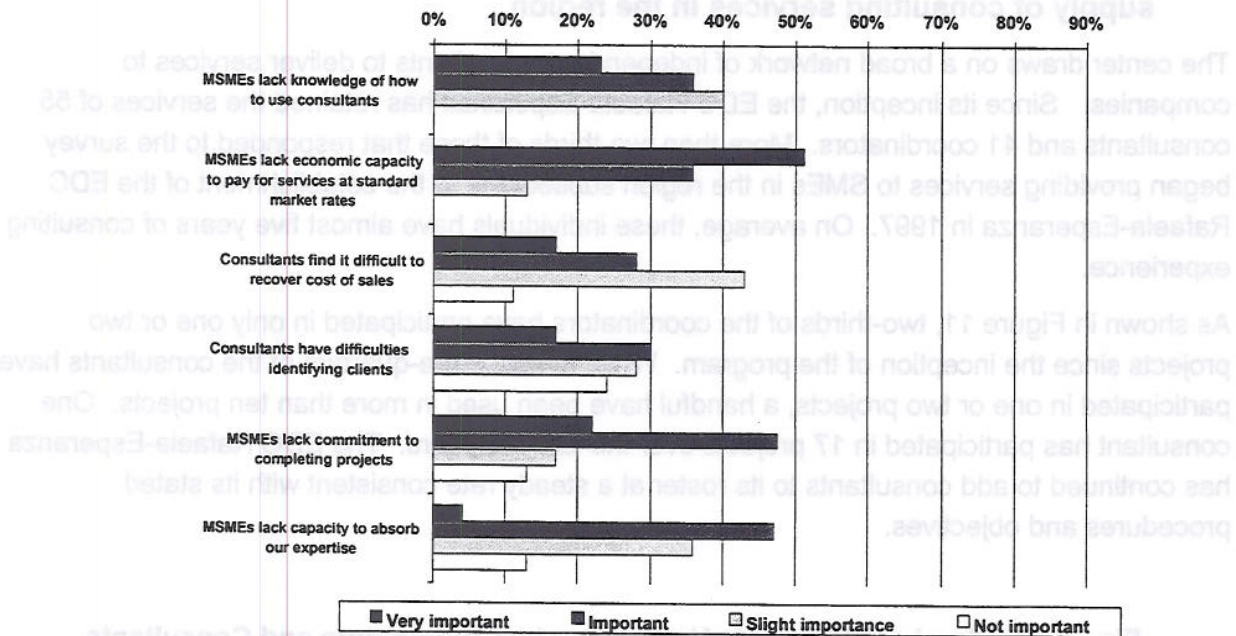
Approximately, 87 percent of consultants that responded to the survey believe that the EDC Rafaela-Esperanza has contributed to an expansion in the market for consulting services in the region. This can be traced, in part, to efforts by the center to remove barriers that limit demand for consultants.

The consultants that responded to the survey noted that their ability to tap the SME market was constrained by the inability of SMEs to pay standard consultant rates, lack of knowledge of how to use consultants, a lack of commitment to following through with projects, and other factors as shown in Figure 10.

<sup>27</sup> The survey was sent out to 71 coordinators and consultants that participated in projects in 1997 and 1998 – 47 returned completed surveys for an effective response rate of 66 percent.



**Figure 10. Barriers to Working with SMEs**



In addition to providing direct financial assistance and negotiating more favorable terms, consultants suggested that the EDC Rafaela-Esperanza plays a direct role in reducing these barriers through other mechanisms as shown in Table 7. Specifically, almost all of the respondents reported that the organization helps SMEs identify their needs, find qualified consultants, and implement recommendations.

**Table 7. Consultants' Perceptions of the Role of the EDC Rafaela-Esperanza**

Process	% of Respondents
Develops a better understanding of SME needs	96%
Finds consultants with necessary experience	96%
Help companies understand and implement recommendations	87%
Works more effectively with consultants	76%
Negotiates more favorable terms with consultants	62%

The EDC Rafaela-Esperanza staff and coordinators meet with firms on a regular basis either during project work or through formal workshops. These interactions serve as the primary means to identify needs within the SME community. The staff also assume responsibility for

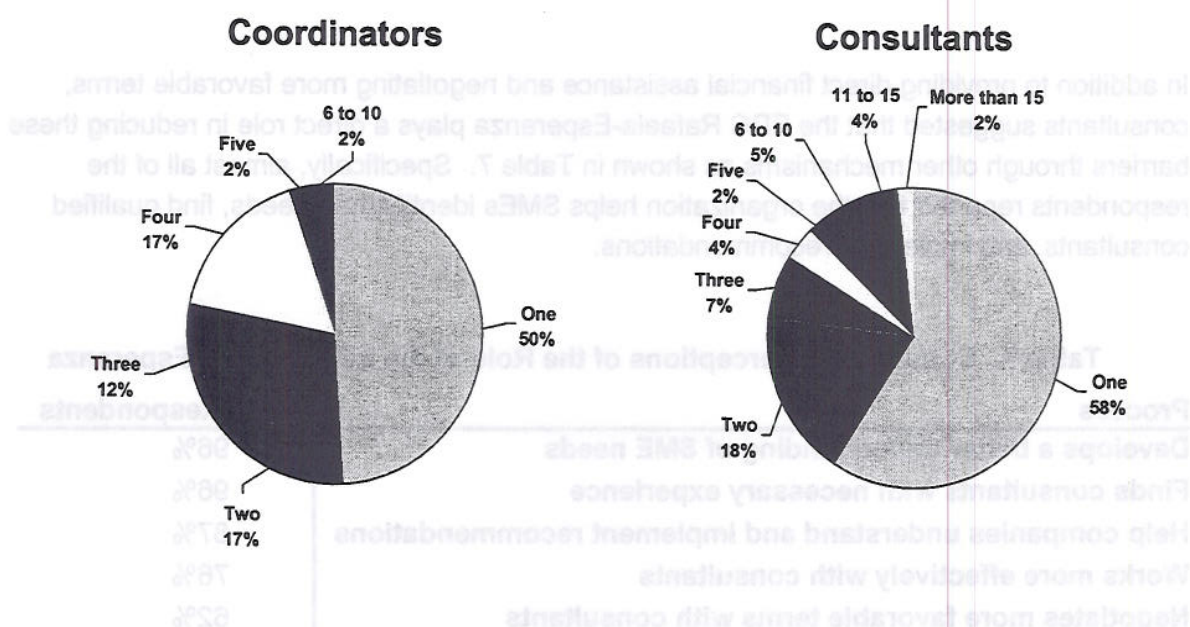
developing terms of reference for specific projects and hiring qualified consultants. In addition, coordinators follow-up with customers to monitor progress and assist in implementation.

## 6.2 The EDC Rafaela-Esperanza has also contributed to an expansion in the supply of consulting services in the region.

The center draws on a broad network of independent consultants to deliver services to companies. Since its inception, the EDC Rafaela-Esperanza has retained the services of 55 consultants and 41 coordinators. More than two-thirds of those that responded to the survey began providing services to SMEs in the region subsequent to the establishment of the EDC Rafaela-Esperanza in 1997. On average, these individuals have almost five years of consulting experience.

As shown in Figure 11, two-thirds of the coordinators have participated in only one or two projects since the inception of the program. While almost three-quarters of the consultants have participated in one or two projects, a handful have been used in more than ten projects. One consultant has participated in 17 projects over the last two years. The EDC Rafaela-Esperanza has continued to add consultants to its roster at a steady rate consistent with its stated procedures and objectives.

**Figure 11. Number of Projects Undertaken by Coordinators and Consultants**



The typical consultant that responded to the survey conducted a total of seven projects in 1998 – approximately five of these projects were with small businesses (less than 100 employees).<sup>29</sup> The volume of business (on a dollar basis) for a typical consultant in 1998 was on the order of

<sup>29</sup> In the following discussion, both consultants and coordinators are referred to as consultants.



\$84,000.<sup>30</sup> The EDC Rafaela-Esperanza accounted for 45 percent of the total volume of business of the consultants that responded to the survey. Some consultants – primarily coordinators – earn their livelihood working with the EDC Rafaela-Esperanza.

Consultants were asked to indicate whether they had experienced specific benefits from working with the EDC Rafaela-Esperanza. As Table 8 shows, there is great deal of variation in how consultants see the benefits of the program. Roughly 94 percent of the consultants that responded to the survey reported one or more of the benefits listed in the table. Respondents most frequently cited the EDC Rafaela-Esperanza as a valuable source of leads and a contributor to the expansion in the market for their services. Approximately 53 percent reported that the EDC Rafaela-Esperanza has led to an increase in their total volume of sales.

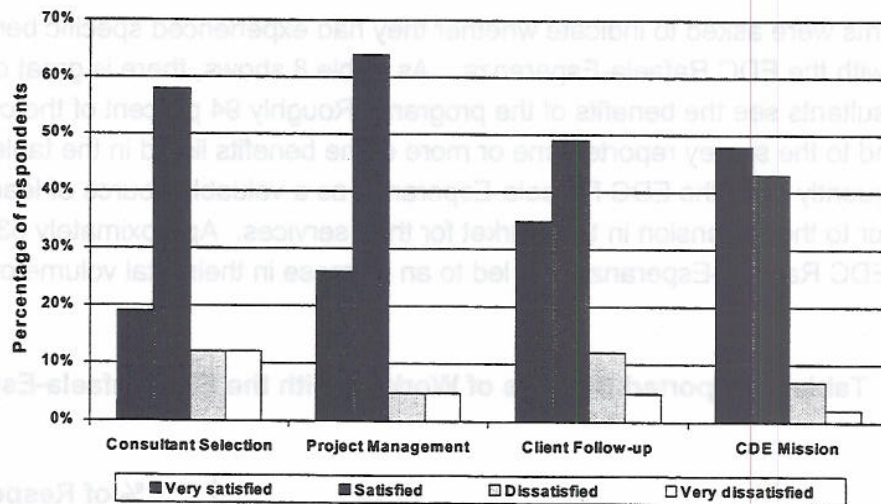
**Table 8. Reported Benefits of Working with the EDC Rafaela-Esperanza**

<b>Process</b>	<b>% of Respondents</b>
Important source of potential clients	32%
Expansion of services to other markets	27%
Shared responsibility for determining project strategy	25%
Reduction in the risk of non-payment	23%
Sharpened definition of project goals	21%
Improved efficiency in service delivery	17%
More rapid payment for services	15%
Improved relationship with clients	14%
Reduction in marketing costs	10%
One or more of the benefits listed above	94%

These consultants were asked to summarize their relationship with the EDC Rafaela-Esperanza as either collaborative or competitive. While potential for competition may exist, fully 93 percent of respondents see their relationship with the EDC Rafaela-Esperanza as collaborative. This sentiment is echoed in the generally high degree of satisfaction that consultants have with the performance of the EDC Rafaela-Esperanza as shown in Figure 12. Still, some consultants express dissatisfaction, particularly with respect to the consultant selection process. It is important to recognize that the EDC Rafaela-Esperanza represents the interest of their customers – small businesses – and that some tension with consultants may be intrinsic to the EDC Rafaela-Esperanza mission. It is the organization's responsibility to help companies qualify and select consultants, and ensure that they meet their needs within the specified time and budget.

<sup>30</sup> The overall size of the consulting market in the region cannot be estimated based on the results of the survey. This would entail surveying either all companies in the region or a random sample of firms – including companies that have not received services from the EDC Rafaela-Esperanza – and asking them to provide the total value of consulting contracts in a specific period of time (e.g., calendar year 1999).

**Figure 12. Consultant Satisfaction**



### 6.3 There is some question about the sustainability of the market in the absence of the EDC Rafaela-Esperanza.

As noted above, approximately 73 percent of the SMEs that completed the survey responded that their experience with the EDC Rafaela-Esperanza made them more likely to hire consultants in the future. Moreover, more than 90 percent of the consultants that responded to the survey indicated that they plan on continuing to offer services to SMEs in the region in the future.

However, the vast majority of consultants that responded to the survey believe that the EDC Rafaela-Esperanza needs to play a continuing role in the development of the market for consulting services. Two-thirds of respondents suggested that demand for services by SMEs would decline in the future if the organization did not continue to exist. While the survey did not ask consultants to explain this conjecture, it may be due to their assessment that certain barriers to the use of private consultants will persist. SMEs may continue to find it difficult to define their needs, find qualified consultants, and pay the full price for services in the absence of the EDC Rafaela-Esperanza. This is likely to be particularly true for companies that have yet to participate in programs offered by the organization. Moreover, since new companies are being established continually in the region, there will always be a pool of SMEs that lack direct experience in working with consultants.



