



Donors Committee

For consideration

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From: The Secretary

Subject: Chile. Nonreimbursable technical-cooperation funding for a project for productivity and management tools in the Chilean hospital market

Basic Information:	Executing agency Hospital Clínico de la Universidad de Chile (HCUCH)
	Amount up to US\$1,700,000 or its equivalent
	Source Small Enterprise Development Facility

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Other distribution: IDB Representative in Chile

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MULTILATERAL INVESTMENT FUND

CHILE

**PRODUCTIVITY AND MANAGEMENT TOOLS IN THE CHILEAN
HOSPITAL MARKET**

(CH-M1006)

DONORS MEMORANDUM

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CONTENTS

EXECUTIVE SUMMARY

I.	BACKGROUND.....	1
A.	The Chilean healthcare system.....	1
B.	The market potential introduced by Plan AUGE	2
C.	The problem: The low response capacity of private hospitals.....	3
D.	Rationale and additionality of the proposed project.....	3
E.	Prior experience of the Bank and the MIF in the sector and the country	4
II.	OBJECTIVES AND DESCRIPTION.....	4
III.	COST AND FINANCING	8
IV.	IMPLEMENTATION.....	9
V.	MONITORING AND EVALUATION.....	11
VI.	SOCIAL AND ENVIRONMENTAL STRATEGY	12
VII.	BENEFITS AND RISKS.....	13
VIII.	SPECIAL CONTRACTUAL CONDITIONS	13
IX.	EXCEPTIONS TO BANK POLICY	14

ANNEXES

Annex 1	Logical framework
Annex 2	Itemized budget
Annex 3	Similar and related projects

APPENDICES

Proposed resolution

DOCUMENTS AVAILABLE IN THE TECHNICAL FILES

Annex 4	Operating Regulations
Annex 5	Terms of reference
Annex 6	Institutional analysis
Annex 7	Model performance contract for pilot and partner hospitals
Annex 8	Procurement plan
Appendix 1	Description of the new hospital management support tools
Appendix 2	Description of the project business model
Appendix 3	Analysis of the Chilean healthcare market
Appendix 4	Economic and feasibility analysis for the project

ABBREVIATIONS

AUGE	Plan de Atención Universal con Garantías Explícitas [Plan for Universal Care with Explicit Guarantees]
DRGS	Diagnostic related groups
FONASA	Fondo Nacional de Salud [National Healthcare Fund]
HCUCH	Hospital Clínico de la Universidad de Chile [University of Chile Clinical Hospital]
HL7	Health Level Seven
ICB	International competitive bidding
ICT	Information and communications technology
ISAPRES	Instituciones de Salud Previsional [private healthcare insurance providers]
NCB	National competitive bidding
PPMR	Project Performance Monitoring Report
TA	Technical assistance

PRODUCTIVITY AND MANAGEMENT TOOLS IN THE CHILEAN HOSPITAL MARKET

(CH-M1006)

EXECUTIVE SUMMARY

Executing agency:	Hospital Clínico de la Universidad de Chile [University of Chile Clinical Hospital] (HCUCH)	
Beneficiaries:	Small and medium-sized private hospitals in Chile	
Amount and source of financing:	MIF/IDB: (Facility III)	US\$1,700,000
	Local contribution	US\$2,300,000
	Total:	US\$4,000,000
Execution timetable:	Execution period:	48 months
	Disbursement period:	54 months
Objectives:	<p>The general objective of the project is to promote the competitiveness of the Chilean healthcare sector, ensuring a diversity of private providers selling services for public and private insurers in the healthcare market. The specific objective is to make small and medium-sized private hospitals more productive through the introduction of new tools based on information and communications technology (ICT) solutions for the management and delivery of healthcare services, which will make it easier for them to provide services under the Plan for Universal Care with Explicit Guarantees (Plan AUGE).</p>	
Description:	<p>The project consists of four components: (1) raising awareness about management innovation in the private healthcare sector; (2) preparing the HCUCH environment for management innovation; (3) transferring management technology to private healthcare providers; and (4) monitoring, evaluation, and dissemination of the experience.</p>	
Environmental and social review:	<p>The operation was approved by the Committee on Environment and Social Impact on 21 October 2005.</p>	
Coordination with other institutions:	<p>No similar programs financed by other official development institutions were identified during project analysis.</p>	

Special contractual clauses:

As conditions precedent to the first disbursement, evidence of the following must be presented: (i) the HCUCH has approved the Operating Regulations, which will contain the execution mechanisms and terms of reference for required consulting services; and (ii) a project coordinator has been selected in accordance with the terms of reference previously agreed to with the Bank. **As a condition precedent to the transfer of equipment to the hospitals running pilot projects,** evidence must be presented that an agreement between the HCUCH and the respective hospital has been signed and entered into effect, according to the terms previously agreed to with the Bank.

Exceptions to Bank policy:

None.

I. BACKGROUND

- 1.1 The introduction of new management processes based on information and communications technology (ICT), such as diagnostic related groups (DRGs), electronic medical records, telemedicine, and clinical guidelines and protocols,¹ is enhancing the economic viability and productivity of the public and private healthcare sectors. However, in Latin America and the Caribbean, these types of tools are only just beginning to be developed and applied. Pilot projects introducing electronic medical records have been conducted in the public and private sectors of countries such as Brazil (Tarjeta SUS) and Argentina (Mendoza province), but no efforts have been made to follow up or further develop the projects. Telemedicine is on the rise, but mostly at private and university hospitals, which have the expertise needed to conduct high-tech procedures, but have been unable to transfer them to the public or private service networks that would benefit middle-income groups. Clinical guidelines and protocols are being used most extensively in private healthcare plans in larger cities and for upper-income groups. They facilitate clinical management, by lowering the cost and improving the quality of medical interventions.

A. The Chilean healthcare system

- 1.2 Since the 1980s, the Chilean healthcare sector has undergone one of the broadest, ongoing reform processes in Latin America, distinguished by expanded primary care coverage and a system for delivering healthcare services through public and private providers backed by an extensive insurance system. Chile's healthcare system consists of two subsystems. The public subsystem, financed through the National Healthcare Fund (FONASA), serves 80% of the population, including low-income groups and indigents, and the private subsystem, which consists of a network of private healthcare insurance providers (ISAPRES), serves 20% of the population, generally people in upper- and upper-middle-income brackets. The ISAPRES subsystem is highly stratified and some middle-income groups do not have plans that provide comprehensive coverage of services, especially those of medium and high complexity.
- 1.3 Outside of Santiago, there are 188 hospitals and private healthcare centers in Chile, and 48% are located in Regions II, V, and VIII, where 26% of the country's population resides, according to the 2002 Population Census, and which have poverty rates of 14%, 19%, and 27%, respectively. The relatively abundant supply

¹ **Diagnostic related groups** provide information on the casemix of patients and make it possible to evaluate the care they are receiving; **electronic medical records** facilitate clinical management by providing medical personnel with basic real-time information on patients; **telemedicine** improves communication between healthcare professionals for the diagnosis, treatment, and prevention of disease; and **clinical guidelines** are reports designed to help doctors and patients make decisions about the proper treatment of specific clinical conditions.

of private healthcare services could be used to expand coverage and improve health care for low-income groups. The data also show the low density of healthcare services in the other regions of the country, where hospitals could treat a greater number of medical conditions.

- 1.4 Although system reforms have brought about expanded coverage and access to basic services, people in the lowest-income brackets do not have broad, reliable access to medium- and high-complexity healthcare procedures, due to the absence of adequate supply and financing mechanisms and the lack of technical support, particularly in the areas of the country farthest from Santiago. This has led to high rates of premature death due to chronic disease, which could be lowered by broader access to modern, high-tech medical procedures.
- 1.5 To address this problem, in 2003 the current administration in Chile approved a plan to provide universal coverage, expanded to include medium- and high-complexity services for the treatment of 56 health conditions, for the entire Chilean population. This plan is known as the Plan for Universal Care with Explicit Guarantees (AUGE).

B. The market potential introduced by Plan AUGE

- 1.6 Plan AUGE, as part of Chile's healthcare reform, requires public and private medical insurers to provide explicit guarantees with regard to access, timeliness, quality, and financial protection for a number of health conditions and problems. As of 1 July 2005, there were guarantees in effect for 25 health conditions. On 1 April 2006, guarantees for an additional 15 conditions will take effect, and on 1 July 2007, explicit guarantees for a total of 56 health conditions will be in effect. According to information from the Ministry of Health, these conditions account for approximately 80% of the Chilean population's burden of disease. The guarantees for the various conditions covered by Plan AUGE apply universally to all beneficiaries. However, the group that will benefit the most from the guarantees will be the low-income segment of the population, composed of indigents and FONASA beneficiaries, as well as ISAPRES beneficiaries with limited purchasing power.
- 1.7 Plan AUGE has introduced new quality and efficiency standards for the provision of medium- and high-complexity services in the healthcare sector, establishing regulations to create an environment in which private and public healthcare institutions compete to deliver these services. In this new environment, private hospitals in Chile must adapt and modernize their management processes in order to become more productive and position themselves to sell services under the new government-financed modalities. This includes forging a new management culture that views ICT and professional development as powerful tools for boosting productivity.

