
SOCIAL ENTREPRENEURSHIP PROGRAM

PROJECT SYNTHESIS

1. **Country:** Costa Rica
2. **Project number:** CR-L1138/CR-T1197
3. **Project name:** Technology to Improve Health Care in Central America
4. **Executing Agency and Borrower:** Asociación de Servicios Médicos para el Bien Social [Health Care Association for Social Good] (ASEMBIS)
5. **IDB unit:** Multilateral Investment Fund (MIF)
6. **Amount of financing**

	<u>IDB US\$</u>	<u>LOCAL US\$</u>	<u>Total US\$</u>
Reimbursable financing	1,000,000	244,000	1,244,000
Technical cooperation	<u>250,000</u>	<u>286,500</u>	<u>536,500</u>
Total:	1,250,000	530,500	1,780,500

7. **Objective and purpose of the project**

The proposed project aims to support improved access and quality of health care services for patients at the base of the pyramid and in vulnerable areas in Central America. The project's purpose will be for ASEMBIS to improve and expand health care by incorporating technological innovations into the business model.

8. **Components of the project**

- a. **Reimbursable financing component.**

ASEMBIS will use these resources to acquire a new digital ophthalmic lens measurement plant and laboratory. This technology is highly automated, self-calibrating, reduces production and equipment maintenance costs, and uses free form digital technology to manufacture lenses. Work can be monitored in real time via internet on this equipment, and status and machine reports can be generated, resulting in greater production, quality and inventory control. The benefit to patients is access to more precise lenses, still at low cost and in less time, because the technology allows for: (i) improved precision from 0.12 diopters to 0.01 per prescription; and (ii) reduced lens delivery time to patients, from 5-6 days to 2 days once they select their frames. The advantages of the new equipment for ASEMBIS are: (i) an estimated 25% reduction in electricity and water consumption; (ii) a 30% increase in annual production capacity of eyeglasses per shift (which would nearly quadruple production capacity running three shifts); (iii) a 50% reduction in lens inventory, which entails lower financial costs; (iv) creation of a centralized inventory, instead of inventories in each of the 12 branch offices; (v) reduced transportation costs, eliminating one of the two current transportation segments; and (vi) real-time communication between the branch and the plant regarding the status of each order, optimizing inventory management. The plant/laboratory is world class⁴ and used by large regional optical chains. ASEMBIS has already conducted a viability study and reviewed the technology on a trip to the United States.

The total cost for the equipment delivered to ASEMBIS property has been quoted at US\$1.07 million, which includes a 12% discount from Schneider for ASEMBIS's nonprofit status. Reimbursable IDB resources will cover up to US\$1 million, and the remainder (US\$70,000) will be paid by ASEMBIS with counterpart resources. ASEMBIS will also contribute counterpart resources to this component to build and outfit the building where the plant will be installed, as well as plumbing, drainage, and electricity, at an estimated cost of US\$174,000. ASEMBIS anticipates that construction of the building can begin in January 2019, and it would be ready when the equipment arrives from Germany, three months after it is ordered and the first payment of 30% of the total cost is made.

b. Nonreimbursable technical-cooperation component.

Through new technological solutions, ASEMBIS aims to develop the information it currently has and that it could obtain in the future, about patients, branch office management processes, and lens production. ASEMBIS has already begun the technology transformation process by implementing digital patient files, to manage each patient's profile and history, and the Agenda system, to electronically manage care schedules and appointments. These two tools, the first in deployment and the second recently fully deployed, already represent an innovative change to its business model, which has also triggered a positively received process of cultural change and adaptation among both internal and external users. The technical cooperation operation aims to promote and accelerate this process through two components: (i) *Innovation to manage impact and improve the quality of patient care*, which seeks to define the most innovative solutions aligned with the strategy of expanding and improving health care services; and (ii) *Technological transformation*, which will implement these innovative solutions by using new, cost-efficient technologies and other tools to generate greater impact.

2.7 The technical cooperation operation expects to improve the following ASEMBIS areas: (i) create a data and business intelligence system linked to impact management; (ii) improve time and quality of optical services and lens delivery; (iii) initiate a system of environmental improvement, waste management, and efficient plant capacity utilization; (iv) recover business process and patient data and use it along with other big data sources; (v) increase the capacity and facilitate the implementation of touring with a new mobile unit and online access to management systems; (vi) improve personalized customer care and communication thanks to new automated solutions; and (vii) improve the quality of service, and remotely monitor and expand care using telemedicine solutions.