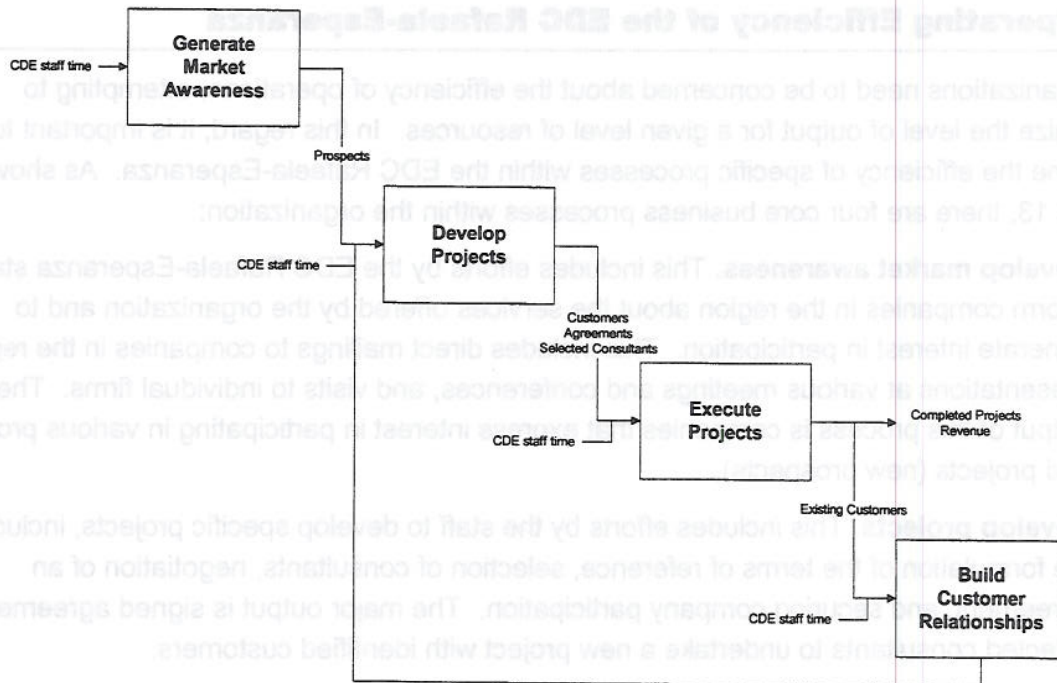
## 7 Operating Efficiency of the EDC Rafaela-Esperanza

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All organizations need to be concerned about the efficiency of operations, attempting to maximize the level of output for a given level of resources. In this regard, it is important to examine the efficiency of specific processes within the EDC Rafaela-Esperanza. As shown in Figure 13, there are four core business processes within the organization:

- **Develop market awareness.** This includes efforts by the EDC Rafaela-Esperanza staff to inform companies in the region about the services offered by the organization and to generate interest in participation. This includes direct mailings to companies in the region, presentations at various meetings and conferences, and visits to individual firms. The major output of this process is companies that express interest in participating in various programs and projects (new prospects).
- **Develop projects.** This includes efforts by the staff to develop specific projects, including the formulation of the terms of reference, selection of consultants, negotiation of an agreement, and securing company participation. The major output is signed agreements for selected consultants to undertake a new project with identified customers.
- **Execute projects.** This includes all efforts to fulfill the scope of work outlined in the terms of reference. As noted above, the primary resources used in this process are outside consultants, including coordinators. Coordinators are responsible for monitoring progress and assisting with implementation. The major outputs are completed projects and earned revenue.
- **Build company relationships.** This includes efforts by staff to maintain contacts with companies. Staff and coordinators meet with companies as a routine part of project work. In addition, the EDC Rafaela-Esperanza sponsors or participates in various events with members of the SME community. Finally, the director of marketing at the center has the responsibility for interviewing customers to gauge their satisfaction with existing services and potential demand for new programs/projects. The major output is expressions of interest in undertaking additional projects.

**Figure 13. Model of Core Business Processes**



Given the description of these processes, it is possible to develop a set of indicators that can be used to gauge the performance of the EDC Rafaela-Esperanza (and other similar organizations). Table 9 lists these suggested indicators along with the EDC Rafaela-Esperanza's performance in the third quarter of 1999. Most of the indicators relate process outputs to inputs (particularly staff resources) to gauge the efficiency of internal processes and are normalized to facilitate comparison.

In this regard, for comparative purposes, the table also provides the median value for the same indicators for roughly 40 similar centers that are part of the NIST Manufacturing Extension Partnership (MEP) in the United States. To enable meaningful comparisons, coordinators are defined as the EDC field staff. As noted above, coordinators are responsible for maintaining contact with companies that are participating in projects, monitoring their progress and providing ongoing assistance. Treated this way, field staff account for roughly 60 percent of total staff on a full-time equivalent basis at the EDC Rafaela-Esperanza. This is comparable to the 60 percent figure for typical centers within the NIST MEP.



**Table 9. Performance Indicators in Third Quarter 1999**

Indicator	EDC Rafaela- Esperanza	Median value for NIST MEP
<b>Overall performance</b>		
<b>Percentage of staff available hours charged to projects</b> Measures the degree to which staff time is committed to projects. A center's performance on this measure provides insight into the center's allocation of staff resources among its different business processes. This is a basic measure of operating efficiency and is also an indicator of a center's capacity to generate revenue.	64.8%	13.9%
<b>Operating cost per project hour</b> Measures the cost of providing one hour of project service. Lowering operating costs or increasing time spent per project will decrease the value of this measure. Conversely, charging few hours to customer projects or having relatively high operating costs will drive this measure up. The value of this measure is equivalent to the hourly rate that a center would need to charge customers in order to cover its operating expenses. Centers that receive in-kind contributions of large ticket items (such as rent), which are not included in their total operating costs, will find their values in this measure to be understated.	\$22.70	\$383.70
<b>Percentage of total expenses covered by customer revenues</b> Measures the extent to which client-paid project fees cover total center expenses. Increasing percent of available hours charged to projects and reducing total operating costs per project hour will tend to result in a higher percentage of center expenses covered by project revenues. Note that center expenses here include payments to third-party service providers. If a center pays out more to third-party service providers than it takes in from customers then this measure will be driven lower.	66.0%	23.3%
<b>Market awareness</b>		
<b>Average hours spent developing a new prospect</b> Measures the average number of staff hours needed to develop a new prospect in the current quarter (the lower the number, the better). Performance on this measure indicates the effectiveness of a center's marketing efforts. Less time spent developing prospects means more time can be spent on other center activities, e.g., project work. A center's performance on this measure will be a function of its overall market potential, i.e., density of manufacturing establishments in the service area, as well as the experience and capabilities of its field staff.	8.7	8.7
<b>Marketing expenses per new prospect</b> Measures the average amount of marketing expenses required to develop a new prospect in the current quarter (the lower the number, the better). This measure provides an indication of the effectiveness of a center's marketing expenditures. A center's performance on this measure will likely be affected by lags that can occur between the time marketing funds are spent and the time the outputs of these expenditures, e.g., marketing brochures or newsletters, are employed to generate new prospects.	\$60.1	\$236.3
<b>New prospects per field staff</b> Measures the relative effectiveness of marketing efforts in the quarter. New prospects represent new sources of potential business. This measure is a function of the amount of time that a center commits to marketing and the effectiveness of those marketing efforts. Centers often experience trade-offs between time spent developing projects, time spent working on projects, and time spent developing new prospects.	13.6	3.9
<b>Project development</b>		



### New customers per field staff

Measures the degree to which a center is expanding its customer base. New customers represent an increase in market penetration. This measure is a function of the amount of time that a center commits to sales or to "developing projects" and the effectiveness of sales efforts. Centers often experience trade-offs between time spent developing projects, time spent working on projects, and time spent developing new prospects.

3.1 1.2

### Conversion rate: prospect to customer

Measures the effectiveness of sales efforts. As a measure of a center's ability to convert prospects into customers, this measure reveals the effectiveness of a center's marketing and sales procedures. Centers that spend significant time qualifying prospects usually produce fewer prospects overall, but more prospects who are likely to become customers. By contrast, centers which do not emphasize qualifying prospects, usually have a larger overall number of prospects and a lower conversion rate of prospects to customers.

44.0% 28.8%

### New projects per field staff

Measures the total amount of new business generated by the center in the quarter. This measure is a function of the amount of time and effort committed to sales to new customers as well as of a center's ability to generate repeat business.

2.9 3.1

### Average gross revenue booked per new project

Measures the size of projects undertaken by or through the center. Factors that may influence this measure include payments made directly by customers to third-party service providers and the rates at which field agent time is billed to customers.

\$4,493.10 \$4,262.40

### Average hours spent developing a new project

Measures the average number of hours that were spent developing a new project in the current period (the lower the number, the better). This performance measure provides an indication of the effectiveness of a center's sales force. A high number on this measure may indicate difficulty "closing the deal". On the other hand, this value will also be affected by the average project size; centers that routinely do large projects will likely score higher on this measure than centers that carry out smaller projects.

38.2 10.6

## Project Execution

### Percentage of field staff available hours charged to projects

Measures the degree to which field agent time is spent delivering project services as opposed to being devoted to other processes, like prospect and project development. This measure is a function of the number, size, and duration of projects undertaken by the center, as well as of the service delivery model of the center itself. This measure may fluctuate from quarter to quarter as a center allocates resources to different business processes as its needs and demands change.

111.9% 23.6%

### Active projects per field staff

Measures one aspect of the project load of field agents. This measure is driven by the number, size, and duration of projects undertaken, as well as the service delivery model of the center. Centers that operate under a broker model should have the ability to maintain a larger number of active projects than if they delivered services directly, assuming that brokered projects require less staff time. This measure gives a better sense of project load when it is considered along with average hours spent per active project.

4.9 7.5

### Average hours spent per active project

Measures the center's level of involvement in project service delivery. This measure is influenced by the number, size, and duration of projects, as well as by the number of projects opened and closed in the period and the steadiness of the center's new project stream. Closing many projects at the beginning of the period, or opening many projects towards the end of the period, will skew this measure. When considered alongside total active projects per field agent this measure gives a good sense of project load.

113.0 13.8



<b>Completed projects per field staff</b> Measures one component of project cycle. When considered along with new projects per field agent this can show cyclical fluctuations in a center's project load. This measure may help a center decide how to allocate resources in the next quarter. If a center is completing projects at a faster rate than it is starting new projects, this may indicate that the center should put more resources into generating new projects. This measure is influenced by the number, size and duration of projects undertaken, as well as by the steadiness of a center's project stream.	3.0	3.0
<b>Open projects per field staff at end of period</b> Measures the work-in-process at the end of the period. This measure shows the project load of field agents leading into the next period. This measure is influenced by the number, size, and duration of projects undertaken, as well as by the steadiness of the center's project stream.	1.9	5.0
<b>Build customer relationships</b>  <b>Percentage of new projects with repeat customers</b> Measures repeat business as the percentage of customers who are returning to the center for additional projects. This provides one indication of customer satisfaction. This measure is a function of both a center's efforts to increase market penetration and develop new sources of business as well as of a center's efforts to build on lasting relationships and to satisfy its existing customers.	n/a	52.5%
<b>Other financial</b>  <b>Payments to consultants as a % of customer revenues</b> Measures the degree to which a center pays third-party service providers to deliver services. A value of less than 100% for this measure indicates that some services are delivered directly by center staff and paid for by the customer. A value of greater than 100% indicates that a center subsidizes third-party service delivery.	58.2%	61.0%
<b>Operating cost per total staff</b> Measures a center's relative operating cost per employee. This measure may be affected by the location of the center, receipt of in-kind contributions such as rent or staff salaries, and other non-project activities undertaken at the center that require the center to incur significant costs.	\$7,279.60	\$25,174.90
<b>Gross customer revenue per field staff</b> Measures the total project revenue generated per field agent. Gross fee revenue for project services per field agent is the total amount of revenue earned or leveraged per field agent. This measure may be affected by payments made directly by customers to third-party service providers. If customers bypass the center and make large payments to third-party service providers this will result in understated gross fee revenue.	\$13,460.20	\$12,023.80
<b>Net customer revenue per field staff</b> Measures the total revenue earned per field agent that "sticks to the ribs" of a center (i.e. that revenue which is not paid out to third-party service providers). A negative value in this measure indicates that the center subsidizes services delivered by third-party service providers.	\$5,631.50	\$4,813.30
<b>Net customer revenue per project hour</b> Measures the customer-paid fees for project services that are not paid out to third-party service providers. This measure indicates the hourly rate actually earned by the center. Negative values indicate that a center subsidizes third-party service delivery. Factors that influence this measure include the total hours charged to projects, the extent to which customers are billed for those hours. It is also important to note that centers may have other operating revenues that are not related to fees earned from project services.	\$10.20	\$40.20





There are three indicators of the overall performance of the center:

- **Percentage of staff available hours charged to projects.** This is a measure of the degree to which staff time (including coordinators) is committed to working with customers on projects as opposed to marketing, sales and other processes. It is a basic measure of staff efficiency and drives revenue generation. Almost 65 percent of the available EDC staff time is devoted to projects as opposed to the roughly 14 percent (median) among NIST MEP centers.<sup>31</sup> This is due, in part, to the decision to retain coordinators on a project basis, ensuring that a significant percentage of their time is devoted to project work. Furthermore, staff at the EDC Rafaela-Esperanza tend to work longer hours than staff of similar centers in the United States.
- **Operating cost per project hour.** This is a measure of the cost of delivering one hour of project service, excluding disbursements to outside consultants. It is equivalent to the hourly rate that centers would need to charge customers to cover fixed costs (plus coordinator time), assuming that the center billed customers for all hours worked on their behalf. In the case of the EDC Rafaela-Esperanza, this figure is roughly \$23. Given the relatively lower project hours and higher salaries, the comparable figure of NIST MEP centers exceeds \$383.
- **Percentage of total expenses covered by customer revenues.** This is a measure of financial self-sufficiency. It represents the degree to which fees paid by customers for services rendered are sufficient to cover total fixed and variable costs. Significantly, the EDC Rafaela-Esperanza is relatively more financially self-sufficient than typical NIST MEP centers. Customer revenues cover 66 percent and 23 percent of total expenses for the EDC Rafaela-Esperanza and NIST MEP centers, respectively.

In general, the data present a picture of an organization that is using resources efficiently. The center has taken steps to minimize the amount of time required for many processes. For example, the organization has adopted measures to streamline the project development process through standard formats, boilerplate contract terms and conditions, and clear procedures for obtaining internal approvals. However, the analysis suggests that there may be room for improvement. The amount of time required to develop a new project – 38 hours – appears high. Some of this time, however, may be related to the requirement to solicit competitive bids from more than one consultant as well as the additional sales efforts associated with group projects.

In keeping with its mission, the center devotes considerable resources to developing relationships with companies prior to their becoming actual customers. While the amount of time required to develop each new prospect – 8.7 hours – is on par with similar centers in the United States, the total amount of time spent on this activity is significantly higher in EDC Rafaela-Esperanza. Moreover, despite the higher conversion rate, the absolute number of prospects that have not yet become customers is also higher. This may suggest the need for

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<sup>31</sup> Available staff time is defined in terms of a standard 40-hour workweek less time for holidays, vacations, and leaves of absence. Therefore, staff can actually devote more than 100 percent of available time to projects if they commit more than 40 hours per week to project work.

better targeting of marketing and sales effort, focusing attention on “qualified” companies that are more likely to purchase services.

Another area that warrants attention is the amount of time that coordinators spend on individual projects. While the average project load is relatively light, field staff at EDC Rafaela-Esperanza commit a great deal of time to active projects compared to other similar centers in the United States even though the size of the typical project in terms of the dollar value is equivalent.

Again, this may be associated with a greater reliance on group projects, requiring coordinators to devote time to each participating company. It may also reflect the desire of the organization to provide coordinators with significant on-the-job training in order to increase the supply of qualified service providers in the region.