C. The problem: The low response capacity of private hospitals

- 1.8 Under the 2004-2006 Digital Agenda,² there are plans in the public sector to extend the digital network to healthcare facilities, institute electronic bookings of medical appointments to reduce waiting times, and introduce the use of an electronic medical license to facilitate coverage, as well as other activities that will guarantee the efficiency of public hospitals and the proper delivery of the guarantees provided for in Plan AUGE.
- 1.9 Many small and medium-sized private Chilean hospitals do not have modern, computerized management systems, which impedes the use of the latest medical technology and prevents them from competitively marketing and delivering services under Plan AUGE. This, in turn, makes it hard for them to expand operations and remain economically viable. Moreover, private hospitals, particularly those that are most remote and isolated from major cities, where technological expertise is concentrated, do not have the same institutional opportunities as other hospitals to increase their technical capacity. Consequently, in addition to struggling to meet technical standards, they are unable to provide an adequate supply of services, particularly in areas where the most underserved segments of the population reside. For example, the delivery of diagnostic imaging services depends on the availability of the right equipment and medical personnel trained to perform the diagnostics. There is a shortage of radiologists in Chile, and some regions have fewer than half the number needed. Telemedicine could be used to compensate for this bottleneck and deliver high-quality diagnostic services in the different regions of the country.

D. Rationale and additionality of the proposed project

- 1.10 This project would be the Bank's first experience with applying ICT-based solutions in the healthcare system to improve the management and increase the productivity of the private hospital market, based on the new quality and efficiency standards being imposed by Plan AUGE. The availability of new technology and a supply of ever more specialized personnel are key to reconciling the sustainability objectives of the private hospital market in Chile with the objective of guaranteeing equal access to services. The project will also provide opportunities for establishing connections with other healthcare services, enabling technology to be applied to the benefit of segments of the population that lack ready access to medium- and high-complexity health solutions.

² The objective of the Digital Agenda is to make the country more competitive, modernize management processes, and expedite the provision of services to users, in both the public and private sectors, through the use of ICT. The results of this effort can be seen in 34 public-private initiatives. The Bank has supported this initiative through project CH-L1001, which provides financing for, among other activities, the modernization of public hospitals through the introduction of ICT so that they can compete to deliver services under Plan AUGE.

- 1.11 The HCUCH, one the country's largest clinical hospitals, has started introducing and developing innovative management systems and its mission is to support the development and coverage of the nation's healthcare system. As a university hospital, the HCUCH can more readily disseminate innovations to other providers in the sector.
- 1.12 The proposed initiative is particularly innovative for the Multilateral Investment Fund (MIF), inasmuch as it is designed to build the business and management capacity of traditionally public service providers and small and medium-sized private hospitals, enabling them to offer services that respond to the needs of their patients, which will expand the coverage and improve the quality of healthcare services.

E. Prior experience of the Bank and the MIF in the sector and the country

- 1.13 The Bank has been implementing loan operations to strengthen the public sector's capacity to apply new technology in response to new market demands, including the technology development and innovation program (CH-0160) and the multiphase program for the strengthening of Chile's digital strategy (CH-L1001), which are contributing to greater and more effective participation by Chile in the digital era by increasing access to and use of ICT as a development factor, through institution-strengthening and implementation of a series of strategic initiatives (digital health³ and local electronic government). In the healthcare sector, the MIF has supported various initiatives, including the program for the regulation of private health plans in Brazil (ATN/MT-6982-BR), which created a regulatory agency for private health plan operators, helping build a mature private health plan market in Brazil.
- 1.14 The MIF has been supporting a number of initiatives in Chile to improve management processes and increase the competitiveness of small and medium-sized enterprises through various mechanisms, including the incorporation of ICT as a competitiveness factor at companies. Projects have been approved for electronic commerce, the development of Web services, such as electronic billing, for small and medium-sized enterprises, and risk management in software development.⁴

II. OBJECTIVES AND DESCRIPTION

- 2.1 The **general objective** of the project is to promote the competitiveness of the Chilean healthcare sector, ensuring a diversity of private providers selling services

³ This program has resources programmed to increase the competitiveness of public hospitals so they are able to deliver services financed under Plan AUGE.

⁴ ATN/MT-8127-CH, ATN/ME-7956-RG-4CH, ATN/MT-9120-CH, and ATN/ME-7956-RG-13CH.

for public and private insurers in the healthcare market. The **specific objective** is to make small and medium-sized private hospitals more productive through the introduction of new tools based on information and communications technology (ICT) solutions for the management and delivery of healthcare services, which will make it easier for them to provide services under the Plan for Universal Care with Explicit Guarantees (Plan AUGE). The project consists of four components: (1) raising awareness about management innovation in the private healthcare sector; (2) preparing the University of Chile Clinical Hospital (HCUCH) environment for management innovation; (3) transferring management technology to private healthcare providers; and (4) monitoring, evaluation, and dissemination of the experience.

- 2.2 **Component 1 – Raising awareness about management innovation in the private healthcare sector (US\$200,000).** This component will heighten the private healthcare sector's interest in developing new management capacities and produce and disseminate information on technological and management tools for private hospitals in Chile.
- 2.3 The component calls for the following activities: (i) a market study to analyze the characteristics of private hospitals; the scale, nature, and extent of use of ICT-based management processes; and the hospitals' needs; (ii) a communications and marketing plan on ICT-based healthcare management processes that will target private hospitals and healthcare providers, helping them identify the technological tools and specialized training and technical assistance services available in the market; and (iii) preparation of a manual specifying the steps and procedures required to implement these tools at small and medium-sized private hospitals and the training curricula for medical and administrative personnel.
- 2.4 In order to carry out component activities, financing will be provided to: (i) engage the required consulting services, including to develop the communications and marketing plan; (ii) produce and edit documents (manual); (iii) hold publicity and informational events; and (iv) design and develop an Internet portal for consultation of standardized solutions for implementing the clinical guidelines proposed under Plan AUGE.
- 2.5 **Component 2 – Preparing the HCUCH environment for management innovation (US\$2.3 million).** The objective of this component is to develop ICT-based solutions for a new business model for the delivery of healthcare services at the HCUCH that can be transferred to the private hospital market in Chile and, possibly, to other countries in the region. The component will strengthen the new management and technical capacities to make management processes more efficient and extend services to a wider swath of the population.
- 2.6 This component calls for the following activities: (i) the creation of an institutional culture at the HCUCH that is receptive to ICT-based management innovation,

including the design and implementation of a plan to provide incentives for the use of ICT tools; expanded and higher-quality electronic records of services provided by the hospital, by health condition and patient; physical upgrading and retooling of the organizational infrastructure of the hospital in anticipation of the new ICT-based tools (diagnostic related groups (DRGs), electronic clinical records, telemedicine, and clinical guidelines); and staff training in the use of these tools; (ii) the implementation of an electronic medical record system at the HCUCH based on and adapted from similar systems in other countries, which will require purchasing and customizing hardware and software for the implementation of this system at the hospital and two of its decentralized clinics (Hospital Barón and Clínica Quilín),⁵ and training for hospital staff once the new system is in place; and (iii) the systematization and promotion of the HCUCH experience at private Chilean hospitals.

- 2.7 This component will create an institutional culture at the hospital that is receptive to the use of ICT, by providing financing for the following activities: internal development of DRG and telemedicine solutions; technical assistance for redesigning the hospital's organizational processes and flows and methods, in order to adapt them to this new business model; development of a Hospital Service Center; staff training in the use of these tools; and promotion of the use of electronic portals to access clinical guidelines. The project will also finance, as part of a more complex, longer-term activity, hardware and software for installing the electronic medical record system at the HCUCH and linking it to the hospital's internal processes in the various cost centers (pharmacy, pathological anatomy, surgical unit), with a view to optimizing efficiency by linking all service systems to the electronic medical record system. The project is expected to serve a minimum of 300 client stations during the first stage of development of the electronic medical record system. Training and informational events will be held on the use of electronic medical records, and financing will be provided to consult hospitals in other countries that use these tools about the lessons they have learned.
- 2.8 **Component 3 – Transferring management technology to private healthcare providers (US\$800,000).** This component will implement and transfer ICT-based tools (telemedicine, clinical guidelines, and DRGs) through pilot projects with private healthcare providers and partnerships with private hospitals. To this end, the following activities will be supported: (1) **Telemedicine:** Partial financing will be provided, as an incentive, for hardware, connectivity, and software for pilot projects in at least 10 private providers that wish to use the HCUCH's telemedicine services to expand their diagnostic options. To be eligible to run a pilot project, providers must: (i) be located outside the Central Region of the country; (ii) primarily serve people in lower-middle income brackets; (iii) be equipped to transmit images

⁵ Hospital Barón of Valparaíso is a medium-complexity hospital that offers most medical specialties. Clínica Quilín, which is currently under construction, will be a high-complexity out-patient clinic.

digitally; and (iv) be willing to adopt the clinical guidelines developed or disseminated by the HCUCH; (2) **Clinical guidelines**: Financing will be provided to produce, coordinate, and disseminate clinical guidelines, which will entail efforts to publicize and promote the guidelines and the ways in which they can improve the clinical management of Chile's hospitals; and (3) **DRGs**: DRG processes and associated technology will be implemented at the HCUCH and at the four private hospitals and their decentralized clinics selected as partners in this initial experience with technology transfer and adaptation, with a view to covering the three megaregions (the northern, central, and southern parts of the country) and evaluating different care modalities—patient/day and admission. These partners will be involved from the start in defining the DRGs and adapting them to suit their needs, testing software and hardware, and conducting trial runs and validation tests of this management tool, for its subsequent widespread use within Chile's network of private hospitals. To be selected as a partner, providers must: (i) have the level of development needed⁶ to implement the tools and enable the HCUCH to provide support; and (ii) use a clinical management system based on cost centers; and (iii) be located outside of Santiago in a place where there is market potential for services marketed under Plan AUGE.