The open innovation methodology will be key to this process. This methodology is characterized by combining internal and external knowledge and encouraging interagency collaboration and collaboration among different technical areas, for which the participation of universities, research centers, technological and strategic solutions companies, and start-ups, consulting firms, and experts from the public and private sectors is key. This type of methodology is also cost efficient, informative, and functional, attracting and building ties with other actors and sources of relevant knowledge. With it ASEMBIS also seeks to generate collective knowledge for the common good, which also entails a learning process for participating institutions, to generate greater impact on access to quality health care services in Central America.

In the context of technological innovation, three challenges of interest have been preidentified: (i) strategic and impact management of the business, (ii) improving the quality of patient care, and (iii) improving environmental and waste management. These challenges

should take into account the analysis of ASEMBIS’s expansion perspectives and strategies, and should meet the criteria of (i) cost efficiency, (ii) ease of institutional absorption and adaptation of the internal and external client; (iii) replicability, scalability, and interconnectivity of the tool to facilitate ASEMBIS’s expansion; (iv) functionality and simplicity to achieve social and environmental impact objectives; and (v) developed and extensively tested innovative, technology-based solutions and tools.

The technical cooperation operation budget will also consider financing coordination activities, knowledge products, and ex post project reviews. The technical cooperation plan of operations, Annex VI in the project technical archives, describes this support in greater detail, including the itemized budget and execution schedule.

The project is strategic for preparing for the expansion of ASEMBIS. Over a three-year horizon, ASEMBIS intends to open three new branches and begin a franchise process with at least four concessions. After this learning process, a more accelerated expansion will begin with franchises expected to reach Central American markets. Both project components are aligned with this strategy and aim to prepare ASEMBIS for a more efficient expansion, providing it with sufficient technical and productive capacity. With the innovation and technological transformation, ASEMBIS will automate processes to improve the patient experience, including communications, prevention, appointment management, medical care, and monitoring and follow-up. With the investment in the new plant, ASEMBIS will increase the quality and production capacity for lenses to grow in the market it serves itself, as well as franchises or sales to third parties.

9. Beneficiaries of the Project

By the end of project year three, ASEMBIS will have increase its lens production capacity by 40%, generating total cumulative sales of 455,000 eyeglasses. Over the same period, ASEMBIS will increase the number of patients served by 33%, to a total of 800,000 in 2021, primarily with vision health services (optometry, optician services, and ophthalmology), but also with a variety of the 30+ other medical services it offers in its current 12 branches, which, along with new franchises, are expected to grow to a total of 19 by the end of the three-year project. An estimated 65% of patients served are expected to be women, and 85% will be from the base of the pyramid (quintiles 1, 2, and 3, of Costa Rica’s socioeconomic strata¹). The beneficiaries include not only the people ASEMBIS treats in its branches, but also those who are treated during ongoing mobile unit trips to remote rural areas, offering optician services and dentistry care. ASEMBIS’s business model is considered a regional public good (RPG), which is being prepared for replication in other countries in the region to improve health care service provision to vulnerable populations, as well as a price-regulation mechanism in health care services.

¹ According to the National Statistics and Census Institute (INEC) National Household Survey of July 2017, Costa Rica has five income quintiles, with quintiles 1 (lowest income) to 3 comprising the base of the pyramid. There are a total of 3,190,445 people in these three quintiles, or 64.7% of the total population. The average per capita monthly income in each quintile is: (i) US\$103/month in quintile 1; (ii) US\$224/month in quintile 2; and (iii) US\$372/month in quintile 3. Minimum wage in Costa Rica in 2018 is equivalent to US\$452/month, at an exchange rate of 580 Costa Rican colones to the U.S. dollar.

10. Expected outcomes and capture of benefits

The direct benefit of the Bank's resources will be captured by: (a) around 800,000 treated patients, from vulnerable sectors and the base of the pyramid, who will have access to high-quality, efficient, timely, and affordable health care services; and (b) ASEMBIS will benefit from: (i) acquiring and putting into service a new laboratory and digital manufacturing plant using cutting-edge technology to make better quality lenses, allowing it to increase lens production capacity by 40%, in just one shift; and (ii) incorporating new technologies (artificial intelligence, business intelligence, big data, telemedicine) which will allow for significant improvements in patient and process database management; both focused on improving service quality, patient experience, measuring impact, and positioning itself to initiate regional expansion.