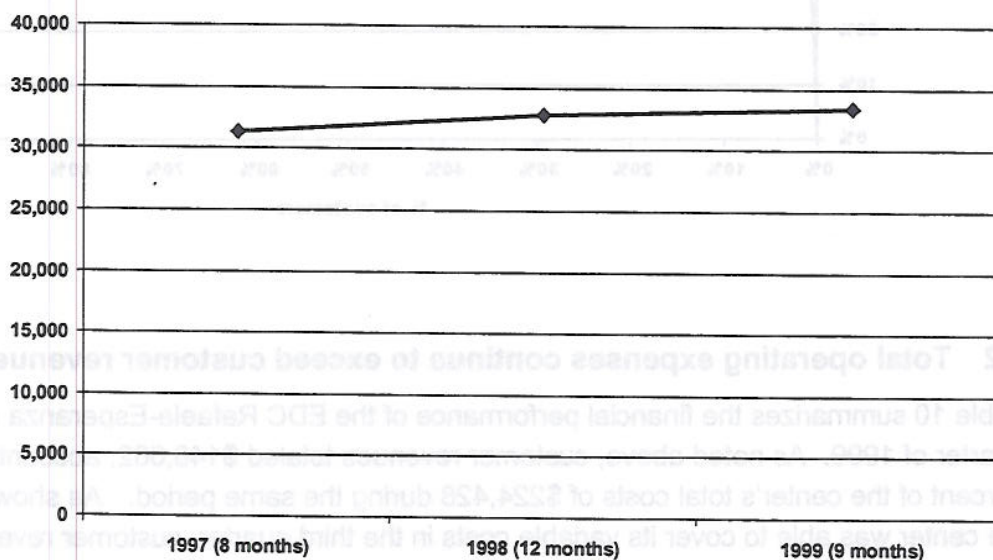
## 8 Financial Sustainability of the EDC Rafaela-Esperanza

The IDB/MIF is interested in the financial sustainability of organizations that it supports. This principle was highlighted in the original Project Memorandum for the program in Argentina. The document states, "Centers will collect a fee for the services they perform. In setting the rates, plans call for using a system of promotion and gradual increases until the operation is self-sustaining, coinciding with the end of the project as per the targets set in the project budget." Specifically, it was envisioned that operating revenues would be sufficient to cover the total operating costs (fixed and variable) by the fifth year of operation.

### 8.1 Client revenues have grown, but are dependent on a handful of companies.

The EDC Rafaela-Esperanza relies on three primary sources of revenue, IDB/MIF, local counterparts, and customer fees.<sup>32</sup> Growth in the latter is of central importance to the ability of the organization to become financially self-sufficient. As shown in Figure 14, customer revenues have grown from a monthly average of \$31,620 in 1997 to \$33,341 in 1999. The upward trend appears to be continuing. In the three months between July and September 1999, the EDC Rafaela-Esperanza took in \$148,062 from customer fees, representing an average of \$49,354 per month.

Figure 14. Average Monthly Customer Revenue in Period

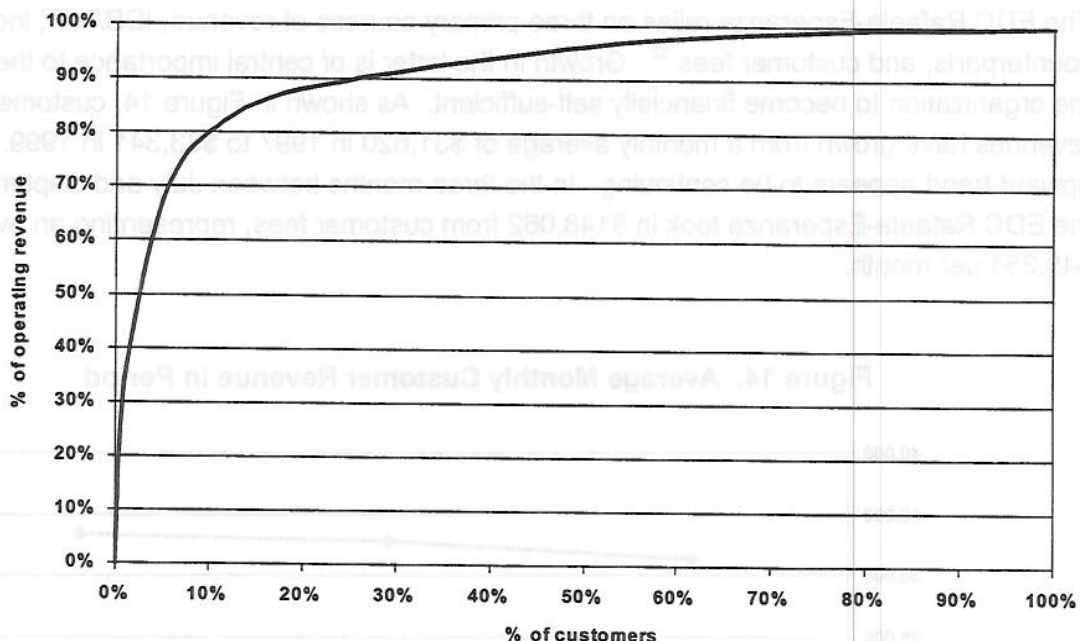


It is important to note that these revenues have been heavily dependent on a relatively small number of firms. As shown in Figure 15, the top one percent of all customers (roughly six firms)

<sup>32</sup> Local counterparts funding has been provided by the Centro Comercial e Industrial del Departamento Castellanos; Cámara de Comercio Exterior; Fundación para el Desarrollo Regional; Centro Industria, Comercio, y Afincados del Departamento Las Colonias; and the Cámara de Industriales Metalúrgicos de Rafaela y el Departamento Castellanos.

as measured by invoiced revenue, account for 34 percent of the total customer fees generated to date. The top ten percent account for 80 percent of all invoiced revenues. These top customers tend to be larger companies that have undertaken one-on-one projects. In particular, five large dairies have provided a substantial share of the total fees paid by companies to the EDC Rafaela-Esperanza since its establishment. It is important to note that companies that have more than 100 employees are invoiced for at least 100 percent of the variable costs associated with specific projects. In practice, this has allowed the organization to cross-subsidize projects for smaller firms. However, the dependence on a relatively small number of customers raises concerns about the future viability of the organization.<sup>33</sup>

**Figure 15. Percentage of Total Fees Accounted for by Top Customers**



## 8.2 Total operating expenses continue to exceed customer revenues.

Table 10 summarizes the financial performance of the EDC Rafaela-Esperanza in the third quarter of 1999. As noted above, customer revenues totaled \$148,062, accounting for 66 percent of the center's total costs of \$224,428 during the same period. As shown below, while the center was able to cover its variable costs in the third quarter, customer revenues were not sufficient to cover both variable *and* fixed costs.

<sup>33</sup> These larger customers may elect to continue to purchase services offered through the EDC Rafaela-Esperanza. In addition, there may be other firms in the region that have the potential to become major customers in the years ahead. The issue of whether the market is "saturated" requires analysis of the likely magnitude and pattern of demand for services in the future.



There are two types of costs to consider in analyzing the financial structure of any organization:<sup>34</sup>

- **Fixed costs.** Fixed costs are those that remain constant regardless of the level of sales. These costs include staff salaries, rent, telephone, etc. In the third quarter of 1999, fixed costs totaled \$80,575.
- **Variable costs.** Variable costs increase or decrease directly in proportion to the level of sales. In the case of the EDC Rafaela-Esperanza, variable costs are those that vary according to the number of projects undertaken with customers. This includes the cost of outside consultants and coordinators as well as direct project costs. In the third quarter of 1999, variable costs totaled \$143,853.

**Table 10. Financial Structure**

	Third Quarter 1999
<b>Customer revenues</b>	<b><u>148,062</u></b>
<b>Coordinator fees</b>	50,961
<b>Consultant fees</b>	86,115
<b>Direct project costs</b>	6,777
<b>Subtotal variable costs</b>	<b><u>143,853</u></b>
<b>Staff salaries and benefits</b>	43,929
<b>Other fixed costs</b>	36,646
<b>Subtotal fixed costs</b>	<b><u>80,575</u></b>
<b>Total fixed plus variable costs</b>	<b><u>224,428</u></b>
<b>Operating deficit (equivalent to the required subsidy from IDB/MIF or local counterparts)</b>	<b><u>(77,366)</u></b>

<sup>34</sup> Fixed costs are only "fixed" only within a certain range of activities or over a certain period of time. For example, the EDC Rafaela-Esperanza might need to add additional full-time personnel once a certain number of projects is exceeded and the capacity of existing staff is exhausted. In addition, some cost are a combination of fixed and variable costs: a certain minimum level is incurred regardless of the level of sales, but costs rise as volumes increase. For example, the telephone bill includes fixed components such as monthly access or line charges. It also includes components that may vary with the volume of business. Strictly speaking, these costs should be separated into their fixed and variable components; however, for many organizations these costs are relatively small.

One of the most important tools in assessing the financial structure of an organization is contribution margin analysis. Contribution margin is simply the percentage of each sales dollar that remains after variable costs have been subtracted, or the amount left over to “contribute” to fixed costs. In the third quarter of 1999, the contribution margin was 2.8 percent or approximately \$4,200.

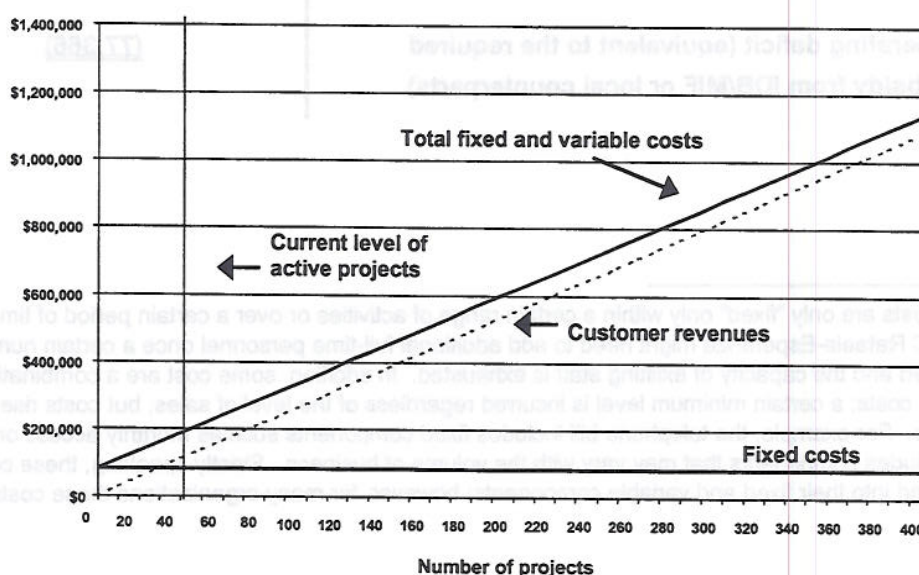
Given fixed costs of 80,575, the operating deficit in the third quarter of 1999 was \$77,366. This amount is equivalent to the required subsidy from IDB and local counterparts and as such reflects the cost of the program from the perspective of the organization. Therefore, the *net* benefits to customers of EDC Rafaela-Esperanza should be considered in light of the subsidized cost of the program.

### 8.3 To become financially self-sufficient, the EDC Rafaela-Esperanza will need to increase the margins on projects.

Figure 16 presents a breakeven analysis for the center given its performance in the third quarter of 1999. The center’s fixed costs are shown as the horizontal, solid black line. The diagonal, solid black line shows the total costs of the program based on the number of active projects in the quarter. The slope is based on the average variable cost of \$2,670 for the 54 active projects in the third quarter of 1999. Finally, the dotted gray line shows total customer revenues. The slope is based on average customer revenues of \$2,741 per active project in the same period.

The graph illustrates that given the current contribution margin of \$71 per project, the EDC Rafaela-Esperanza would be unable to cover its total costs even if the number of active projects in the quarter increased eight-fold to more than 400. (The diagonal solid black and dotted gray lines do not intersect.) Therefore, the path to self-sufficiency is not an issue of expanding the number of projects. To become self-sufficient, the EDC Rafaela-Esperanza must reduce fixed costs, reduce variable costs, and/or increase the average customer revenue per project. Given the current structure of the organization, only the third option offers much potential for success.

**Figure 16. Breakeven Analysis (Quarterly Performance)**

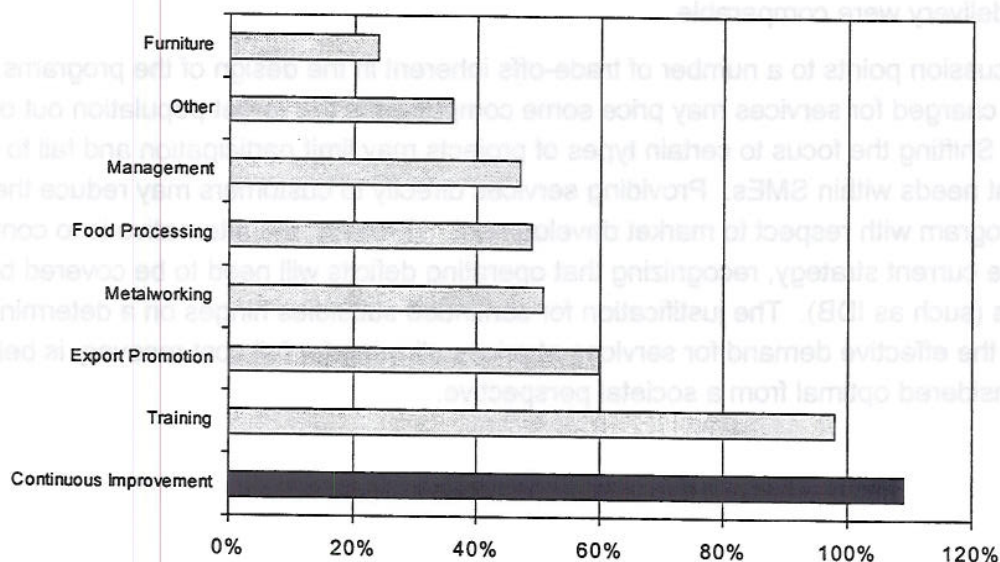




For the EDC Rafaela-Esperanza to breakeven at the current number of projects, it would need to increase the average number of companies that participate in given projects and/or raise prices by approximately 52 percent, while holding costs constant. To a great extent, the cost of undertaking a particular group project is independent of the number of participating companies. Therefore, increasing the number of companies involved in a project would increase the contribution margin. In this regard, it is our understanding that some companies that express interest in participating in a project during the planning stages subsequently elect not to sign up later on. Raising prices is, perhaps, more straightforward. However, hiking prices by this amount may severely limit participation among the very companies that the EDC Rafaela-Esperanza is striving to serve.