- 2.9 The HCUCH will provide technical assistance to implement, provide training in, and monitor the different processes, and evaluate procedures at every telemedicine pilot project, the partners in the DRG project, and the private hospitals interested in adopting the clinical guidelines. The individuals responsible for promoting the different tools at both the HCUCH and the pilot medical centers will form a network of experts who will work to promote the use of these tools at other private medical centers in Chile.
- 2.10 This component will finance: (i) technical assistance for the implementation of 10 telemedicine pilot projects at selected hospitals; (ii) assistance for the implementation of DRG solutions at four partner hospitals; and (iii) staff training in the use of the new tools.
- 2.11 **Component 4 – Monitoring, evaluation, and dissemination of the experience (US\$200,000)**. The project will implement a monitoring system that will serve as the foundation for systematizing the experience and publicizing it in the country and the region. To this end, the following activities are planned: (i) the development of a project monitoring and tracking system that enables information to be gathered on the efficiency and efficacy of the new technologies used; (ii) project evaluations and audits; (iii) the systematization of the experience through the production of illustrative materials, how-to manuals, and publications that support efforts to transfer the experience; (iv) international events to present and discuss project

⁶ They should have the capacity to manage ICT-based solutions; technical support capacity; and communications infrastructure consistent with project needs (servers, Internet connection).

outcomes; and (v) technical assistance for a relevant hospital in a Latin American or Caribbean country, to be chosen by the HCUCH based on an existing relationship and technical compatibility.

- 2.12 **Expected outcomes.** The expected outcomes of the project are: (i) a DRG-based management model for the hospital network; (ii) a specialized Web portal in the healthcare sector with information on DRGs, telemedicine, electronic medical records, and clinical guidelines; (iii) 50 new clinical guidelines, for posting to the Web portal, (iv) the implementation of the first phase of the electronic medical record system (300 client stations) at the HCUCH; and (v) 10 telemedicine pilot projects at private hospitals and four DRG projects at partner hospitals.

III. COST AND FINANCING

- 3.1 **Cost and financing.** The total cost of the project will be US\$4 million, of which US\$1.7 million (42.5%) will be financed with nonreimbursable resources from the Multilateral Investment Fund (MIF). The University of Chile Clinical Hospital (HCUCH) will provide US\$2.3 million in local counterpart resources, which includes contributions from the hospitals that will run pilot projects and partner hospitals. Up to 50% of local counterpart resources can be in kind.

Components	MIF (US\$)	HCUCH (US\$)	TOTAL (US\$)
Component 1: Raising awareness about management innovation in the private healthcare sector	212,000	20,000	232,000
Component 2: Preparing the HCUCH environment for management innovation	623,000	1,635,000	2,258,000
Component 3: Transferring management technology to private healthcare providers	339,000	482,000	821,000
Component 4: Monitoring, evaluation, and dissemination of the experience	187,000	35,000	222,000
Executing unit	316,800	125,000	441,800
Contingencies	22,200	3,000	25,200
TOTAL	1,700,000 (42.5%)	2,300,000 (57.5%)	4,000,000

- 3.2 **Sustainability.** The sustainability of the project is based on the following factors: (i) the involvement of the HCUCH will guarantee the availability of efficient installed technical capacity (specialized unit in information technology, hardware, security systems, technical services, and maintenance); (ii) the project will generate solutions to lower the operating costs and improve the efficiency of patient care systems, which is to say that with increased technological support, processes can be

automated, making them more efficient and allowing resources to be reallocated along the entire value chain; (iii) Plan AUGE will spur the expansion of the private healthcare market in Chile; and (iv) the HCUCH may replicate these experiences at other private hospitals by having the beneficiaries cover recurrent costs.

IV. IMPLEMENTATION

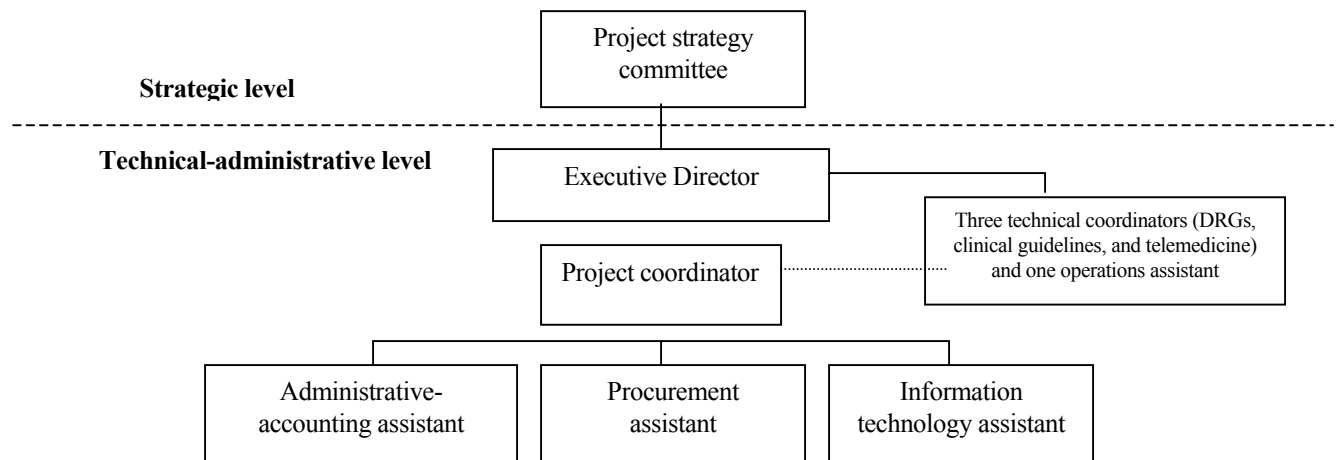
- 4.1 **Executing agency.** The Dr. José Joaquín Aguirre Clinical Hospital (HCUCH)⁷ is a private hospital associated with the University of Chile. The HCUCH handles purchases in the same way as any other private institution. Its procedures are set forth in a manual of operations, and it is audited by the University of Chile and the Office of the Comptroller General of the Republic.
- 4.2 At present, the HCUCH generates 95% of its income autonomously and finances its operations with own resources from the sale of services to the public sector (National Healthcare Fund–FONASA) and the private sector (private healthcare insurance providers–ISAPRES), which it has done since 1996. The hospital provides care in virtually all medical specialties, with a proven commitment to excellence and obtaining the latest technology. It has experience producing and using electronic clinical guidelines and runs a telemedicine center that carries out approximately 100 image transmissions per day. To attract patients in remote areas, the HCUCH runs three commercial medical offices in the northern part of the country, which promote the hospital, support extension activities, and refer patients requiring medium- and high-complexity medical procedures to the hospital. The HCUCH Operations Management Office⁸ will be responsible for project implementation with the support of the unit in charge of the hospital’s information technology development plan. The Operations Management Office will also be assisted by a coordinating unit, to be created for this project.
- 4.3 **Execution mechanism.** For project execution, a strategic unit and a technical-administrative unit will be created. The strategic unit, which will take the form of a project strategy committee, will meet at least twice per year. It will consist of the HCUCH general director, who will serve as chair; the HCUCH general manager; the HCUCH operations manager, who will serve as executive secretary;

⁷ Its care network includes several hospitals and public healthcare centers in Santiago and other regions, and supports extension activities and coordinates the referral of patients requiring medium- and high-complexity medical procedures to the hospital. In 2004, the hospital entered into an agreement to operate jointly with Megasalud, Chile’s largest nationwide out-patient healthcare network, with more than 20 clinics in 11 of the 13 regions of the country. Megasalud is part of the Chilean Construction Board, a nonprofit organization and one of the largest trade associations in the country.

⁸ The office employs 35 professionals in diverse areas of specialization. Attached to this office are the Divisions of Information Technology and Management Support, Quality, Logistical Support, and Patient Care.

