

PROJECT TO SUPPORT TECHNOLOGICAL INNOVATION IN NICARAGUA

(NI-0147)

EXECUTIVE SUMMARY

Borrower:	Republic of Nicaragua	
Executing agency:	Ministry of Development, Industry, and Trade (MIFIC), acting through the Nicaraguan Science and Technology Council (CONICYT).	
Amount and source:	IDB: (FSO)	US\$6.79 million
	Local contribution ¹ :	US\$2.67 million
	Total:	US\$9.46 million
Terms and conditions:	Amortization period:	40 years
	Grace period:	10 years
	Disbursement period:	30 months (plus six months to finance the project audit)
	Interest rate:	1% for first 10 years, 2% thereafter
	Inspection and supervision:	1% of loan amount
	Credit fee:	0.5% per year on disbursed balance
Objectives:	<p>The general objective of the project is to lay the foundations for a framework of action ("enabling conditions") that facilitates technology transfer and technological innovation in small and medium-sized businesses. The project's specific objectives are: (i) to expand and deepen the market for technology services; (ii) to pilot, under controlled conditions, organizational and financial arrangements that facilitate technological innovation; and (iii) to strengthen the capacities of bodies that coordinate supply and demand among technology services.</p>	

At the end of the project, on the basis of lessons learned, the government will decide how and how much to increase its investment in science and technology. These lessons will make possible: (i) an appropriate institutional strategy; (ii) a national innovation system capable of coordinating technological changes, and, hence, an expansion/deepening of the market for technology services; (iii) minimal State participation as facilitator and regulator of the sector; (iv) greater awareness of the benefits and applicability of new technologies; (v) a framework of sustainability including an

¹ This amount will include up to the equivalent of US\$1.6 million from the project beneficiaries.

institutional proposal for obtaining funds from different sources; and (vi) a larger number of SMEs capable of achieving high levels of quality and productivity on a long-term basis.

Description: The project consists of two components:

Component 1. Pilot scheme to remove obstacles to supply and demand: Matching grants and financial outsourcing

This component will test out new mechanisms for delivering matching grants for technological innovation in SMEs, and for projects to strengthen technology service laboratories. This funding mechanism is expected to: (i) stimulate and meet the demand for technological innovation; (ii) improve the supply of services; (iii) encourage joint SME-university projects; and (iv), contribute to higher export value-added in the longer run.

Component 2. Strengthening of national innovation system (NIS)

This component will support: (i) a strengthening of the Nicaraguan Science and Technology Council (CONICYT), as the central pillar and facilitator for NIS development, and of the Technology, Standardization and Metrology Office (DTNM)—given the relevance of its functions both to CONICYT and to the project; (ii) gradual incorporation of the project's coordinating unit (CU) as CONICYT executive secretariat during project execution; (iii) establishment of a supervision, monitoring and evaluation system; (iv) creation of a pilot network of technology facilitators to serve as intermediaries between SMEs and technology service providers; and (v) testing of new NIS coordination models.

Justification for an innovation and learning loan:

This project qualifies as an innovation loan given that:

1. **Lessons will be learned from a new institutional experience:** the project will trial an administrative outsourcing plan for channeling finance to SMEs (paragraphs 2.5; 2.6). This will afford an insight into this method, and provide new institutional experience with the technological facilitators network (paragraph 2.15), which is to be implemented for the first time. In addition, a sustainable financing scheme will be agreed and proposed (paragraph 2.10). Also, a method for analyzing and financing small-scale technological projects to enhance SME productivity will be tested for the first time (paragraph 2.7). This is expected to be useful for many other financial institutions, thereby generating positive institutional externalities.

2. **Flexibility will be added to the design:** the various methods for delivering services and disseminating information on innovation-related technological change will provide the coordinating unit with the feedback needed to foster the emergence of designs that were unforeseeable during the preparation stage.
3. **A new institutional framework for action will be tested:** the use of science and technology to achieve a massive increase in SME productivity and competitiveness is a new concept for Nicaragua's economic development.
4. **Mechanisms will be tested for using appropriate information and communication technologies** aimed at minimizing information asymmetries, in accordance with the specific needs of SMEs and the country.