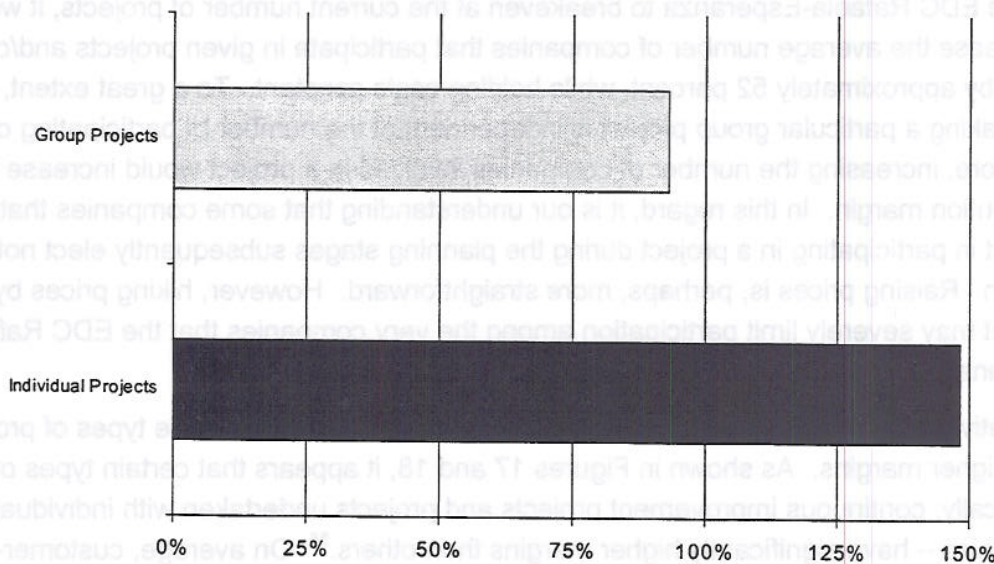
Alternatively, the center could try to shift its project mix to focus on those types of projects that have higher margins. As shown in Figures 17 and 18, it appears that certain types of projects – specifically, continuous improvement projects and projects undertaken with individual companies – have significantly higher margins than others.<sup>35</sup> On average, customer-paid fees for continuous improvement projects cover more than 100 percent of the variable costs of these projects, contributing roughly \$900 to fixed costs. Similarly, customer-paid fees for individual projects tend to exceed variable costs by almost 50 percent, contributing more than \$1,500 to fixed costs. The center could focus greater efforts on developing these types of projects, shifting resources away from other types of activities.

**Figure 17. Contribution Margin of Different Programs**



<sup>35</sup> The results presented in the figures are based on data for all programs conducted by EDC Rafaela-Esperanza since its inception.

**Figure 18. Contribution Margin of Individual and Group Projects**



Finally, there may be another way to become self-sufficient *if* the organization is willing to alter its basic business model significantly – provide services directly to companies using internal staff, rather than outside consultants. This may enable the organization to retain revenues that otherwise would be paid to third parties. For example, assuming that consultants include a 10 percent profit margin in their fees, EDC Rafaela-Esperanza would have been able to save roughly \$8,600 in the third quarter by performing the work themselves *if* the underlying cost of service delivery were comparable.

This discussion points to a number of trade-offs inherent in the design of the programs. Raising the fees charged for services may price some companies in the target population out of the market. Shifting the focus to certain types of projects may limit participation and fail to address important needs within SMEs. Providing services directly to customers may reduce the impact of the program with respect to market development. However, the alternative is to continue to follow the current strategy, recognizing that operating deficits will need to be covered by funding agencies (such as IDB). The justification for continued subsidies hinges on a determination of whether the effective demand for services at prices allowing for full cost recovery is below the level considered optimal from a societal perspective.



## 9 Principal Findings and Recommendations

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Returning to the questions posed in the introduction to the report, there are several findings that warrant highlighting:

- **The EDC Rafaela-Esperanza has reached a significant percentage of the target population.** More than 600 companies have participated in the program in various ways, accounting for 20 to 25 percent of all SMEs in the region.
- **The EDC Rafaela-Esperanza has provided a mix of services in direct response to expressed interest by SMEs in the region.** The center has undertaken approximately 190 projects since its establishment in mid-1997. These projects have been developed with input from businesses in the region. Most of these projects have been undertaken on a group basis to keep the cost per participant at acceptable levels. They have tended to focus on issues related to quality standards, production processes, organizational development and general management concerns.
- **Companies are satisfied with the services provided by the EDC Rafaela-Esperanza.** Approximately 95 percent of customers that responded to the survey indicated that they were “very satisfied” or “satisfied” with the center’s services. Moreover, roughly four out of ten customers have participated in more than one project, suggesting that they perceive that the EDC Rafaela-Esperanza is providing a valuable service relative to the cost of participation. Approximately, 61 percent of respondents stated that they could not have obtained similar services from other organizations. The EDC Rafaela-Esperanza should explore this latter finding further. In particular, the EDC Rafaela-Esperanza should conduct an analysis of competitive services as part of its ongoing market research activities. This analysis should focus on identifying and assessing the services that respondents indicated that they could have obtained from other organizations.
- **Companies have benefited from services provided by the EDC Rafaela-Esperanza.** More than 80 percent of companies that responded to the survey indicated that they changed their operations as a direct result of projects undertaken under the auspices of the EDC Rafaela-Esperanza, particularly in areas related to worker safety and health, organization of production, and quality systems. These changes have led to higher quality, lower costs and faster turnaround times among a significant percentage of firms. Approximately 46 percent of firms that responded to the survey indicated that their sales and/or profitability increased as a result of the services that they received from the center. There is evidence to suggest that larger, one-on-one projects tend to increase the likelihood that companies will implement changes and subsequently improve performance.
- **The EDC Rafaela-Esperanza has contributed to an expansion in the market for consulting services in the region.** The center has spurred demand for services among SMEs by reducing specific barriers. In addition to lowering the cost of services, the center has helped companies define their needs, identify qualified consultants, and follow through with implementation. Significantly, most companies that have participated in the program



had not used outside consultants in the past. The center has also helped expand the supply of consultants providing services to SMEs in the region. The EDC Rafaela-Esperanza has used almost 100 different consultants on different projects since the inception of the program. Coordinators are recruited locally as part of an explicit strategy to train a cadre of consultants in the region. The results of the survey suggest that most consultants had not provided services to SME prior to the establishment of the center in 1997. In a collaborative effort, the EDC Rafaela-Esperanza has been an important source of leads for these consultants and contributed directly to new business. That said, there is still a question about the sustainability of the market in the absence of the EDC Rafaela-Esperanza. While 73 percent of companies indicated that they were more likely to hire consultants in the future as a result of their experience with the program, two-thirds of the consultants suggested that demand for consulting services was contingent on the continued existence of the EDC Rafaela-Esperanza.

- **The EDC Rafaela-Esperanza has used available human and financial resources efficiently.** The organization has a lean staff, supplemented with outside consultants (including coordinators). Resources are used efficiently within core processes to produce important outputs such as new prospects, new projects and new customers. The organization has adopted measures to streamline and document core processes – particularly project development – in order to minimize the time required to perform specific activities and to enable progress to be tracked on a regular basis. Furthermore, the decision to retain coordinators on a project basis helps ensure that a significant percentage of time is devoted to project work, while minimizing fixed costs. Almost 65 percent of staff time (including coordinators) was devoted to projects in the third quarter of 1999, significantly higher than similar centers in the United States.
- **The EDC Rafaela-Esperanza will need to modify its strategy to achieve financial self-sufficiency.** Customer revenues have grown since the inception of the program, primarily as result of six firms that together account for more than one third of all revenues generated to date. In the third quarter of 1999, customer revenues were sufficient to cover the variable costs associated with projects. However, the organization is far from being able to cover its total operating expenses through customer revenues. Moreover, it cannot achieve financial self-sufficiency by simply increasing the number of group projects. It will need to increase prices across the board by more than 50 percent and/or shift its emphasis to higher margin projects – particularly, large projects with large companies. As noted above, the alternative is to continue to follow the current strategy, recognizing that operating deficits will need to be covered by funding agencies (such as IDB/MIF).

There are several steps that the EDC Rafaela-Esperanza should consider taking to strengthen the organization. These can be grouped under three headings: target market, service mix, and operations.

- **Target market**
  - ➔ **Expand the base of primary customers.** To date, the EDC Rafaela-Esperanza has been dependent on a relatively small number of companies for the bulk of its customer



revenues. This places the organization in a vulnerable position; the ability of the EDC Rafaela-Esperanza to achieve its financial objectives is contingent on these companies continuing to purchase services. The center should take steps to diversify its customer base, developing solid relationships with other companies that have the potential to become stable and significant customers. This may entail having to extend operations outside of the current region. If it elects to do so, the organization should identify areas with a high concentration of larger manufacturing firms that are likely to purchase services from the EDC Rafaela-Esperanza. A detailed analysis of the market should be conducted prior to any expansion.

- **Focus greater effort on working with preferred customers.** The EDC Rafaela-Esperanza should continually consider ways to achieve greater impacts – higher income in the region through rising productivity and expanded sales – with *limited* resources. This will entail allocating resources to efforts that yield the greatest returns consistent with its broader mission. The EDC Rafaela-Esperanza needs to focus efforts on working with companies that have the potential to succeed based on their commitment to increased productivity and growth. Greater resources should be allocated to intensive work with these preferred customers with an emphasis on implementation.

- **Service mix**

- **Provide performance assessments.** The EDC Rafaela-Esperanza should develop an internal capacity to undertake assessments of individual companies in the region. Information gained through this process should guide the organization's interactions with particular firms as well as provide a foundation for the development of broad programs. Assessment tools should be based on objective data and, where possible, include national and international benchmarks. These tools should be designed to highlight the particular aspects of the business that merit improvement and motivate change by demonstrating the potential returns on various investments. The ability to undertake objective assessments should become a distinctive element of the EDC Rafaela-Esperanza's approach that is well recognized in the market.
- **Continue to focus on helping companies increase productivity, but also expand services related to strategic planning, market research and product development.** The importance of being able to make products better, faster and cheaper will intensify. This will generate an even greater need for the types of services that the EDC Rafaela-Esperanza is already offering, particularly those related to order fulfillment. However, based on analysis of important global trends, sustained profitability will increasingly be a function of the degree to which companies are distinctive, providing the right products in the right markets. To this end, the EDC Rafaela-Esperanza should expand and/or develop new services related to strategic planning, market research and product development.
- **Place greater emphasis on one-on-one projects.** Projects with individual companies have been shown to yield greater impacts for companies, while also contributing higher margins for the organization. The EDC Rafaela-Esperanza should increase the number



of one-on-one projects, focusing on the specific needs of particular companies. This will require extensive functional as well as industry expertise.

- **Operations**

- ➔ **Strike an appropriate balance between the use of internal staff and outside consultants to deliver services to SMEs.** The use of outside consultants has strengths and weaknesses. Intensive use of outside consultants greatly expands the range of expertise available to SMEs in the region and is central to one aspect of the organization's mission. However, the use of outside consultants comes with a price. The EDC Rafaela-Esperanza needs to pay for these services (which include profit), reducing its net earned revenues – a serious issue in the face of declining donor support. In addition, the use of outside consultants makes it more difficult to absorb the lessons of projects and build long-term customer relationships. The EDC Rafaela-Esperanza should offer certain services directly to SMEs using its own internal staff. It will need to decide which services should be offered directly and build internal capabilities accordingly. This decision should be informed by knowledge of what other, mainly private consultants, bring to the market. The EDC Rafaela-Esperanza should not duplicate services already offered by the private sector at an acceptable level of quality.
- ➔ **Monitor performance based on well-defined indicators of efficiency and effectiveness.** The report presents a great deal of data with respect to various performance indicators. The staff of the EDC Rafaela-Esperanza should review the report and decide which indicators it believes are most appropriate for the organization. Where possible, indicators should be standardized across all centers in Argentina and other similar centers in Latin America. While the EDC Rafaela-Esperanza currently collects most of the data required to calculate suggested performance indicators, staff (including coordinators) should be required to record the time devoted to core business processes as well as individual projects. Periodic reports should be prepared and reviewed with staff, calling attention to actions needed to improve performance on key dimensions, including effectiveness, outreach, operating efficiency and financial performance.
- ➔ **Develop alternative long-term funding sources.** The EDC Rafaela-Esperanza may decide that efforts to become entirely financially self-sufficient are subverting the basic mission of the organization. The justification for continued subsidies hinges on a determination of whether the effective demand for services at prices allowing for full cost recovery is below the level considered optimal from a social perspective. In this regard, SMEs may be unwilling to hire outside consultants at prevailing market prices due to imperfect information. Moreover, even in a world characterized by perfect information and individually maximizing behavior, the level of investment in consulting services by SMEs at prevailing market prices may still be deficient from a social perspective due to externalities and equity considerations. If the organization decides that continued subsidies are required, it will need to take steps to secure long-term funding to help defray its structural operating deficits, particularly as IDB/MIF funding is phased out. It should begin to develop a strategy to secure ongoing funding from business groups,



philanthropic foundations, multilateral organizations, or government agencies as soon as possible.

10 Appendix A – Case Studies

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### 10.1 Summary

Natufarma produces medical products based on natural ingredients. The company was well managed with a network of distributors in different regions of Argentina covering the national market. It seemed that Natufarma had everything it needed to become a leader in the Argentinean market for natural healthcare products. There were, however, indications of a problem. While the overall market was expanding rapidly in Argentina, Natufarma's sales were relatively stagnant. New products imported from the United State were gaining market position in Argentina, especially NaturalLife, with a strong image and brand. Natufarma did not know how to react. Fernando Fermín, commercialization manager, was considering making changes to his distribution network given his impression that distributors were the principal cause of Natufarma problem.

Around that time, Mauricio Cassio, head of the EDC office in Esperanza, met with Fermín to acquaint him with the services offered by the EDC Rafaela-Esperanza and indicated that the organization could help him identify and resolve the factors contributing to poor sales performance. Fermín agreed to undertake a project with co-financing provided by the EDC Rafaela-Esperanza. The project entailed extensive market research and the development of a commercialization strategy. The resulting recommendations encouraged Natufarma to begin an effort to transform their business. Said Fermín, "Over the past two years, we have changed the way we were doing business – these changes will represent tangible benefits in the near future."