- two members appointed by the rector at the suggestion of the HCUCH; the four directors of the partner hospitals in the diagnostic related groups (DRGs) project; two representatives from the 10 hospitals running telemedicine pilot projects; and the project coordinator. The committee will perform two key functions. It will: (a) chart an overall strategic course for the project; and (b) provide definitive coordination and supervision of basic project activities. The committee's operating mechanisms are described in the Operating Regulations.
- 4.4 The technical-administrative unit will take the form of a project coordinating unit created within the HCUCH Operations Management Office, the manager of which will serve as the executive director. The coordinating unit will also consist of a general coordinator, a part-time administrative-accounting assistant, a part-time procurement assistant, an information technology assistant, an operations assistant, and three coordinators from the HCUCH staff (coordination of telemedicine, DRGs, and clinical guidelines). The unit's team of technical experts will staff the Hospital Service Center planned under component 2.
- 4.5 The executive director will: (i) manage and coordinate the coordinating unit and project implementation; (ii) integrate the project with general hospital operations; (iii) liaise with the Bank; (iv) appoint a general coordinator for the project, with the no objection of the Bank; and (v) manage the resources contributed by the local counterpart and the partner providers.
- 4.6 The general coordinator will: (i) coordinate project activities; (ii) prepare, consolidate, and deliver to the Bank project financial statements; (iii) conduct technical and financial monitoring of the project; (iv) prepare semiannual progress reports; (v) help the executive director run the project; (vi) develop a project monitoring and tracking system; (vii) prepare and update semiannual procurement plans and inform the Bank, and develop a contract database; (viii) prepare annual work plans; and (ix) coordinate with the technical staff responsible for project components in order to support implementation thereof with timely interventions.
- 4.7 The operations assistant and the three technical coordinators will: (i) ensure the implementation of the activities planned under components 2 and 3: and (ii) support the general coordinator in all tasks, including sending materials required for component 1 activities. The three technical coordinators will be HCUCH staff. Terms of reference for the corresponding contracts can be found in the Operating Regulations.

Project execution chart – Coordinating unit



- 4.8 An open public call will be issued for expressions of interest from private hospitals in the country that would like to participate in the pilot projects (ten for telemedicine and four for DRGs). The relationship with each hospital will be governed by a performance contract signed by the parties.
- 4.9 **Procurement.** All goods and services for the project will be procured in accordance with Bank policies (documents GN-2350-4 and GN-2349-4). The executing agency has presented the Bank with the project procurement plan, based on the itemized budget (Annex 2). The Bank may retroactively charge against the local counterpart contribution up to US\$200,000 in expenditures made between 1 August 2005 and the date on which the operation is approved, provided the procurement procedures used were substantially similar to the Bank's.
- 4.10 **Execution period and disbursement schedule.** The project execution period will be 48 months and the disbursement period, 54 months. The revolving fund will be equivalent to 20% of the amount of the Bank's contribution, inasmuch as the project will require disbursements of large sums, particularly during the first months of execution (design and development of DRGs and an electronic medical record system).

V. MONITORING AND EVALUATION

- 5.1 **Monitoring reports.** The coordinating unit will prepare and deliver to the Bank's Country Office in Chile semiannual progress reports on the project within 30 days after the end of each six-month period and a final report within 30 days after the last disbursement. The unit will include the annual work plan it has prepared for the second year in the second semiannual progress report. These reports will follow a format previously agreed to with the Country Office and will cover project

activities and financial performance, as well as outcomes, measured against the performance indicators and benchmarks set forth in the logical framework (Annex 1). The Country Office will use these reports to supervise project implementation and prepare a project completion report in the three months following the last disbursement.

- 5.2 **Audits and evaluations.** Annual audits of the project will be conducted by the Office of the Comptroller General of the Republic, which will also perform the final audit. The Bank, drawing on the Multilateral Investment Fund (MIF) contribution, will hire independent consultants to conduct two project evaluations. The midterm evaluation will be performed when 50% of the MIF contribution has been disbursed or 26 months after the date of the agreement, whichever occurs first, by consultants hired by the Bank using project funds. The corresponding terms of reference will be previously agreed to with the executing agency. Based on the midterm evaluation, the Country Office, with the support of the project team as necessary, will determine whether the project can proceed or whether it should be modified, suspended, or cancelled. The evaluation will consider, at a minimum, the following: (i) progress on the indicators in the logical framework; (ii) overall budget performance; (iii) the pari passu disbursement of local counterpart resources in accordance with the project budget; (iv) the entry into force of the Operating Regulations and compliance therewith during project implementation; and (v) the problems, risks, and challenges associated with the project and recommendations for its successful implementation.
- 5.3 A final evaluation commissioned by the Bank using project funds will be performed three months after the end of the execution period. The following will be evaluated: (i) the fulfillment of the specific purposes and objectives of the project, essentially the impact of the pilot projects; (ii) user satisfaction, as expressed in a survey evaluating the different tools developed under the project; (iii) the impact of the project as measured by the productivity of healthcare services; and (iv) the sustainability of activities initiated under the project once the MIF contribution has ended. There are plans to conduct an ex post evaluation two years after project completion, to be financed in equal parts by the University of Chile Clinical Hospital (HCUCH) and the MIF.

VI. SOCIAL AND ENVIRONMENTAL STRATEGY

- 6.1 The proposed project will not have any direct social or environmental impact because project activities will focus on the development and application of hospital management models based on information and communications technology (ICT) at the University of Chile Clinical Hospital (HCUCH) and participating private Chilean hospitals. The project will provide financing to procure some of the required equipment and develop the capacity needed to manage these technologies.

- 6.2 Project activities will result in improvements in the management of all processes common to healthcare providers. Inasmuch as it has the potential to improve hospital waste management and create new jobs, the project is expected to have an positive indirect social and environmental impact. Moreover, because the project will promote the delivery of quality healthcare services in remote areas, where public services are in short supply and which are generally home to the poorest segments of Chile's population, access to health care will be improved for the poorest people in the country.

VII. BENEFITS AND RISKS

- 7.1 **Benefits.** The proposed project will directly benefit small and medium-sized private hospitals as follows: (a) It will simplify clinical management processes, optimizing resource use and improving efficiency in the current levels of care; (b) It will provide opportunities for establishing connections with other healthcare services and forming strategic partnerships, which will add value to the hospital; (c) It will boost responsiveness and enhance satisfaction among the beneficiaries of pilot projects in the poorest communities; and (d) It will create the right conditions for project replication, by developing a methodology (processes, public-private coordination mechanisms, results of technical assistance services) that the Bank will be able to use in other countries in Latin America and the Caribbean.
- 7.2 **Risks.** The main risks to this operation are as follows: (i) The direct beneficiaries of the project (doctors, administrative personnel, and patients) do not use the new tools properly for fear of radical changes in the practice of medicine; (ii) The hospitals do not have sufficient capacity to adapt the new management models and tools to their needs; (iii) The hospitals do not have sufficient financial resources to purchase the equipment required by the project or lack the liquidity needed to cover the cost of modernizing their management systems. To mitigate these risks, the project calls for the following activities: (i) A communications and marketing plan will be developed with courses, workshops, manuals, and awareness campaigns to address the interests of the different beneficiaries of the project; (ii) The hospitals will be represented on the project strategy committee; and (iii) The eligibility criteria for the partner and pilot hospitals require sufficient financial and institutional resources to implement the new tools.

VIII. SPECIAL CONTRACTUAL CONDITIONS

- 8.1 **The following will be conditions precedent to the first disbursement:** (i) evidence that the University of Chile Clinical Hospital (HCUCH) has approved the Operating Regulations, which should describe, *inter alia*, the execution mechanisms and terms of reference for consulting services; and (ii) evidence that a project coordinator has been selected in accordance with the terms of reference

previously agreed to with the Bank. **As a condition precedent to the transfer of equipment to the hospitals running pilot projects**, evidence must be presented that an agreement between the HCUCH and the respective hospital has been signed and entered into effect, according to the terms previously agreed to with the Bank.

IX. EXCEPTIONS TO BANK POLICY

- 9.1 The project does not call for any exceptions to Bank policy.

PRODUCTIVITY AND MANAGEMENT TOOLS IN THE CHILEAN HOSPITAL MARKET (CH-M1006)

LOGICAL FRAMEWORK

Narrative summary of objectives	Indicators	Means of verification	Assumptions
Goal			
To promote the competitiveness of the private healthcare sector in Chile	<p>Two years after project completion:</p> <p>At least 80% of resolutions of health conditions covered by Plan AUGE are treated at the HCUCH and partner healthcare centers</p> <p>A 10% increase in the number of telediagnostic procedures (telemedicine) performed annually, starting from the second year of project execution</p> <p>One hundred (approximately 50% of the market) private hospitals continue to participate in experiences that promote the incorporation of new tools for innovating the management of Chile's healthcare system.</p>	<p>Use of the Quality Management Monitoring System (which includes technical, administrative, and customer satisfaction indicators) developed by the executing agency</p> <p>Production systems at the HCUCH and partner healthcare centers</p> <p>Survey of private hospitals and attendance records for planned awareness-raising activities</p> <p>Invoices and records of telediagnostic procedures conducted by the HCUCH</p> <p>Ex post evaluation by the external consultant hired by the HCUCH</p> <p>Final evaluation by the external consultant</p>	Public-private relations are strengthened for the improvement and the fulfillment of the targets set for the development of the Chilean health system.