Relationship of the project to the Bank's strategy for the sector and the country:

In Nicaragua, the Bank is involved in supporting the enhanced poverty reduction strategy (ERRP). The present project is a key tool for implementing that strategy. With the leading role assigned to SMEs, this operation, which facilitates access to financing and an increase in technical support services, is consistent with the Bank's country strategy and with the Eighth Replenishment.

Environmental and social review:

The Operating Regulations (Component 1, Matching Grants) contains specific criteria to ensure the subprojects financed do not generate negative environmental impacts. Specifically, it will be a prerequisite that participating SMEs be compliant with national regulations on the environment, or be in the process of compliance. In addition, the technology facilitators (TFs) will receive training to identify possible environmental impacts in the activities of the firms involved. Apart from this, technology facilitation centers (TFCs) will contain electronic information on clean technologies and other procedures for recognizing harmful environmental effects and mitigating them.

Benefits:

This project will provide experience of new institutional arrangements, and will facilitate institutional strengthening among the NIS entities involved. These outcomes will help to eliminate obstacles to technology transfer and set the stage for overcoming three major concurrent bottlenecks that restrict the potential of SMEs to participate in the global economy: funding, information and timely technical support for technological innovations. The project will allow collective learning about the uses of science and technology, which will foster better coordination of interests and economic exchange between the various actors in the national innovation system.

Risks: The project's main risk is that CONICYT may fail to obtain a permanent budget to maintain an effective organization, and that it does not hire experienced staff from the CU, a basic requirement for providing leadership in the administration of technological change in the country.

This risk can be overcome, however, since: (i) the mandate CONICYT has been given to carry out its functions is established in its charter; (ii) the support provided in this project for disseminating its benefits and the lessons learned will be very well targeted, in order to gain allies to support project sustainability; (iii) additional measures have been taken to make the project sustainable, including preparation of a proposal at the end of the project for a fund capture mechanism, the Nicaraguan Technological Innovation Fund (FONITEC); and (iv) the facilities for financing (matching grants), and for promotion and forging closer relations with SMEs (facilitators network), will turn the latter into key interest groups along with other new actors involved. And finally, CONICYT, along with the increased productivity/income resulting from its actions, are crucial for achieving the objectives of the enhanced poverty reduction strategy, so the national budget is expected to contribute to its sustainability.

Special contractual clauses:

Special conditions precedent to disbursement of the loan:

The borrower shall demonstrate to the Bank that: (i) the Project Coordinating Unit has been set up with a complement of technical staff and it has been equipped with the work materials required for it to function in accordance with the terms and conditions previously agreed on with the Bank (paragraph 3.8), and (ii) CONICYT's regulations have entered into effect.

Once the loan contract has been duly signed and is in effect, and after the general conditions precedent to the first disbursement have been satisfied and before the borrower has hired the technical experts for the CU, it is recommended that the Bank disburse up to the equivalent of US\$100,000 from the loan proceeds for the purpose of engaging the aforesaid experts and defraying their fees.

The loan contract will also contain standard Bank conditions relating, among other things, to audits, reports, inspections, evaluations, maintenance, and procurement of goods and services.

Poverty-targeting and social sector classification:	This operation does not qualify as a poverty-targeted investment (PTI) or as a social-equity enhancing project, as described in the indicative targets mandated by the Bank's Eighth Replenishment (document AB-1704 (paragraph 4.9).
Exceptions to Bank policy:	None.
Procurement:	The procurement of goods and related services and the contracting of consulting services will be carried out in accordance with Bank's usual policies and procedures. The project does not entail procurement for civil works. International competitive bidding will be required for: (i) goods and related services in amounts greater than, or equal to, US\$250,000; and (ii) for consulting services in amounts over US\$200,000. The procurement of goods and related services and the hiring of consulting services in amounts below the thresholds indicated will be governed, in principle, by the provisions of national legislation (paragraph 3.35).