### 10.2 Background

Founded 12 years ago by Hernán Perín, Natufarma is located in Esperanza, province of Santa Fe, Argentina. Natufarma is a pharmaceutical company focusing on the production and commercialization of medicinal products of natural origin. The owner and founder started out producing healthcare products based on natural herbs and ingredients such as the following: garlic, valeriana, guaraná, fish oil, etc. Travelers began to recognize the quality of these products and regularly started to return to stock up on new supplies. In response, the company expanded their operations by establishing agreements with official distributors in different regions of Argentina, particularly Buenos Aires. The company also serves pharmacies through direct sales.

Approximately 95 percent of their sales are within the national market; the remaining five percent is in Uruguay. The major consumers of these products are individuals with high disposable incomes – a market that has attracted other competitors such as NaturalLife (United States), Garden House (Chile) and Top Life (Argentina). NaturalLife is currently the leader in the Argentinean market.

Natufarma currently employs 40 people. It has a modern factory and laboratory. The production process – extraction, concentration, grinding, drying, compression, filling, and packaging – is conducted under the most rigorous standards of quality, following generally accepted good manufacturing practices (GMP) for pharmaceutical firms.



### 10.3 Problem

Sales reached roughly \$2 million in 1997. However, the rate of growth of the company's sales lagged the rapid expansion in the overall market for natural healthcare products in Argentina. According to Fermín, commercialization manager, the phenomena that triggered the expansion of the market "was the acceptance of medical doctors to use alternative medicine as a means to treat patients". However, Natufarma was not prepared to exploit this new opportunity. Fermín explained, "We were aware that the market was growing and new competition was entering Argentina and taking advantage of our weak position. We realized that big changes had to be made in our organization."

Fermín continued, "At first we thought that the problem was with our distribution channels and we were ready to change them. But then the opportunity to receive professional services through the EDC was there, so we decide to seek professional advice."

Fermín contacted Mauricio Caussi, responsible for the EDC office in Esperanza, and explained their problem. Caussi suggested that they work with Natufarma to examine the market more closely and develop an appropriate strategy. Caussi recalled, "Hernán Perín, the father of Fernando, did not like the idea of hiring consultants." Nevertheless, the company decided to undertake a project with the EDC in March 1997. Given the success of the first project, as discussed below, the company has returned to the EDC Rafaela-Esperanza for further assistance.

### 10.4 Services

Natufarma received the following individual technical assistance from the EDC Rafaela-Esperanza:

- **Market Research (RA – 017).** The objective of this project was to quantify the market and analyze Natufarma's position in terms of consumer perception and market penetration. The EDC Rafaela-Esperanza identified three consulting firms that could provide the services required by Natufarma – PERFIL, KPMG and Ordoñez. Following a series of interviews with representatives of the three companies, Natufarma selected PERFIL to carry out the work.

Two tasks were undertaken by PERFIL. The first was to conduct an analysis of Natufarma's strengths, weaknesses, opportunities and threats (SWOT analysis). This analysis highlighted the fact that large firms were interested in the market; foreign companies were already making efforts to gain market share, and traditional pharmaceutical firms were planning new investments. Moreover, the study found that consumers did not recognize the brand name "Natufarma" and that the company had no identifiable image in the market. PERFIL offered three initial recommendations: change the focus of the company, reorient products to satisfy the demand, and invest more in marketing. Focus groups were used in the second task to refine the recommendations. The focus groups investigated consumer perception, patterns of product uses, brands and image, and packaging. This work was carried out in Buenos Aires with the supervision of Fermín and Caussi in August 1997.



As discussed in more detail below, the project led to a series of major changes within the firm.

- **Business Clinic – Human Resources (RA – 080).** In implementing some of the recommendations from the initial project, Natufarma realized that it required further support in human resource management. Fermín stated, “Highly skilled people are the key to company success.” He contacted the EDC in the summer of 1998 to seek additional assistance in this area. The objective of this project was to evaluate human resource management in Natufarma and to prepare an action plan to improve operations. A different consulting firm was selected for this project. The activities carried out by the consultant included a visit to the company for an evaluation of the actual situation, preparation of a diagnostic report, development of an action plan, and a presentation of recommendations to Natufarma. Unfortunately, the project did not meet the company’s expectations. Maria Verónica Cardoso – the project coordinator from the EDC Rafaela-Esperanza – explained “no significant changes were made to the original plan that Natufarma had already established based on its own assessment. For example, Natufarma had already decided to incorporate a new person to directly manage the human resource department with the responsibilities of managing salaries, evaluating personnel and their needs, organizing new benefits schemas for employees, etc.” The recommendations offered by the consultants did not seem to go far enough.

Despite the problems with the second project, the company has sought additional assistance from the EDC Rafaela-Esperanza and holds the organization in high regard.

## 10.5 Outcomes

Natufarma has undertaken a series of changes based on the services that they received. Said Fermín, “As a result of the recommendations provided by PERFIL, we completely changed our approach to doing business.” Holding up a set of new product brochures, he explained, “We were managing 35 products, now we have focused our efforts on just 17. Our image has changed and our products have new packaging. We have reorganized our distribution channels and cover the main market in Buenos Aires a lot better. Internally, we reengineered all of our processes.”

The outcomes of the company’s interaction with the EDC can be summarized as follows:

- **Changes in capabilities and practices:**
  - ➔ Adopted new approach to formulate company strategy in relation to product lines, market and distribution channels.
  - ➔ Introduced the concept of market research based on focus groups in the company.
  - ➔ Developed new approaches to publicity and promotion, including new brochures and an aggressive campaign to present its new image.
  - ➔ Reduced its product line from 35 products to 17.

- Reorganized distribution channels, focusing on expanding the company's position in the Buenos Aires market.
- Introduced new after-sales customer services, including a new newsletter with information regarding natural products and answers to specific customer questions.
- **Immediate impacts:**
  - Reduced inventories (raw materials and finished goods) as a result of reduction in product line with subsequent cost savings.
  - Improved communication with customers and greater brand recognition.
- **Changed business performance:**
  - Fermín expects that the changes the company has made will lead to increased sales in 2000.

## 10.6 Conclusions

The following conclusions can be drawn from this case study:

- **The EDC services can lead to substantial changes within companies.** Natufarma transformed its business in response to the services that they received through the EDC Rafaela-Esperanza. In this case, the principal service entailed an in-depth assessment of the company's market position that resulted in a set of recommendations specific to the firm. Significantly, the project was conducted on a one-to-one basis.
- **An important role of the EDC is to evaluate and select qualified consultants.** Companies such as Natufarma are hesitant to hire consultants due to their lack of experience and the generally poor reputation of many consulting firms. Said Fermín "companies, such as ours, are not ready to hire consultants. We need help to deal with them. Once we have the experience, we could continue our way alone". In fact, Natufarma subsequently hired PERFIL without the intervention of the EDC in order to continue their efforts to become more competitive. Natufarma has spent \$60,000 over the last three years on consultant services.



## 10.7 Chronology of major events

Date	Event
February 1997	Natufarma contacts Mauricio Caussi of the EDC-Esperanza to seek help with its commercialization strategy.
March 1997	Terms of Reference (TOR) for the project is developed and approved.
April 1997	Evaluation and selection of consultants – company selects PERFIL S.A.
July 1997	Market Research – RA017 begins with PERFIL SA.
August 1997	Natufarma receives the report from PERFIL SA. Based on the recommendations Natufarma defines new product lines, makes changes in logo and company image, reorganizes distribution channels, and reengineers certain processes. These changes were completed by April 1999.
September 1998	Natufarma begins Business Clinic – Human Resources (RA-80) to evaluate their human resource management.
June 1999	An ISO 9000 quality audit is performed by Miguel Angel Segura, responsible for ISO programs at the EDC.
July 1999	Natufarma signs a new contract with the EDC (Human Resources RA-212) to develop its human resource area and train personnel. This program will end in January 2000.

## **DBT S.A**

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### **10.8 Summary**

DBT S.A. had been a successful manufacturer of electrical motors for electricity generators. However, the company was interested in finding a local source of technical assistance. Explained Daniel Druetta, plant manager, "professional technical assistance can constitute a significant competitive advantage."

Through the EDC Rafaela-Esperanza, DBT has been receiving assistance in implementing a quality system in compliance with ISO 9000, improving their workplace, reorganizing their production system and adopting a new marketing strategy targeted toward new markets outside of Argentina. Druetta stated, "The services provided by the EDC and the consultants hired through them have exceeded our expectations."

### **10.9 Background**

DBT S.A., was founded in 1995, assuming control of the manufacturing plant of CRAMACO S.A. in the city of Sastre, Santa Fe, Republic of Argentina. CRAMACO S.A. had been manufacturing rotating electric machines of increasing complexity since 1947. Using the CRAMACO trademark, DBT currently offers a wide range of generators and electric motors for different industrial uses. Sales are divided into the following products and services: 10 percent DC motors, 70 percent AC motors for OEM of electricity generators, and 20 percent repair services. DBT currently employs 60 people. Annual sales for 1999 are projected at \$4.6 million, a 14 percent drop from the level achieved in 1998. In 1998, exports to Brazil, Uruguay, Colombia Taiwan, and the United States accounted for 50 percent of their sales. The Brazilian crisis was responsible for the significant reduction in exports.

The firm has the capacity to produce up to 2,500 motors per year. However, it is currently operating below capacity. It manufactured 1,552 units in 1998 and expects to produce 1500 units in 1999. All parts for the motors are produced in the company, except for foundry parts that are ordered from a supplier. Manufacturing processes include drilling, milling, turning, punching and painting.

### **10.10 Problem**

DBT was looking for local consulting services in several areas, particularly in the area of quality assurance systems. Druetta recalled, "We are about 500 kilometers from Buenos Aires. We needed qualified training and technical support, especially in topics related to quality and ISO 9000. We felt isolated and did not know whom we could trust."

In March 1997, the EDC invited representatives of the industrial community to participate in the opening ceremony for the new organization. Approximately 200 people attended, including representatives from DBT. At that time, the EDC announced that it would be offering different programs, among them, Quality Assurance ISO9000. "We contacted the EDC as soon as we



heard about the program,” said Druetta. As discussed in more detail below, the company has participated in eight different projects over the past few years.

### 10.11 Services

DBT has received a variety of services from the EDC, including technical assistance and staff training, as well as trade missions to other countries. The following discussion focuses on technical assistance.

- **Pre-certification ISO 9000 Group II.** The objective of the program is to pre-certify companies for ISO 9000. It is undertaken in three or four stages. At every stage, companies have the opportunity to decide whether or not to continue based on their evaluation of the performance of the consultant and coordinator assigned to the project. Miguel Segura – coordinator of quality services at the EDC Rafael-Esperanza – pointed out that “companies might decide to bring in new consultants or coordinators if they are not happy with their performance.” He also stated, “it takes companies several months to develop a quality system. It is really important to give companies the chance to build their quality system at their own pace.” Seven companies signed on to participate in the ISO 9000 Group II. These included Glutal, SICA, Clorindo Appo, Fimaco, RG Frenos, FACCA, and DBT. The following stages were carried out by this group:
  - **Program ISO 9000 – Planning RA-008: (May to July 1997)** The activities undertaken during this initial phase include the selection of the consultant, a diagnostic for each company, and the development of an action plan. Following a competitive bid process, Abel Antonio Gramajo (Qualitech) was selected to provide consulting services. Other consultants that bid on the project included Ubatec, Cané y Arroyo Asociados, and Folgar Lusic y Asociados (KPMG). The diagnostic is used to establish the status of the quality system of the company. Segura indicated that this is an important stage of the program, “we need to identify where a company is in terms of its quality system so we can establish the right action plan for each company”. Based on the results of the diagnostic, an action plan was prepared for the group as a whole; however, as Segura explained, “each individual company carries out the plan at its own pace.”
  - **Project ISO 9000 – Stage I of implementation RA-028 (October 1997 to January 1998).** Two training courses are carried out during this stage: a 30-hour course to prepare the “pilot” – the pilot is responsible for implementation within each company – and an 8-hour course for the company’s quality committee. Following training, the companies design and document their own quality system according to the action plan. The consultant visited each company twice each month. Each visit lasted two to four hours. During this time, the consultant offered recommendations on how best to proceed. According to Segura, “the consultant adjusts the plan for each company according to its progress.” The coordinator visited each company every week to monitor progress and review documents.
  - **Project ISO 9000 – Group II - Stage II of implementation RA-060 (February to August 1998).** Four of the seven companies that participated in Stage I decided to



continue on with the program using the same consultant.<sup>36</sup> These companies were Fimaco, RG Frenos, FACCA, and DBT. During this stage, the participating companies continued to develop quality manuals and document general procedures, specific procedures and registers.

- **Project ISO 9000 – Group II - Stage III of implementation RA-121 (September to December 1998).** At this stage, most companies had already completed 90 percent of the necessary documentation. One company – Fimaco – was actually certified.
- **Project ISO 9000 – Group II - Stage IV of implementation RA-151 (January to April 1999).** This is the final stage. The companies made final adjustment to their quality system, internal audits took place, correction actions were made, and registers were updated. DBT did not complete the program because of financial problems and decide not to seek certification at that time. Another company, FRENOS RG, was certified after this last stage was completed
- **Multiplicar II RA-022** – The Multiplicar II program focuses on helping companies implement the Japanese technique known as the 5S's to improve workplace organization. It includes seven, two-hour meetings over a five-month period. Typically, five people from each company participate in the program. Ricardo Theler, member of the EDC staff, conducted the training sessions, with follow up provided by one of the coordinators, Edgardo Denegri. Theler explained, "At that time we did not have the adequate administrative procedures to select, evaluate and hire a consultant. We were trying to give the service ourselves to satisfy the demand." According to Druetta, the program helped DBT to "improve attitudes within the company and people's behavior towards their work place. It also helped reassure us that the work that we had been doing in the area of quality was correct."
- **Business Clinic - Organization and Management of Production RA-073** – The objective of this project was to help companies improve production processes through the application of Theory of Constraints (TOC). The project began with a 2.5-day training session covering the basic concepts of TOC. Companies were asked to complete a questionnaire addressing production problems, financial situation, and performance indicators (time to delivery, percentage of customer rejections, percentage of internal rejections). Based on this data, the consultant used a simulation tool to identify critical resource constraints and offered recommendations to improve the performance of the plant. Druetta explained "we already had started to make changes in our production process before starting this program. Therefore, the program helped us to assure that the work we did before was in the right direction. Also it helped to leverage knowledge among personnel, create a positive environment in our company and gave us a formal methodology to tackle problems." María Verónica Cardoso, a the EDC coordinator, remembered "it was

<sup>36</sup> The other three companies – Glutal, SICA, and Clorindo Appo – decided to continue with the support of the EDC coordinator. According to Segura, "the companies have not made a great deal of progress in implementing the quality system, mainly because of their own performance. Therefore, spending more money on a consultant would have been a waste."



very easy to work with DBT as they seemed to advance quickly in the implementation of recommendations. They were committed to the program.”