Narrative summary of objectives	Indicators	Means of verification	Assumptions
Purpose			
<p>To make the University of Chile Clinical Hospital (HCUCH) and the beneficiary health centers more productive through the introduction of new tools based on information and communications technology (ICT) solutions for the management and delivery of healthcare services, which will make it easier for them to provide services under Plan AUGE.</p>	<p>36 months into project execution:</p> <ul style="list-style-type: none"> The 10 hospitals running the telemedicine projects have improved efficiency and quality and have a rating score of at least 100%. <p>By project completion:</p> <ul style="list-style-type: none"> The four hospitals running the DRG projects have improved efficiency and quality and have a rating score of at least 100%. At least 50% of the HCUCH's and the beneficiary healthcare centers' patients/customers who receive services provided under Plan AUGE report a high degree of satisfaction with the new services. There is a 4% reduction in the cost of services for the 10 main DRGs by the third year of implementation of the DRGs. (These 10 DRGs account for more than 80% of the HCUCH's expenses.) By the end of the first year of implementation of the DRGs, the relative weights of the DRGs are calculated, which can be extrapolated and disseminated nationwide. 	<p>Checklist of performance parameters related to efficiency and quality (application of DRGs, clinical guidelines, and telemedicine) for evaluation and scoring purposes</p> <p>(Checklist designed during project implementation for each tool)</p> <p>Checklist of performance parameters related to efficiency and quality in telemedicine for evaluation and scoring purposes</p> <p>Production statistics for the HCUCH and beneficiary health centers, and their DRG applications.</p> <p>Cost results of the HCUCH and partner hospitals</p> <p>Checklist of performance parameters related to efficiency and quality of DRGs for evaluation and scoring purposes</p> <p>Baseline information</p> <p>Semiannual progress reports and final report prepared by the HCUCH</p> <p>Midterm and final evaluations prepared by an external consultant (including a survey of a sample of beneficiary patients)</p> <p>Project Performance Monitoring Report (PPMR)</p> <p>MIF project completion report</p>	<p>Ten hospitals are selected to run the telemedicine projects and the corresponding performance contracts are signed.</p> <p>Four hospitals are selected to run the DRG projects and the corresponding performance contracts are signed.</p>

Narrative summary of objectives	Indicators	Means of verification	Assumptions
	<ul style="list-style-type: none"> An average of 1,000 monthly hits to the project Web portal. 	Counter for number of portal hits	
Components			
1. Raising awareness in the private health sector about new tools for management innovation in the Chilean healthcare system	<ul style="list-style-type: none"> By the sixth month, the results of the market study on the private healthcare sector in Chile are presented. By the twelfth month, the communications and marketing plan is designed. By the thirty-sixth month, the communications and marketing plan is being deployed to target 100 private hospitals (50% of the market). By the forty-eighth month, the market study has been cited or used as a reference in at least 10 publications or research reports on the healthcare sector in Chile. 	<p>Attendees at the presentation of the market study and references to study findings in the press</p> <p>References (quotes) to the market study in other studies or research reports on the healthcare sector in Chile</p> <p>Record of attendance at awareness-raising and informational events</p>	<p>Doctors and administrative personnel in the healthcare sector are willing to promote management innovation in the healthcare system.</p> <p>There is interest within the private health market in using the new technological tools, and sufficient resources for implementing the tools are allocated.</p> <p>Plan AUGÉ is implemented according to plan and on schedule</p> <p>The development of ICT-based management tools remains a priority and continues to receive the financial support of HCUCH authorities.</p> <p>The new clinical guidelines are regularly updated.</p>
2. Preparing the HCUCH environment for management innovation (DRGs, electronic medical records, telemedicine, and clinical guidelines)	<p>DRGs:</p> <ul style="list-style-type: none"> By the eighteenth month, the costs assigned for every case in the HCUCH's casemix and the classification of the casemix for the 600 DRGs are available. By the twenty-fourth month, DRG software and interfaces have been developed for integration with HCUCH systems. 	<p>Evidence of integration</p> <p>Report analyzing initial application of DRGs at the HCUCH</p> <p>Annual evaluation reports from the project coordinator, endorsed by the HCUCH operations manager</p> <p>Approved consultant's report</p> <p>Annual evaluation reports from the project coordinator, endorsed by the HCUCH operations manager</p>	

Narrative summary of objectives	Indicators	Means of verification	Assumptions
	<ul style="list-style-type: none"> ▪ By the twenty-fourth month, the DRGs accounting for at least 80% of the HCUCH's expenses have been identified. ▪ By the thirtieth month, a strategy for lowering costs at the HCUCH is under way. ▪ By the forty-eighth month, the management processes prioritized by DRG for the HCUCH and its partners and project beneficiaries are available (includes the 56 health conditions scheduled for Plan AUGE coverage by 2007) <p>Electronic medical records:</p> <ul style="list-style-type: none"> ▪ By the twelfth month, the software for the electronic medical records has been developed. ▪ By the twenty-fourth month, the Health Level Seven (HL7) protocols have been developed and implemented. ▪ By the twenty-fourth month, a contract for the electronic records software has been awarded. ▪ By the thirty-sixth month, 200 doctors have been trained in the use of electronic medical records. ▪ By the forty-eighth month, electronic medical records are available on 300 client stations as part a pilot project. 	<p>Baseline information (At project start-up, there are no electronic medical records.)</p> <p>Baseline information (Fifty clinical guidelines are available in 2005.)</p>	

Narrative summary of objectives	Indicators	Means of verification	Assumptions
	<p>Telemedicine:</p> <ul style="list-style-type: none"> By the twenty-fourth month, two diagnostic stations are in operation and at least 20 professionals have been trained. By the thirty-sixth month, 2,600 consultations (imaging) are transmitted per month through the telemedicine center. <p>Clinical guidelines:</p> <ul style="list-style-type: none"> By the twenty-fourth month, 70 clinical guidelines have been developed and posted to the portal. By the thirty-sixth month, 90 clinical guidelines have been developed and posted to the portal. By the forty-eighth month, 50 professionals have received training on clinical guidelines and all medical personnel at the HCUCH (300 full-time staff members plus part-time doctors) are using the clinical guidelines (100 available through the portal). 	<p>Annual reports documenting the number of images transmitted through the Telemedicine Center</p> <p>Baseline information</p> <p>(In 2005, the Telemedicine Center handled an average of 2,000 transmissions per month.)</p> <p>Telemedicine agreements in place</p> <p>Annual evaluation reports from the project coordinator, endorsed by the HCUCH operations manager and the project strategy committee</p> <p>Record of images transmitted by the 10 hospitals participating in the telemedicine experience</p>	
<p>3. Transfer of management technology to private health services</p>	<ul style="list-style-type: none"> By the twenty-fourth month, 10 telemedicine agreements and four DRG agreements have been signed with hospitals. By the twenty-fourth month, the software, equipment, and connections for the telemedicine and DRG 	<p>Record of the use of clinical guidelines in the partner hospitals (maximum of 14)</p> <p>Record of attendance at training and awareness-raising activities</p> <p>Record of the number of manuals distributed and the results of the evaluation questionnaire for the manual</p>	

Narrative summary of objectives	Indicators	Means of verification	Assumptions
	<p>projects have been procured and installed.</p> <ul style="list-style-type: none"> ▪ By the thirty-sixth month, the DRGs that account for at least 80% of the beneficiaries' or partners' costs have been identified and a strategy to lower costs is being implemented. ▪ By the thirty-sixth month, at least 100 doctors and healthcare professionals have participated in training and awareness activities held for hospitals participating in the project (maximum of 14). ▪ By the forty-eighth month, telemedicine solutions are being applied at 10 hospitals, with each hospital transmitting an average of 100 images per month. ▪ By the forty-eighth month, at least 50% of doctors at the partner hospitals are consulting the clinical guidelines. ▪ By the forty-eighth month, DRG-based management processes are being applied at four partner hospitals for at least the 56 health conditions covered by Plan AUGE. 	<p>Semiannual progress reports and final report prepared by the executing agency</p> <p>Midterm and final evaluations prepared by an external consultant</p> <p>Reports from the financial/accounting and technical inspection visits</p> <p>PPMR</p> <p>MIF project completion report</p>	
<p>4. Monitoring, evaluation, and dissemination of the experience</p>	<ul style="list-style-type: none"> ▪ By the sixth month, the management control and project monitoring system is in operation at the HCUCH. ▪ By the twenty-fourth month, a baseline analysis has been conducted 		

Narrative summary of objectives	Indicators	Means of verification	Assumptions
	<p>for the 10 hospitals running telemedicine pilot projects and the four partner hospitals running DRG projects.</p> <ul style="list-style-type: none"> ▪ By the thirty-sixth month, a plan for replicating the project throughout the region has been developed, and at least one additional hospital outside Chile has been selected to receive technical assistance from the HCUCH. ▪ By the forty-eighth month, a manual containing information on the management innovations for the healthcare sector (electronic medical records, DRGs, telemedicine, and clinical guidelines), including on implementation and application, is available. ▪ By the forty-eighth month, at least one international seminar to publicize the project has been held. 		
<p>Activities</p> <p>1. Raise the awareness of the private healthcare sector about new tools for management innovation in the Chilean healthcare system</p>	<p>MIF: US\$212,000 Local counterpart: US\$20,000</p> <p>1.1 Design and development of the communications and marketing strategy</p> <p>1.2 Design, development, and construction of the portal</p>	<p>Semiannual progress reports and final report prepared by the executing agency</p> <p>Midterm and final evaluations prepared by an external consultant</p> <p>Reports from the financial/accounting and technical inspection visits</p> <p>PPMR</p>	<p>Doctors and other medical professionals commit to using electronic medical records and DRGs (including partner hospitals).</p> <p>Counterparts for the telemedicine pilot projects are available.</p> <p>Doctors actively implement the new management tools for the Chilean healthcare system</p>