- **Business Clinic - Marketing RA-078.** The objective of this project was to support the marketing efforts of participating companies. The consulting firm, PERFIL SA., was hired to work with the companies over a period of six months. The project was intended to teach participants new concepts related to analyzing information, understanding their businesses better, and designing appropriate strategies. As part of this effort, DBT learned about concepts such as marketing management (Kotler), competitive advantage (Porter) and the profit zone and value migration (Slywotsky). In addition, technical assistance was provided to help companies apply these concepts within their own firms. DBT applied different techniques to formulate a new sales strategy.

## 10.12 Outcomes

DBT has found the assistance of the EDC of great help. Druetta stated, “The center has been a real partner for the company.” Although the Brazilian crisis has hurt the company, Druetta indicated that the company would have been worse off without EDC assistance.

The outcomes of the company's interaction with the EDC can be summarized as follows:

- **Changes capabilities and practices:**
  - ➔ Introduced a quality system based on ISO 9000 and adopted the 5S technique
  - ➔ Identified critical resource constraints based on TOC and reorganized production to leverage its capacity and avoid bottlenecks.
  - ➔ Adopted a new approach to formulate company strategy
  - ➔ Changed its product lines
  - ➔ Changed its distribution channels and established a new strategic relationship with its main distributor
  - ➔ Reorganized its marketing function to conduct better research on user requirements. Based on this research, DBT is currently developing a new product.
  - ➔ Developed a new human resource management process and improved administration systems
- **Immediate impacts:**
  - ➔ Reduced inventories by 40 percent
  - ➔ Reduction in scrap, rework and costs (albeit not measured).
- **Changed business performance:**
  - ➔ Druetta indicated that it was not easy to directly relate the services provided by the EDC with an improvement in sales or profit for DBT.

- However, he stated, “it was very positive for our company, it help us to clarify the different alternatives to follow. The changes that we have made allowed the company to grow in the right direction, even when the Brazilian crisis hit us. It really changed the way the company was thinking about its strategy.”

### 10.13 Conclusions

- **Successful projects lead companies to undertake new projects.** DBT has undertaken eight projects with the EDC Rafaela-Esperanza over the past few years. Some of these projects, such as the ISO 9000 series, were undertaken as logical sequence in the process of implementation. Others grew out of the experience and relationship with the organization over time.
- **Success also requires a willingness and ability of the company to change.** Representatives of the company and the EDC both remarked on the commitment of the company to the process of transformation. The company was interested in improving its performance and was willing to make necessary changes in their operations. At the same time, companies have to be able to make needed investments. In this case, the company was unable to go ahead with ISO 9000 certification due to financial constraints at that time.
- **In the absence of clear measures, companies find it difficult to assess the impact of the EDC on their overall performance.** DBT “felt” that improvements had occurred in its company, but found it difficult to quantify impacts. It is important that the EDC find a way to measure benefits generated by different types of projects.



## Chronology

Date	Event
<b>April 1997</b>	DBT contacts the EDC to know more about available programs. The EDC recommends Multiplicar II, but DBT decides to begin with ISO9000.
<b>August 1997</b>	Program ISO 9000 – Group 2 – (RA-008). Initial diagnostic and preparation of action plan.
<b>September 1997</b>	Company begins its participation in Multiplicar II - (RA-022) which ends in February 1998.
<b>October 1997</b>	Program ISO 9000- Group 2 – (RA-028). Second stage of pre-certification program.
<b>May 1998</b>	Quality Assurance ISO 9000 – Group 2 – (RA-060). Third stage of pre-certification program.
<b>June 1998</b>	Business Clinic – Organization and Management of Production (RA-073).
<b>September 1998</b>	Business Clinic – Marketing (RA-078)
<b>September 1998</b>	Quality Assurance ISO 9000 – Group 2 (RA-121) Fourth stage of pre-certification program.
<b>January 1999</b>	Quality Assurance ISO 9000 – Group 2 – RA151). Final stage of pre-certification program begins. Brazilian crisis does not allow DBT to continue with the program.
<b>May 1999</b>	DBT participates in the commercial mission to Chile organized by the EDC.
<b>September 1999</b>	DBT asks the EDC to carry out an internal audit of its quality system. Consultant Ramon Arroyo carries out the work and declares that DBT is ready for pre-certification ISO 9000.

## 11 Appendix B – Future evaluations of BDS programs

IDB/MIF has funded similar business development service (BDS) programs in Colombia, Costa Rica, and El Salvador over the past decade and is interested in comparing and contrasting their performance.

All of the programs maintain data on the number of companies assisted, the number of projects conducted, the amount of revenues generated and other key program outputs in different periods. For example, as shown in the following table, the number of companies that have received assistance in different countries vary considerably. Moreover, this aspect of performance appears unrelated to the level of funding committed to the program – Costa Rica has served almost six times more companies than Colombia with less than one-third of the funding.

**Basic Program Information**

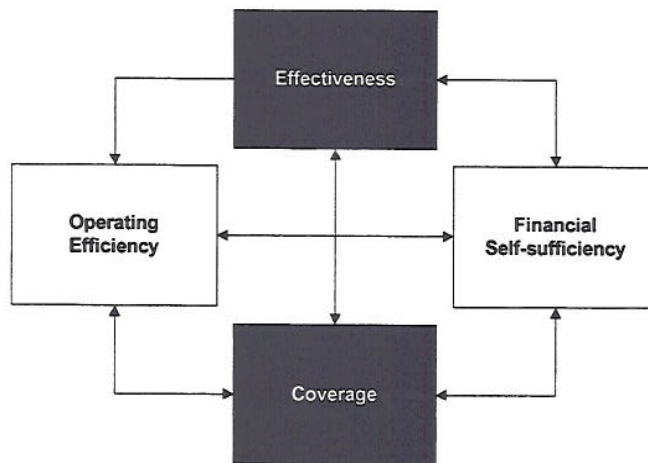
	Total Budget	Period	Target population	Budget per targeted company	Companies assisted through 6/30/99	% of target population served
Argentina	\$15.2 million	1995-99	5,050	\$3,020	1008	20.0%
Colombia	\$10.3 million	1995-98	14,699	\$701	326	2.2%
Costa Rica	\$3.3 million	1995-98 ext. 2000	4,822	\$692	1827	37.9%
El Salvador	\$2.8 million	1995-98 ext. 2000	9,721	\$283	990	10.2%

However, these differences may be due to different definitions and/or modes of operations. For example, “assisted” companies may have participated in a two-hour group seminar in one country; in another country assistance may entail in-depth one-on-one projects over many months. Without data on the level of effort expended in rendering assistance, it is impossible to interpret these differences appropriately. Similarly, results presented in different reports are not normalized to account for differences in the level of resources committed to the different programs. In the table above, it is clear that the level of resources devoted to Argentina per company in the target population dwarf that committed to El Salvador. Standardization is needed in order to facilitate comparison over time and across different centers.

Perhaps, more importantly, based on the materials sent to us, it appears that none of the programs has collected data on customer and market outcomes in a rigorous, systematic manner. Here again, it is difficult to judge whether results are good or not; they need to be considered within the context of the entire enterprise as illustrated in the following figure.



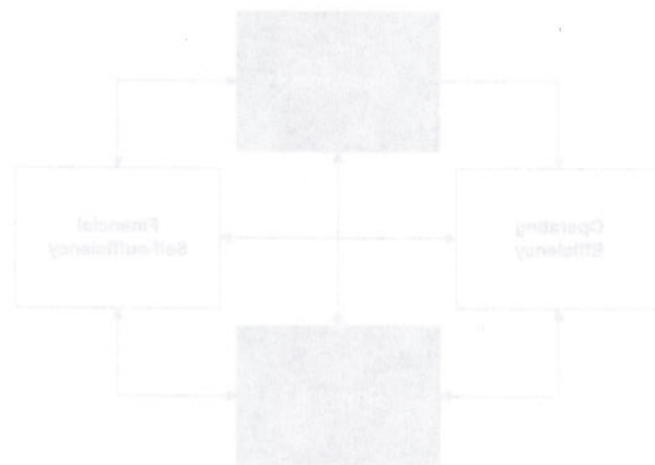
## Evaluation Framework



To ensure comparability, it is imperative that common measures *and* methods for data collection be used in the evaluation of these programs. We would suggest that each center in the different countries use the same approach to evaluate its performance. The tools presented in Appendix C provide a starting point for the development of a coherent and comprehensive evaluation system for BDS programs in Latin America. However, organizations will require training in order to ensure that the system is implemented in a consistent and rigorous manner.

That said, stakeholders should be cautious in using these measures in comparing the performance of different programs. Additional analysis will be needed to reconcile differences among programs in terms of client base, geographic coverage, service focus and other factors that influence relative performance. The point is to understand performance with respect to the set of objectives put forth by different centers and the particular business model that they have adopted.

## 12 Appendix C – Survey instruments and data collection forms



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# **Enterprise Development Center Evaluation Toolkit**

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**Prepared for:**

**The Inter-American Development Bank  
Multilateral Investment Fund**

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## Introduction

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Over the past few years, the Inter-American Development Bank (IDB) has provided financial support to various private, not-for-profit Enterprise Development Centers (EDCs) in Argentina, Colombia, Costa Rica and El Salvador to help meet the diverse needs of small and medium-sized enterprises (SMEs).<sup>1</sup> While differences among these organizations exist, all are intended to improve the performance of participating companies as well as develop a thriving market for business consulting services.

The IDB is interested in learning more about the performance of these programs. This concern stems from both pressure to ensure that monies are well spent and a desire to strengthen programs to better meet the needs of SMEs in the future. The IDB wants to make sure that future evaluations of EDCs provide objective, credible and useful information. This requires a well-designed evaluation system that focuses on correct measures and employs appropriate evaluation designs and analytical techniques. To help establish this system, Nexus Associates, Inc. – an economics and management consulting firm that specializes in performance measurement and program evaluation – was asked to prepare an evaluation toolkit that could be used by Enterprise Development Centers (EDCs) throughout Latin America and the Caribbean.<sup>2,3</sup>

These tools are intended to be used as part of a comprehensive evaluation system that can provide information for budgetary decisions, program oversight, and ongoing program management. The system should be designed to ensure that program managers can use results as a basis for modifying operations to better meet the needs of SMEs in the region served by the EDC. It should also be structured to ensure that information needed for program budgeting and oversight is provided to IDB and other stakeholders.

The toolkit contains six components: evaluation standards, evaluation framework, core performance measures, required program records, surveys and case studies.

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<sup>1</sup> There are currently ten Enterprise Development Centers in operation with IDB support. These include one in Costa Rica, one in El Salvador, five in Colombia (Santa Fe de Bogota, Medellin, Cali, Barranquilla, and Bucaramanga) and three in Argentina (Rafaela, San Rafael and Mar del Plata).

<sup>2</sup> The tools presented in this toolkit draw on the results of an evaluation of the IDB-supported EDC Rafaela-Esperanza in Argentina as well as prior work undertaken for the World Bank, the National Institute of Standards and Technology (NIST) and other organizations with which we have worked over the past five to seven years.

<sup>3</sup> The toolkit is based on the assumption that any quantitative assessment of the effectiveness of EDC will be based primarily on asking participating companies to estimate program impacts. There are, however, other approaches to evaluation, including experimental design with random assignment and quasi-experimental designs. Both involve comparison of changes in the performance of companies that participated in the program with that of similar, non-participating firms. However, budgetary and data consideration may make this type of design infeasible.



## Component 1. Evaluation Standards

Evaluation undertaken by EDCs should be guided by the standards delineated in Table 1 to help ensure consistent and high quality.<sup>4</sup>

**Table 1. Evaluation Standards**

- Evaluations should be based on a clear description of the program's target population, goals, strategies, activities and budget, including a clear articulation of causal mechanisms.
- Performance measures should have a clearly apparent and logical relationship to program activities, and include measures of immediate effects and intermediate impacts, as well as final benefits.
- Performance measures should be reliable, leading to an accurate assessment of performance, where possible based on objective indicators, rather than subjective considerations or judgements.
- Data collected as part of program evaluations should be substantially free of error, particularly bias.
- Estimates of program outcomes should be based on the concept of additionality, attempting to rule out other factors that may influence results.
- Programs should identify where their results are dependent on other IDB and other stakeholders-sponsored programs.
- Evaluations should employ analytical techniques that are appropriate given particular evaluation questions and data availability.
- Evaluation reports should call attention to any data limitations and the level of confidence that should be applied to stated results.
- Evaluation reports should draw a distinction between statistical significance and policy significance – the magnitude of impact matters.<sup>5</sup>
- Programs should commit a reasonable share of their total annual operating budgets to evaluation – on the order of one to three percent.

<sup>4</sup> The standards are based on various guidelines. For example, see *The Results Act: An Evaluator's Guide to Assessing Agency Annual Performance Plans*, United States General Accounting Office, April 1998.

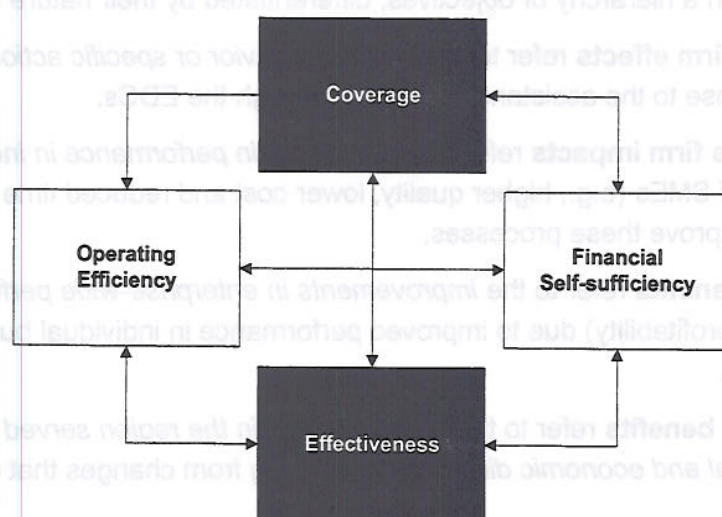
<sup>5</sup> Given a large enough number of observations, it is possible to find results that are significant from a statistical perspective, but so small as to be meaningless in terms of policy considerations.



## Component 2. Evaluation Framework

Evaluations should focus on four critical dimensions of performance: operating efficiency, financial self-sufficiency, coverage (or market penetration), and effectiveness as illustrated in Figure 1. The first two dimensions of performance deal with internal issues. The second two address issues related to the central mission of EDCs. Unlike for-profit organizations, EDCs have a specific public purpose – improve the competitiveness of SMEs in the target market, while strengthening the overall market for business development services. It is this public purpose that differentiates the EDCs from private consultants and provides the basic justification for IDB support.

Figure 1. Evaluation Framework



Each element of the framework is discussed below:

- **Operating efficiency.** EDCs should examine whether internal processes are efficient, yielding the highest level of output for a given level of input, or alternatively, using the least resources to achieve a given level of output. EDCs should use the results of the analysis to identify the changes in policies and practices required to minimize waste and take the maximum advantage of available resources, particularly staff time.
- **Financial self-sufficiency.** EDCs should assess their financial health, detailing the sources and uses of funds as well as the need for continued subsidies. EDCs should use the results of the analysis to identify the specific steps that are needed to make sure that revenues are sufficient to cover total variable and fixed costs.
- **Coverage (or market penetration).** EDCs should determine the extent to which companies in target populations – the groups of firms to which EDCs are directed – are actually receiving services. This analysis should examine penetration rates within different segments of the

population, highlighting segments that are under-served or over-served relative to the target population. EDCs should use the results of the analysis to identify steps to increase coverage within their regions.

- **Effectiveness.** The EDCs, IDB and other stakeholders want to know if programs work in terms of producing desired *outcomes*. The focus on program outcomes is intended as a means to ensure that program managers understand their responsibility for achieving results and as a basis for improving programs over time. While EDCs may differ with respect to activities, client base, geographic coverage, and funding levels, they all share a common aim – to improve the performance of SMEs. To this end, companies need to take steps to improve critical business processes and subsequent financial performance. In turn, any evaluation of EDCs should address the extent to which programs have helped SMEs improve these processes and result in stronger growth and profitability. Program outcomes can be considered within a hierarchy of objectives, differentiated by their nature and timing:
  - ⇒ **Immediate firm effects** refer to *changes in behavior or specific actions* taken by SMEs in direct response to the assistance provided through the EDCs.
  - ⇒ **Intermediate firm impacts** refer to the *changes in performance in individual business processes* of SMEs (e.g., higher quality, lower cost and reduced time) as a result of taking actions to improve these processes.
  - ⇒ **Final firm benefits** refer to the *improvements in enterprise-wide performance* (e.g., sales growth and profitability) due to improved performance in individual business processes within SMEs.
  - ⇒ **Final public benefits** refer to the *improvements in the region served by the EDC along various social and economic dimensions* resulting from changes that occur in assisted firms.

In addition, the purpose of the EDCs extends beyond impacts on individual businesses. In particular, EDCs aim to build a thriving market for consulting services in their regions. The EDCs, IDB and other stakeholders also want to know the degree to which the centers have contributed to growth in the demand for consulting services and the supply of these services in the market.



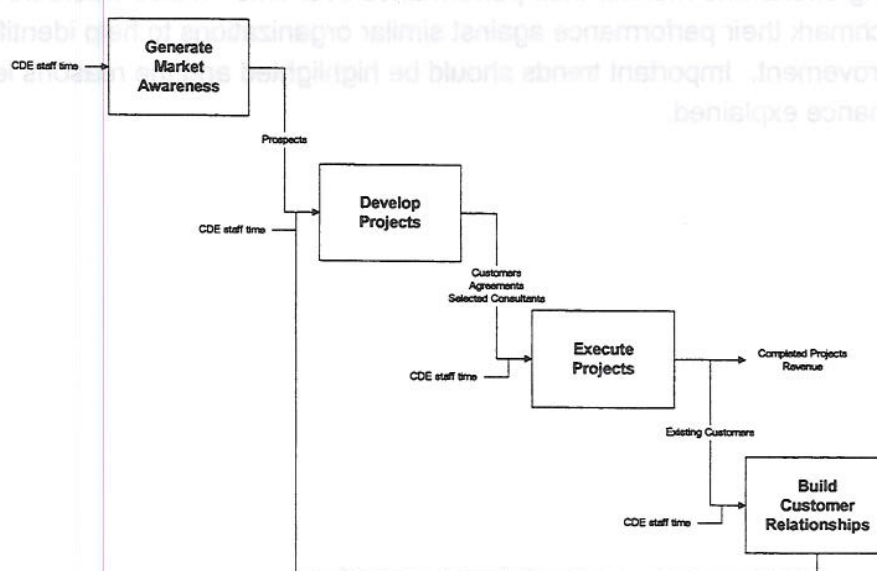
### Component 3. Core Performance Measures

EDCs should track their performance over time with respect to each element of the evaluation framework: operating efficiency, financial self-sufficiency, coverage and effectiveness. Tables 2 and 3 present a set of core performance measures that should be adopted by all EDCs, along with the means to collect data necessary to calculate each of the performance measures. These sources are discussed in more detail in other components of the toolkit.

The recommended performance measures that deal with efficiency and financial self-sufficiency flow from an analysis of core processes within EDCs as illustrated in Figure 2. These can be summarized as follows:

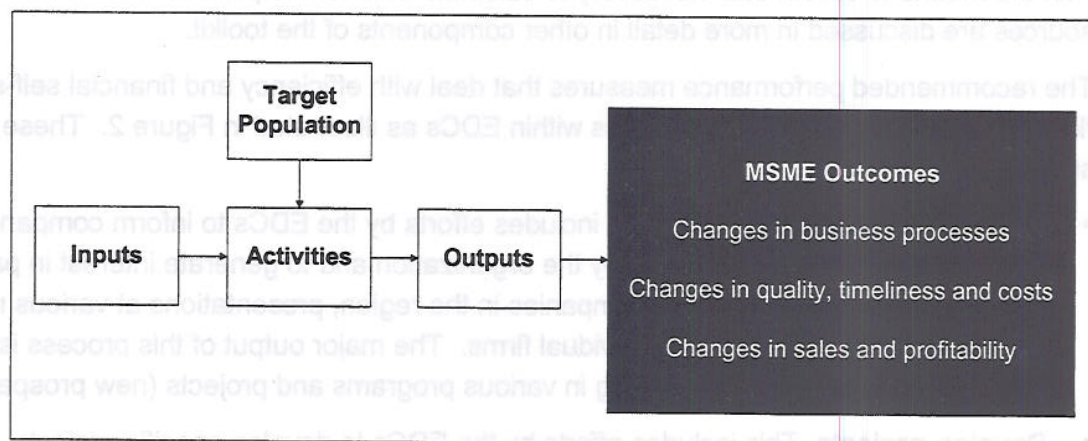
- **Develop market awareness.** This includes efforts by the EDCs to inform companies in the region about the services offered by the organization and to generate interest in participation. This includes direct mailings to companies in the region, presentations at various meetings and conferences, and visits to individual firms. The major output of this process is companies that express interest in participating in various programs and projects (new prospects).
- **Develop projects.** This includes efforts by the EDCs to develop specific projects, including the formulation of the terms of reference, selection of consultants, negotiation of an agreement, and securing company participation. The major output is signed agreements for selected consultants to undertake a new project with identified customers.
- **Execute projects.** This includes all efforts to fulfill the scope of work outlined in the terms of reference. As noted above, in many cases, the primary resources used in this process are outside consultants. The major outputs are completed projects and earned revenue.
- **Build company relationships.** This includes efforts by staff to maintain contacts with companies through various events and meetings. The major output is expressions of interest in undertaking additional projects.

Figure 2. Process Map



The measures included in Table 3 dealing with coverage and effectiveness are driven by the underlying program logic model as shown in Figure 3.

**Figure 3. Program Logic Model**



In addition to the core measures presented in the tables, each EDC should develop an explicit set of performance measures that are relevant to its specific activities and goals. In so doing, they should apply three basic criteria by which to judge whether measures are good – validity, reliability and practicality. Valid measures provide an accurate reflection of the underlying concept that is supposed to be measured. Reliable measures are less subject to measurement error, providing consistent estimates of the “true” value of whatever aspect of performance is being assessed. Finally, outcome measures have to be practical in terms of implementation – it has to be possible to obtain data necessary to calculate measures within budgetary, time and other constraints.

Centers should establish specific targets for each of the measures that they adopt as part of ongoing planning efforts and monitor their performance over time. It also would be helpful for centers to benchmark their performance against similar organizations to help identify areas warranting improvement. Important trends should be highlighted and the reasons leading to good or poor performance explained.



**Table 3. Core Measures of Efficiency and Financial Self-Sufficiency**

Performance Measure	Type	Data Source
Average hours spent developing a new prospect	Efficiency	Program records
Marketing expenses per new prospect	Efficiency	Program records
New prospects per field agent	Efficiency	Program records
Average hours spent developing a new project	Efficiency	Program records
New projects per field agent	Efficiency	Program records
New customers per field agent	Efficiency	Program records
Percentage of new projects with repeat customers	Efficiency	Program records
Conversion rate: prospect to customer	Efficiency	Program records
Active projects per field agent	Efficiency	Program records
Average hours spent per active project	Efficiency	Program records
Percentage of staff available hours charged to projects	Efficiency	Program records
Completed projects per field agent	Efficiency	Program records
Field agents as a percentage of total staff	Efficiency	Program records
Operating costs per client served	Efficiency, Self-sufficiency	Program records
Operating costs per total staff	Efficiency, Self-sufficiency	Program records
Operating costs per project hour	Efficiency, Self-sufficiency	Program records
Net revenues per project hour	Self-sufficiency	Program records
Average gross revenue per new project	Self-sufficiency	Program records
Gross revenue per field agent	Self-sufficiency	Program records
Net revenue per field agent	Self-sufficiency	Program records
Payments to third party service providers as a percentage of revenues	Self-sufficiency	Program records

**Table 3. Core Measures of Coverage and Effectiveness**

Performance Measure	Type	Data source
Percentage of center expenses covered by revenues	Self-sufficiency	Program records
Percentage of target population served	Coverage	Program records
Percentage of clients that were satisfied or very satisfied with the services provided	Effectiveness	Survey
Percentage of clients that could not have received the same services elsewhere	Effectiveness	Survey
Percentage of clients that changed one or more businesses processes as a direct result of the services provided	Effectiveness	Survey
Percentage of clients that improved one or more business processes as a direct result of the services provided	Effectiveness	Survey
The average percent change in annual sales among all clients as a direct result of the services provided	Effectiveness	Survey
The average percent change in value added among all clients as a direct result of the services provided	Effectiveness	Survey
The average percent change in gross profit among all clients as a direct result of the services provided	Effectiveness	Survey
The average percent change in employment among all clients as a direct result of the services provided	Effectiveness	Survey
The total change in value added among all clients per dollar expended on the program	Cost-effectiveness	Survey, Program records
The total change in employment among all clients per dollar expended on the program	Cost-effectiveness	Survey, Program records



## Component 4. Program Records

EDCs should capture and store program data in a systematic manner. Internal records are a vital source of data for evaluation. At a minimum, all programs should capture information on the characteristics of companies that they have served, the nature of services provided to these companies, and basic financial information. The data should be collected and analyzed at least quarterly. The use of computerized relational database will facilitate this process.

A list of program data needed to calculate performance measures related to efficiency and financial self-sufficiency delineated in Component 3 is included in Table 4.

**Table 4. Data Required for Efficiency and Financial Self-sufficiency Performance Measures**

1. Number of open projects at end of previous quarter
2. Number of new projects initiated in current quarter
3. Number of projects closed in current quarter
4. Gross bookings for new projects in current quarter
5. Number of customers at end of previous quarter
6. Number of new customers in current quarter
7. Number of prospects at end of previous quarter
8. Number of new prospects in current quarter
9. Total full, part-time, and in-kind staff committed to EDC activities
a. Total staff paid by EDC (FTE)
b. In-kind staff (FTE)
10. Total full, part-time, and in-kind field staff committed to EDC activities
a. Total field staff paid by EDC (FTE)
b. In-kind field staff (FTE)
11. Total hours charged to key processes (sum 11a - 11f, 11h)
a. Number of hours charged to customer projects
b. Number of staff hours charged to holidays, vacation, sick and leave
c. Number of staff hours charged to project development
d. Number of staff hours charged to prospect development
e. Number of staff hours charged to company relationship building
f. Number of total staff hours charged to travel
g. Number of total field staff hours charged to travel
h. Number of hours charged to all other processes

Table 5 provides a list of other data that centers should capture routinely. In addition to providing basic descriptive program information, these data are needed to design sampling strategies for surveys and/or as explanatory variables in subsequent statistical analyses.

**Table 5. Other Data Required for Analysis**

Program Data	Type
Name of company served	Client
Location of company	Client
Corporate affiliation	Client
Foreign-ownership	Client
Industry classification (SIC four-digit level)	Client
Total number of employees	Client
Total annual sales	Client
Type of assistance provided to each client	Service
Magnitude of assistance provided to each client	Service
Duration of assistance provided to each client (calendar days)	Service
Business process focus of assistance provided to each client	Service



## Component 5. Surveys

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Much of the data required to conduct an effective evaluation can only be acquired from client surveys. In most situations, surveys constitute the only way to gather information from a large number of companies on customer satisfaction and impacts resulting from their participation in a program. The questionnaires included in this component can be used by all EDCs. At a minimum, EDCs should survey customers once per year to obtain data required for all of the measures specified above as part of Component 3. They should also survey consultants that have provided services to EDC customers periodically.