Narrative summary of objectives	Indicators	Means of verification	Assumptions
2. Prepare the HCUCH environment for management innovation	MIF: US\$623,000 Local counterpart: US\$1,635,000 2.1 Create a Hospital Service Center to provide advisory services 2.2 DRGs: development of DRG software and interfaces, training for 120 professionals, and traineeships 2.3 Electronic medical records: procurement and development of software, training, and application 2.4 Telemedicine: equipment procurement and training 2.5 Clinical guidelines: updating (50) and development (50) of guidelines, training, and dissemination		
3. Transfer management technology to private healthcare services	MIF: US\$339,000 Local counterpart: US\$482,000 3.1 Development of four partner centers and 10 telemedicine pilot projects		
4. Monitoring, evaluation, and dissemination of the experience	MIF: US\$187,000 Local counterpart: US\$35,000 4.1 Monitoring and evaluation 4.2 Dissemination of outcomes 4.3 Production of materials 4.4 Implementation of a monitoring and tracking system 4.5 Technical assistance for one hospital in the region		

No.	Productivity and management tools in the Chilean hospital market	Quantity and unit	US\$ cost total	TOTAL 4 YEARS (48-month disbursement period)					
				MIF	COUNTERPART				Counterpart total
					Cash		In-kind		
					HCUCH	Medical centers	HCUCH	Medical centers	
1	Component 1: Communications and marketing								
1.1.	Design and development of the communications and marketing strategy		170,000	150,000	0	0	20,000	0	20,000
1.1.1	TA for the health market and management innovation study	29,600	30,000	30,000					0
1.1.2	TA for designing the communications and marketing plan		20,000	20,000					0
1.1.3	Development of the communications and marketing plan		120,000	100,000			20,000		20,000
1.2.	Design, development, and construction of portal		62,000	62,000	0	0	0	0	0
1.2.1	Design and construction of the portal	750 programming hours	30,000	30,000					0
1.2.2	Promotion and launch		7,000	7,000					0
1.2.3	Development of an HCUCH portal user's manual		10,000	10,000					0
1.2.4	Promotional materials (posters and brochures)		15,000	15,000					0
	Total for component 1		232,000	212,000	0	0	20,000	0	20,000
	Pari Passu			91.4%					8.6%
2	Component 2: Preparation of the HCUCH environment for management innovation								
2.1.	Create Hospital Service Center to provide advisory services		267,000	108,000	159,000	0	0	0	159,000
2.1.1	TA for designing the action and training plan	1 professional x 36 months x US\$3,000 1 professional x 36 months x US\$3,000	36,000	36,000					0
2.1.2	Operations assistant		108,000	0	108,000				108,000
2.1.3	Technical support and maintenance		108,000	72,000	36,000				36,000
2.1.4	Equipment		15,000	0	15,000				15,000
2.2.	Diagnostic related groups (DRGs)		96,000	70,000	26,000	0	0	0	26,000
2.2.1	Procurement of software for DRGs	500 programming hours x US\$40/hour 250 programming hours x US\$40/hour US\$14/student training hour x 5 hours per student x 120 HCUCH professionals 2 trips abroad x 4 people x US\$3,700 per trip	16,000	0	16,000				16,000
2.2.2	TA to estimate the ratios of economic resources needed for each of the main DRGs at the hospital		10,000	0	10,000				10,000
2.2.3	Development interfaces for communicating with the current cost center system		20,000	20,000					0
2.2.4	Develop interfaces with the hospital information system		10,000	10,000					0
2.2.5	Training of 120 professionals		10,000	10,000					0
2.2.6	Trips to learn about experiences abroad		30,000	30,000					0
2.3.	Electronic medical records		1,700,000	350,000	1,350,000	0	0	0	1,350,000
2.3.1	Basic software and hardware	5,000 hours x US\$40/hour (equivalent to 30 person months) 300 computers x US\$1,000 each including basic software, network connections, and warranty 2,500 hours x US\$40/hour (equivalent to 15 person months) 4 trips abroad x 3 people x US\$4,000 per trip Data storage Implement electronic records system (starting with pilot project in maternity ward) and training	100,000	100,000					0
2.3.2	TA to develop departmental software for the electronic medical records		150,000	100,000	50,000				50,000
2.3.3	TA to develop software for management of the electronic records		600,000	0	600,000				600,000
2.3.4	Hardware for the electronic records stations (300 clients)		300,000	0	300,000				300,000
2.3.5	Customize existing systems for use of HL7 standards		100,000	100,000					0
2.3.6	Trips to learn about experiences abroad		50,000	50,000					0
2.3.7	Data storage		100,000	0	100,000				100,000
2.3.8	Implement electronic records system (starting with pilot project in maternity ward) and training		300,000	0	300,000				300,000
2.4.	Telemedicine		105,000	5,000	100,000	0	0	0	100,000
2.4.1	Central image processing equipment	2 diagnostic stations x US\$45,000 each + licenses for processing software	100,000	0	100,000				100,000
2.4.2	Training for 20 professionals	US\$14/student training hour x 15 hours per student x 20 professionals	5,000	5,000					0
2.5.	Clinical guidelines		90,000	90,000	0	0	0	0	0
2.5.1	TA for updating and improving the 50 clinical guidelines already in existence	US\$14/student training hour x 10 hours per student x 50 HCUCH professionals	40,000	40,000					0
2.5.2	TA for the development of 50 clinical guidelines		20,000	20,000					0
2.5.3	Training of 50 professionals		10,000	10,000					0
2.5.4	Dissemination activities for use of clinical guidelines		20,000	20,000					0
	Total for component 2		2,258,000	623,000	1,635,000	0	0	0	1,635,000
	Pari Passu			27.6%					72.4%

3	Component 3: Transfer of management capacity and ICT to four medical centers involved in pilot projects								
3.1	Development of 4 partner centers and telemedicine pilot projects		821,000	339,000	160,000	322,000	0	0	482,000
3.1.1	Technical team from the HCUCH to support the incorporation of ICT at medical centers (10 telemedicine, clinical guidelines, and 4 DRGs)	2 professionals x 24 months x US\$3,000 each	144,000	144,000					0
3.1.2	Procurement and installation of equipment for centers running DRG pilot projects	1 PC x pilot project (4 pilot projects)	4,000	0		4,000			4,000
3.1.3	Procurement and installation of equipment for centers running telemedicine pilot projects	10 centers x (1 PC x US\$1,000 + 1 x-ray scanner x 30,000 + viewing station x 2,000)	333,000	100,000		233,000			233,000
3.1.4	Procurement and installation of telemedicine software at centers running pilot projects	Number of licenses to be determined. Estimated at US\$2,000/license x 4 licenses x 10 centers	80,000	40,000		40,000			40,000
3.1.5	Fees of instructors providing training in DRGs, clinical guidelines, and telemedicine to personnel at pilot project centers	US\$25/training hour per student x 20 hours per student x 250 external professionals and training materials	125,000	0	125,000				125,000
3.1.6	6 regional workshops to raise awareness	6 workshops x US\$2,500 each	15,000	15,000					0
3.1.7	Development of manuals on DRGs, electronic records, telemedicine, and clinical guidelines	4 manuals x US\$10,000 each	40,000	40,000					0
3.1.8	Acquire bandwidth to transmit telemedicine data between the centers and the HCUCH	10 centers x 24 months x US\$150/month	36,000	0		36,000			36,000
3.1.9	Travel and per diem, lodging, and rental of space for training		44,000	0	35,000	9,000			44,000
	Total Component 3		821,000	339,000	160,000	322,000	0	0	482,000
	Pari Passu			41.3%					58.7%
4	Component 4: Monitoring and evaluation								
4.1	Monitoring and evaluation		30,000	30,000	0	0	0	0	0
4.1.1	Evaluations	US\$10,000 x 2	20,000	20,000					0
4.1.2	Ex post evaluation	US\$10,000	10,000	10,000					0
4.2	Dissemination of results		100,000	80,000	0	0	20,000	0	20,000
4.2.1	3 seminars in Latin America and the Caribbean		80,000	60,000			20,000		20,000
4.2.2	Materials		20,000	20,000					0
4.3	Monitoring and evaluation system		30,000	30,000					0
4.3.1	Consulting services	60 days x US\$400 + travel expenses of US\$1,750 + 25 days of per diem	30,000	30,000					
4.4	Production of illustrative materials and how-to manuals for transfer of experience		30,000	15,000	15,000				15,000
4.4.1	Various consulting and nonconsulting services			15,000	15,000				15,000
4.5	Technical assistance for a hospital in the region		32,000	32,000					0
4.5.1	Travel and per diem	4 people x 2 trips x US\$4,000	32,000	32,000					
	Total for component 4		222,000	187,000	15,000	0	20,000	0	35,000
	Pari Passu			84.2%					15.8%
EU	Executing unit								
EU.1	Executive director (part time)	US\$2,000 x 48 months	96,000	0	96,000				96,000
EU.2	General coordinator (full time)	US\$4,000 x 48 months	192,000	192,000					0
EU.3	Administrative-accounting assistant (part time)	US\$1,300 x 48 months	62,400	62,400					0
EU.4	Procurement assistant (part time)	US\$1,300 x 48 months	62,400	62,400					0
EU.5	Office furniture	US\$5,000	5,000	0		5,000			5,000
EU.6	Offices, services, communications, mail, Internet, etc.	US\$500 x 48 months	24,000	0		24,000			24,000
	Total for executing unit		441,800	316,800	96,000	0	29,000	0	125,000
	Pari Passu			71.7%					28.3%
	Contingencies		25,200	22,200	3,000				3,000
	PROJECT TOTAL		4,000,000	1,700,000	1,909,000	322,000	69,000	0	2,300,000
	PARI PASSU			42.5%					57.5%

PROCUREMENT PLAN	
Project information:	
Country:	Chile
Executing agency:	Hospital Clínico de la Universidad de Chile [University of Chile Clinical Hospital] (HCUCH)
Project title:	Productivity and Management Tools in the Chilean Hospital Market
Loan:	CH-M1006
Period covered by this procurement plan:	18 months
Prior review (procurement thresholds):	
Goods, works, and nonconsulting services	ICB over US\$350,000; NCB over US\$100,000; Shopping under US\$100,000.
Selection of consultants	Over US\$200,000 publication in Development Business, from US\$30,000 to US\$200,000 publication in national newspaper or government procurement portal
Ex ante review	Consulting services over US\$100,000, individual consultants over US\$50,000, and goods over US\$100,000

CH-M1006

PROCUREMENT OF GOODS AND NONCONSULTING SERVICES

No.	Description	Cost			Procurement method	IDB review	Scheduled date for call/tender
		MIF	LOCAL	TOTAL			
Goods							
2.1.4	Equipment (hardware)	\$ -	\$ 15,000	\$ 15,000	National law	Ex post	May-06
2.2.1	Equipment (software)	\$ -	\$ 16,000	\$ 16,000	National law	Ex post	April-06
2.3.1	Equipment (basic software and hardware)	\$ 100,000	\$ -	\$ 100,000	SH	Ex ante	March-07
2.3.4	Equipment (300 computers at US\$1,000 each, including basic software, network connection, and warranties)	\$ -	\$ 300,000	\$ 300,000	National law	Ex post	March-07
2.3.7	Equipment (data storage)	\$ -	\$ 100,000	\$ 100,000	National law	Ex post	March-07
2.4.1	Equipment (2 diagnostic stations x US\$45,000 each + licenses for processing software)	\$ -	\$ 100,000	\$ 100,000	National law	Ex post	January-06
EU.5	Office furniture	\$ -	\$ 5,000	\$ 5,000	National law	Ex post	January-06
EU.6	Offices, services, communications, mail, Internet, etc.	\$ -	\$ 24,000	\$ 24,000	National law	Ex post	January-06
Total for goods		\$ 100,000	\$ 560,000	\$ 660,000			
Nonconsulting services							
2.2.6	Travel and per diem for trips to learn about other countries' experiences with DRGs (2 trips abroad x 4 people x US\$3,700 per trip)	\$ 30,000	\$ -	\$ 30,000	DC	Ex ante	January-06
2.3.6	Travel and per diem for trips to learn about other countries' experiences with electronic medical records (4 trips abroad x 3 people x US\$4,000 per trip)	\$ 50,000	\$ -	\$ 50,000	DC	Ex ante	September-06
Total for nonconsulting services		\$ 80,000	\$ -	\$ 80,000			
TOTAL FOR GOODS AND NONCONSULTING SERVICES		\$ 180,000	\$ 560,000	\$ 740,000			

Procurement method
SH: Shopping
DC: Direct contracting
National law: In cases in which 100% of the financing comes from local counterpart resources

CH-M1006

PROCUREMENT OF CONSULTING SERVICES

No.	Description	Cost			Selection method	Selection method for local contribution	Prequalification	IDB review	Date scheduled for call/tender
		MIF	LOCAL	TOTAL					
Individual consultants									
2.1.1	Consulting services to design the action and training plan	\$ 36,000	\$ -	\$ 36,000	IC		No	Ex post	May-06
2.1.2	Consulting services for operations assistance (1 professional x 36 months x US\$3,000)	\$ -	\$ 108,000	\$ 108,000	National law		No	Ex post	December-06
2.1.3	Consulting services for technical support and maintenance (1 professional x 36 months x US\$3,000)	\$ 72,000	\$ 36,000	\$ 108,000	IC		No	Ex ante	December-06
2.2.2	Consulting services to estimate the ratios of economic resources needed for each of the DRGs at the hospital	\$ -	\$ 10,000	\$ 10,000	National law		No	Ex post	August-06
2.2.4	Consulting services to develop communications interfaces with the hospital computer system (250 programming hours x US\$40/hour)	\$ 10,000	\$ -	\$ 10,000	IC		No	Ex post	December-06
4.3.1	Consulting services to develop the monitoring and evaluation system for 60 days	\$ 30,000	\$ -	\$ 30,000	IC		No	Ex post	January-06
EU.1	Executive director (US\$2,000 x 48 months)	\$ -	\$ 96,000	\$ 96,000	National law		No	Ex post	January-06
EU.2	General coordinator (US\$4,000 x 48 months)	\$ 192,000	\$ -	\$ 192,000	IC		No	Ex ante	January-06
EU.3	Administrative-accounting assistant (US\$1,300 x 48 months)	\$ 62,400	\$ -	\$ 62,400	IC		No	Ex ante	January-06
EU.4	Procurement assistant (US\$1,300 x 48 months)	\$ 62,400	\$ -	\$ 62,400	IC		No	Ex ante	January-06
Total for individual consultants		\$ 464,800	\$ 250,000	\$ 714,800					
Consulting firms									
1.1.1	Consulting services to conduct the study on the healthcare market and management innovation	\$ 30,000	\$ -	\$ 30,000	QCBS		No	Ex post	January-06
1.1.2	Consulting services to design the communications and marketing plan	\$ 20,000	\$ -	\$ 20,000	QCBS		No	Ex post	June-06
1.1.3	Consulting services to develop the communications and marketing plan	\$ 100,000	\$ 20,000	\$ 120,000	QCBS	National law	No	Ex ante	December-06
1.2.1	Consulting services to design and construct the Web portal (750 programming hours)	\$ 30,000	\$ -	\$ 30,000	QCBS		No	Ex post	December-06
1.2.2	Consulting services to promote the launch of the Web portal	\$ 7,000	\$ -	\$ 7,000	QCBS		No	Ex post	January-07
1.2.3	Consulting services to develop a user's guide to the portal	\$ 10,000	\$ -	\$ 10,000	QCBS		No	Ex post	December-06
1.2.4	Consulting services to design and print promotional material	\$ 15,000	\$ -	\$ 15,000	QCBS		No	Ex post	December-06
2.2.3	Consulting services to develop communications interfaces with the current cost center system (500 programming hours x US\$40/hour)	\$ 20,000	\$ -	\$ 20,000	QCBS		No	Ex post	December-06
2.2.5	Consulting services to develop 5-hour training sessions for 120 HCUCH staff (US\$14 per student training hour, including logistics for planned events)	\$ 10,000	\$ -	\$ 10,000	QCBS		No	Ex post	April-07
2.3.2	Consulting services to develop departmental software for the electronic medical records	\$ 100,000	\$ 50,000	\$ 150,000	QCBS	National law	No	Ex ante	January-06
2.3.3	Consulting services to develop software for management of electronic medical records	\$ -	\$ 600,000	\$ 600,000	National law		No	Ex ante	January-06
2.3.5	Consulting services to customize existing systems for the use of HL7 standards (2,500 hours x US\$40/hour)	\$ 100,000	\$ -	\$ 100,000	QCBS		No	Ex ante	January-06
2.4.2	Consulting services to develop 15-hour training sessions on telemedicine for 20 professionals (US\$14/training hour/student)	\$ 5,000	\$ -	\$ 5,000	QCBS		No	Ex post	March-06
2.5.1	Consulting services to update and improve the 50 clinical guidelines currently available	\$ 40,000	\$ -	\$ 40,000	QCBS		No	Ex post	May-06
2.5.2	Consulting services to develop 50 clinical guidelines	\$ 20,000	\$ -	\$ 20,000	QCBS		No	Ex post	December-06
Total for consulting firms		\$ 507,000	\$ 670,000	\$ 1,177,000					
TOTAL FOR CONSULTING SERVICES		\$ 971,800	\$ 920,000	\$ 1,891,800					

Selection method

QCBS: Quality- and cost-based selection

SSS: Single-source selection

IC: Individual consultant

National law: In cases in which 100% of the financing comes from local counterpart resource

CHILE
PRODUCTIVITY AND MANAGEMENT TOOLS IN THE CHILEAN HOSPITAL MARKET
(CH-M1006)

A. Similar or related MIF projects

Project number and date of approval	Project title, executing agency, and amount	Date of signature and disbursement period in months	Percentage disbursed	Comments
ATN/MT-8127-CH 12/04/2002	Program to Strengthen Chilean E-Commerce Security and Trust Santiago Chamber of Commerce US\$1 million from the MIF	04/01/2003 42 months	37%	Classified S/P. The project is being satisfactorily implemented and will likely achieve its objectives, given the favorable environment and the high probability that the assumptions will be met.
ATN/MT-9120-CH 03/09/2005	Development of an Electronic Invoicing System and Tax Portal for Micro, Small, and Medium-sized Enterprises in Chile Servicio de Impuestos Internos [Internal Revenue Service] US\$1,279,000 from the MIF	04/09/2005 42 months	0%	Classified S/P. The executing agency has recently fulfilled all conditions precedent (13 October 2005).
ATN/ME-7956-RG-4 03/01/2004	ICT4BUS - CCS Web Services Santiago Chamber of Commerce US\$302,000 from the MIF	03/01/2004 30 months	31%	Classified S/P. The project is being satisfactorily implemented. Notably, the COMEX portal has been developed, and 65 companies have listed with it.
ATN/ME-7956-RG-14 08/10/2004	ICT4BUS - ICT Platform Centro de Productividad Industrial [Center for Industrial Productivity] US\$370,096 from the MIF	08/10/2004 30 months	56%	Classified S/P. The project is being satisfactorily implemented and will likely achieve its objectives, given the favorable environment and the high probability that the assumptions will be met.