There are a number of critical issues that need to be addressed to design and administer a survey successfully. These include the following:

- **Sampling.** EDCs should send the survey to all companies or a representative sample of companies that received services in the previous 12 months. If a sample is used, it is imperative that each client has a known and independent probability of being included to enable results to be extrapolated to the total population of firms served during the period. Sending surveys to companies that are likely to respond in a certain way or drawing a convenience sample will bias results.
- **Response rates.** EDCs should strive for a high response rate, i.e., greater than 50 percent. Maximizing response rate is particularly important if there is some reason to believe that companies that *do* respond may differ systematically from those that *do not*. For example, if respondents tend to regard the program more positively than non-respondents do, the survey results will be biased in favor of the program. (The opposite could also be true: survey respondents may be less happy with the program than non-respondents and may use the survey as a means of expressing their frustration.) Follow-up contact is probably the best means of ensuring that written surveys are returned. Getting agreement to comply with data collection when the individual or organization enters into a contract with the center can also boost response rates.
- **Data entry and quality control.** EDC should establish specific procedures for data entry and quality control. All data should be checked thoroughly before it is recorded. The quality of data entry should be verified by spot checking all or a sample of forms for accuracy and by carefully examining data for responses that appear inconsistent. Coding should take special note of how to distinguish missing data versus a response of zero or “not applicable.” It is recommended that original copies of written questionnaires be kept on file in the event of a discovery of systematic entry errors or accidental loss of data.

## EDC Customer Survey

Company name: \_\_\_\_\_

1. Have you received any service from the Enterprise Development Center (EDC)? ☐ Yes ☐ No

2. If you answered YES to question 1, how satisfied were you with EDC services?  
☐ Very Satisfied ☐ Satisfied ☐ Neutral ☐ Dissatisfied ☐ Very Dissatisfied

3. Could you have obtained the same services from another organization? ☐ Yes ☐ No

4. Did your company benefit in any of the following ways from working with EDC?

Defined our needs more clearly	<input type="checkbox"/> Yes <input type="checkbox"/> No	Made consultants affordable	<input type="checkbox"/> Yes <input type="checkbox"/> No
Found consultants with required expertise	<input type="checkbox"/> Yes <input type="checkbox"/> No	Managed relationship with consultants	<input type="checkbox"/> Yes <input type="checkbox"/> No
Negotiated more favorable agreements with consultants	<input type="checkbox"/> Yes <input type="checkbox"/> No	Helped us implement consultant recommendations	<input type="checkbox"/> Yes <input type="checkbox"/> No

5. Has your company implemented changes in any aspects of its business as a direct result of EDC services? ☐ Yes ☐ No

6. If you answered YES to question 5, did you experience changes in functions or processes related to any of the following?

Business strategy formulation	<input type="checkbox"/> Yes <input type="checkbox"/> No	Quality system	<input type="checkbox"/> Yes <input type="checkbox"/> No
Market research	<input type="checkbox"/> Yes <input type="checkbox"/> No	Safety and health	<input type="checkbox"/> Yes <input type="checkbox"/> No
Advertising and/or promotion strategy	<input type="checkbox"/> Yes <input type="checkbox"/> No	Distribution channels for products	<input type="checkbox"/> Yes <input type="checkbox"/> No
Sales	<input type="checkbox"/> Yes <input type="checkbox"/> No	After sales services	<input type="checkbox"/> Yes <input type="checkbox"/> No
Product design	<input type="checkbox"/> Yes <input type="checkbox"/> No	Management of human resources	<input type="checkbox"/> Yes <input type="checkbox"/> No
Process design	<input type="checkbox"/> Yes <input type="checkbox"/> No	Financial systems	<input type="checkbox"/> Yes <input type="checkbox"/> No
Production	<input type="checkbox"/> Yes <input type="checkbox"/> No	Information systems	<input type="checkbox"/> Yes <input type="checkbox"/> No
Acquisition of raw materials and parts	<input type="checkbox"/> Yes <input type="checkbox"/> No	Other: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No

7. Did these changes have an impact on your company in any of the following ways?

Increase in productivity (production volume per employee or per hour)	<input type="checkbox"/> Yes <input type="checkbox"/> No	Increase in number of customers	<input type="checkbox"/> Yes <input type="checkbox"/> No
Reduction in scrap, rework, or reject rate	<input type="checkbox"/> Yes <input type="checkbox"/> No	Decrease in production time or delivery time	<input type="checkbox"/> Yes <input type="checkbox"/> No
Lower costs	<input type="checkbox"/> Yes <input type="checkbox"/> No	Decrease in absenteeism and/or accidents	<input type="checkbox"/> Yes <input type="checkbox"/> No
Compliance with norms and regulations	<input type="checkbox"/> Yes <input type="checkbox"/> No	Others: _____	<input type="checkbox"/> Yes <input type="checkbox"/> No



8. Has your company improved its competitiveness as a direct result of EDC services? ☐ Yes ☐ No

9. If you answered YES to question 8, did improved competitiveness result in higher sales or profits?

Higher sales ☐ Yes ☐ No

Higher profits ☐ Yes ☐ No

10. Have you used consulting services from any organization other than EDC in the last 3 years? ☐ Yes ☐ No

11. If you answered YES to question 10, how many consulting projects have you undertaken in the last three years other than those with EDC? Number \_\_\_\_\_

12. How much did you invest in these other consulting services? Total \$ \_\_\_\_\_

13. As a result of your experiences working with EDC, are you more willing to hire consultants on your own in the future? ☐ Yes ☐ No

14. Please provide data regarding 1998 and 1999 in the first two columns. In the third column, please estimate what the values would have been in 1999 if you had not received assistance from EDC.

		1998	1999	Estimate for 1999, if you had not received services
Total sales		\$	\$	\$
Total exports		\$	\$	\$
Total wages		\$	\$	\$
Total purchasing costs (parts, raw materials, etc.)		\$	\$	\$
Total number of employees				

Thank you for your time – please fax this survey to:

## EDC Consultant Survey

Name of Consulting Company/Name of Consultant: \_\_\_\_\_

	1997	1998	1999	
<b>1. How many consulting projects did you complete in the following years?</b>				
a) What percentage of the total projects completed in each year were conducted for small and medium enterprises (< 100 employees)?	%	%	%	
b) How many of the total projects completed in each year were conducted through EDC?				
<b>2. What were your total fees from consulting projects in the following years (in US dollars)?</b>				
a) What percentage of your total fees in each year were from projects with small and medium enterprises (under 100 employees)?	%	%	%	
b) What percentage of your total fees in each year were from projects conducted through EDC?	%	%	%	
<b>3. Did you provide consulting services to small and medium enterprises in the EDC region prior to the center's establishment in 19XX?</b>	<input type="checkbox"/> Yes <input type="checkbox"/> No			
<b>4. How many years of experience doing consulting work do you have?</b>	_____ years			
<b>5. To what extent do the following factors pose barriers to your ability to provide consulting services to small and medium enterprises (SMEs)?</b> Please indicate the significance of the barrier on a scale of 1 to 4, where 1=not a barrier, 2=minimal barrier, 3=significant barrier, and 4= very significant barrier				
a) SMEs are unable to benefit from our expertise	1	2	3	4
b) SMEs lack experience working with consultants	1	2	3	4
c) SMEs are unable to pay our standard rates	1	2	3	4
d) SMEs have difficulties implementing consultant recommendations	1	2	3	4
e) SMEs have difficulties finding qualified consultants	1	2	3	4
f) The cost of marketing services to SMEs is too high	1	2	3	4
g) Others: _____	1	2	3	4
<b>6. How would you characterize your relationship with EDC?</b>	<input type="checkbox"/> Collaborative <input type="checkbox"/> Competitive			



7. Have your own sales changed as a result of the services provided by EDC? ☐ Increase  
☐ No change  
☐ Decrease
8. Do you plan on continuing to offer consulting services to SMEs in the region in the future? ☐ Yes  
☐ No
9. Assuming EDC no longer existed, would SMEs be more or less likely to use consultants in the future? ☐ More likely  
☐ No change  
☐ Less likely
10. Which of the following possible benefits have you derived from working on projects through EDC? (check all that apply)
- a) The EDC is a valuable source of new customer leads ☐ Yes ☐ No
  - b) The EDC reduces our marketing costs ☐ Yes ☐ No
  - c) The EDC helps sharpen the definition of project goals ☐ Yes ☐ No
  - d) The EDC reduces the risk of nonpayment for services ☐ Yes ☐ No
  - e) The EDC provides faster payments ☐ Yes ☐ No
  - f) The EDC makes it affordable for SMEs to use our services ☐ Yes ☐ No
  - g) The EDC improves relationships with the customer ☐ Yes ☐ No
  - h) The EDC has enable us to expanded into new markets ☐ Yes ☐ No
  - i) The EDC is able to secure a stronger commitment to projects by SMEs ☐ Yes ☐ No
  - j) The EDC improves the efficiency in service delivery ☐ Yes ☐ No
  - k) Other: \_\_\_\_\_ ☐ Yes ☐ No
11. Have any companies that you have worked with through the EDC hired you again as a direct result of the services that your company provided through the EDC? ☐ Yes ☐ No
12. How satisfied are you with the performance of the EDC in the following areas? Please rate on a scale of 1 to 4, where 1=very dissatisfied, 2=dissatisfied, 3=satisfied, and 4= very satisfied
- a) Selecting consultants for specific projects 1 2 3 4
  - b) Managing specific projects 1 2 3 4
  - c) Maintaining relationships with SMEs 1 2 3 4
  - d) Administering contracts 1 2 3 4
  - e) Other: \_\_\_\_\_ 1 2 3 4



## Component 6. Case Studies

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EDCs should prepare case studies as an integral part of evaluations. The aim should be to prepare a minimum of two to four cases per year. The case studies should adhere closely to the program logic model developed by the program. They should trace the path from program activities to outputs to outcomes, following the logic models developed by the centers. The logic model should guide the questions asked, the program and company personnel who should be interviewed, the written materials reviewed, and the final write-up of the case.

In general, case studies involve multiple sources of information including direct observation, interviews, documents and physical artifacts. A case study is much more than a service delivery “success story.” It should seek to provide insights into the dynamics of the program. A good case study follows a rigorous methodology, presenting a clear and logical connection between program activities and business outcomes. In each case study, alternative explanations are ruled out explicitly through qualitative analysis such as pattern matching and event chronologies.

Case studies can serve a variety of purposes. Specific cases are often selected because they illustrate a particular point the evaluator would like to make. For instance, they can be useful to demonstrate the reasons for different outcomes due to variations in service provision and/or differences in clients. They can be used to describe “typical” client outcomes or particularly successful or unsuccessful ones.

Because they may employ a wide variety of information types, case studies require planning to be effective. Before beginning research, it is critical to establish the specific purpose, approach, target, and data sources for case studies.

- **Select unit of analysis.** Programs should identify the entity on which the case will focus. A case study could focus on a range of levels: the program, a specific client firm, a specific project, an outside service provider, or a business network. Despite the range of options, most cases focus on a specific client and their experiences with the program. The customer should be chosen for a reason. In general, in selecting cases, attention should be focused on companies where there is a great deal to learn. For example, this may include companies that seem to be outperforming their peers or it could be companies that are having difficulties responding to competitive pressures. Unlike surveys, case studies do not have to be representative of the entire client base.
- **Consider data sources.** A rich case study employs a number of data types and sources. It benefits from the use of additional statistical and descriptive data collected in other components of the evaluation, for example, from client surveys or program activity records. In general, case studies are strengthened by the inclusion of other pertinent statistics that describe organizations, situations, causes and effects.
- **Address alternative explanations.** A good case study will always address alternative explanations for the changes observed (i.e., the impacts) rather than simply asserting that the program alone is directly responsible. For example, alternative explanations for the cause of benefits observed among clients might include “the economy improved,” “they helped themselves,” or “their biggest customer grew rapidly.” In the process of writing the case



study, the plausibility of rival explanations for observed phenomena need to be addressed. Depending on the case, it may or may not be possible to disprove rival explanations completely. However, it is important to eventually discuss them -- readers are likely to think of these alternative explanations themselves and dismiss the case study conclusions if these alternatives are not discussed.

- **Use results in communications with sponsors and public.** A case study is likely to have multiple uses. It should be fully incorporated into the program's communications strategy. Possible uses include reporting to funding agencies, marketing materials, public relations materials and briefings for program sponsors.

An outline of the recommended standard case study research protocol for use in researching and writing case studies for EDCs is presented on the next page.

## **Protocol for Case Study Report**

### **TITLE PAGE**

### **PREFACE AND ACKNOWLEDGEMENTS**

Conclude this section by giving the name, address, e-mail, etc., of a source for further information about the case.

### **EXECUTIVE SUMMARY**

The case study should include an executive summary highlighting major findings.

### **CASE REPORT**

#### **I. Brief description of the firm and its business**

#### **II. Logic model narrative**

The bulk of the case narrative should be organized as if one were “filling out” the logic model. The following subheadings are suggested:

##### **A. The nature of the assistance**

1. Preceding conditions (problems) that led to the assistance
2. How the initial contacts were made
3. The program activities that were carried out
4. The program outputs that were delivered
5. New capacity for change that resulted

##### **B. Changes in manufacturing practice – immediate firm effects**

1. The recommended changes in business processes
2. How the recommended changes were implemented

##### **C. Changes in manufacturing performance**

1. Intermediate firm impacts
2. Final firm benefits

##### **D. Competing explanations for the performance of the company**

#### **III. References**

#### **IV. Supplementary materials:**

##### **A. Chronology**



Define temporal markers for key events, identifying specific dates where possible (give periods of time where specific dates are not possible). The events should begin with the preparation for the practice, and might cover the following:

- Decision to request assistance
- Dates of needs assessment, if conducted
- Timeline for planning the service
- Stages of delivering the service (and dates)
- Date when the processes were changed or established
- Dates when immediate firm effects began to be observed
- Dates when intermediate firm impacts began to be observed
- Dates when the final firm benefits began to be observed
- Dates of other key accomplishments

**B. Other materials**

1. Data tables

2. Testimonials

Collect data about the perceived satisfaction with the program outputs. Grouped data may include survey results from the local evaluation or the needs assessments conducted by the company or program.

3. List of practice materials

Collect examples of documents that were used in implementing the change in the practice. These might include memos, internal reports, plans, etc. Also, collect illustrative tools that were used as part of the practice, for example, revised forms or job tickets.

4. Graphics/pictures

If possible, collect any "before and after" pictures of the practice. Collect any other graphic illustrations of the change in business processes, for example, plant layout diagrams or revised method flow charts.









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