B. Similar or related Bank projects in Chile

Project number	Project title, executing agency, and amount	Date of approval and disbursement period	Objective
CH0160 1286/OC-CH	Technology Development and Innovation Program Ministry of Economy US\$100 million from the Ordinary Capital	11/29/2000 4 years	The program's general objective is to help increase the competitiveness of the Chilean economy by supporting technological innovation and development in strategic areas of the national economy, and their transfer to and dissemination within the entrepreneurial sector, particularly among small and medium-sized enterprises that produce goods or provide services.
CHL1001 1585/OC-CH	Multiphase Program for the Strengthening of Chile's Digital Strategy Office of the General Secretary of the Presidency; Public Procurement Directorate of the Ministry of Finance; Telecommunications Subsecretariat of the Ministry of Transport and Telecommunications; Health Subsecretariat of the Ministry of Health, Regional Development and Administration Subsecretariat of the Ministry of the Interior; and the Ministry of Education US\$13,233,000 from the Ordinary Capital	11/3/2004 3 years	The program's general objective is to contribute to greater and more effective participation by Chile in the digital era, expanding access to and use of information and communication technologies as a factor for development, through institutional strengthening and implementation of a series of strategic initiatives to reinforce the strategy.

C. MIF portfolio in Chile

No	Memo #	Project #	ATN #	Name	Exec. Agency	FCL	Approval	Status	MIF Amount	% Disb
1	MIF/AT-31	TC9307291	ATN/MH-4761-CH	Pilot Program to Contract Out Retraining and Placement Services to the Private Sector	SENCE	II	14-Dec-94	Completed	1,840,897	100
2	MIF/AT-33	TC9410151	ATN/MH-4905-CH	Strengthening The National Commission On Environment	CNMA	II	24-May-95	Completed	1,902,500	100
3	MIF/AT-59	TC9504201	ATN/MT-5053-CH	Transport Sector Concessions	MOPDV	I	1-Nov-95	Completed	1,467,955	100
4	MIF/AT-79	TC9602138	ATN/MT-5199-CH	Global Integration	MH	I	24-Apr-96	Completed	606,318	100
5	MIF/AT-96	TC9609142	ATN/MH-5394-CH	Program for Innovation in Training in Technical Skills	FEE	II	30-Oct-96	Completed	297,600	100
6	MIF/AT-96	TC9609150	ATN/MH-5395-CH	Program for Innovation in Training in Technical Skills	FA	II	30-Oct-96	Completed	300,000	100
7	MIF/AT-96	TC9506348	ATN/MH-5393-CH	Program for Innovation in Training in Technical Skills	CIDE	II	30-Oct-96	Completed	1,009,375	100
8	MIF/AT-110	TC9604019	ATN/ME-5444-CH	Technology Transfer and Investment Fund	FC	IIIa	11-Dec-96	Completed	2,889,141	100
9	MIF/AT-110	TC9608269	EQU/MS-0009-CH	Technology Transfer and Investment Fund	FC	IIIb	11-Dec-96	Completed	2,986,490	100
10	MIF/AT-148	TC9504144	ATN/ME-5767-CH	Program of Small Enterprise Competitiveness	CEPRI	IIIa	19-Nov-97	Completed	2,000,000	100
11	MIF/AT-232	TC9801194	ATN/MT-6376-CH	Commercial Arbitration and Mediation Center	CCS	I	3-Feb-99	Completed	646,598	100
12	MIF/AT-294	TC9808041	ATN/MH-6698-CH	Labor Competency Certification Program	FC	II	13-Oct-99	Completed	1,849,174	100
13	MIF/AT-308	TC9805071	ATN/MT-6809-CH	Strengthening Water Sector Regulatory Entity	SSS	I	8-Dec-99	Completed	1,063,361	100
14	MIF/AT-314	TC0005003	ATN/MH-6959-CH	Regional Employment Program for the Blind	UNITCH	II	26-Apr-00	In execution	500,700	81

No	Memo #	Project #	ATN #	Name	Exec. Agency	FCL	Approval	Status	MIF Amount	% Disb
15	MIF/AT-329	TC9904019	ATN/ME-6985-CH	Micro-Leasing Restructuring Program for INDES S.A.	INDES	IIIa	31-May-00	In execution	570,000	83
16	MIF/AT-370	TC0009031	ATN/ME-7201-CH	Equity Investment in the "Negocios Regionales" Investment Fund	FC	IIIa	1-Nov-00	Cancelled	0	0
17	MIF/AT-370	TC0009010	EQU/MS-7202-CH	Equity Investment in the "Negocios Regionales" Investment Fund	FCMI	IIIb	1-Nov-00	Completed	3,000,000	100
18	MIF/AT-400	TC0009024	ATN/MT-7353-CH	Modernization of the Mass Transportation System	MTT	I	7-Mar-01	In execution	1,250,000	72
19	MIF/AT-403	TC0009002	ATN/MH-7403-CH	Training for Young Entrepreneurs	FEE	II	25-Apr-01	In execution	276,602	97
20	MIF/AT-416	TC0007039	ATN/ME-7468-CH	Integrating Microenterprise Production	FS	IIIa	27-Jun-01	In execution	1,092,000	90
21	MIF/AT-458	TC0107009	ATN/ME-7799-CH	Risk Scoring System for Bandesarrollo Microempresas	BDDM	IIIa	22-Feb-02	In execution	270,000	80
22	MIF/AT-461	TC0108000	ATN/ME-7830-CH	Regulation of Credit Unions (FECRECOOP)	FECRECOOP	IIIa	3-Apr-02	Cancelled	0	0
23	MIF/AT-516	TC0205024	ATN/MT-8127-CH	Strengthening of Security and Trust in Electronic Trade	CCS	I	4-Dec-02	In execution	1,000,000	23
24	MIF/AT-518	TC0207025	EQU/MS-8133-CH	Strengthening and Promoting the Venture Capital Industry	CORFO	IIIb	11-Dec-02	Approved	10,000,000	0
25	MIF/AT-518	TC0207026	ATN/ME-8132-CH	Strengthening and Promoting the Venture Capital Industry	CORFO	IIIa	11-Dec-02	Approved	400,000	0
26	MIF/AT-558	TC0305032	ATN/ME-8529-CH	Adoption of Corporate Social Responsibility Practices in SME's	PUCV	IIIa	3-Dec-03	In execution	1,250,000	10
27	MIF/AT-583	CH-M1001	ATN/MT-8617-CH	International Financial Reporting Standards and International Standards Auditing	CCCH	I	21-Jan-04	In execution	725,000	10
28	MIF/AT-590	TC0205037	ATN/MT-8696-CH	Strengthening Credit Unions Regulation and Supervision	MEFR	I	28-Apr-04	Approved	1,136,000	0

No	Memo #	Project #	ATN #	Name	Exec. Agency	FCL	Approval	Status	MIF Amount	% Disb
29	MIF/AT-637-1	CH-M1005	ATN/ME-9077-CH	Government E-Procurement Support for SMEs - B2G	CCCH	IIIa	2-Feb-05	Approved	707,207	10
30	MIF/AT-645	CH-M1004	ATN/MT-9120-CH	Development of Electronic Invoicing System and Tax Portal for Micro and SMEs	SII	I	9-Mar-05	Approved	1,279,000	10
31	MIF/AT-656	TC0205023	ATN/MT-9239-CH	Strengthening of Airport Security	Dir. Aeronautica Civil	I	15-Jun-05	Approved	500,000	0
Total MIF Amount									42,815,919	

DOCUMENT OF THE INTER-AMERICAN DEVELOPMENT BANK
MULTILATERAL INVESTMENT FUND

PROPOSED RESOLUTION

Chile. Nonreimbursable Technical Cooperation ATN/MT---CH. for the Productivity
and Management Tools in the Chilean Hospital Market Project

The Donors Committee of the Multilateral Investment Fund

RESOLVES:

1. That the President of the Inter-American Development Bank or such representative as he shall designate is authorized, in the name and on behalf of the Bank, as Administrator of the Multilateral Investment Fund, to enter into such agreements as may be necessary with the Hospital Clínico de la Universidad de Chile, and to take such additional measures as may be pertinent for the execution of the project proposal contained in Document MIF/AT-____ with respect to a technical cooperation for the productivity and management tools in the Chilean hospital market project.
2. That up to the amount of US\$1,700,000, or its equivalent in other convertible currencies, shall be authorized for the purpose of this resolution, chargeable to the resources of the Technical Cooperation Facility of the Multilateral Investment Fund.
3. That the above-mentioned sum is to be provided on a nonreimbursable basis.