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GRUPO BANCO MUNDIAL

INSTITUTIONAL REPORT

HIGHER EDUCATION IMPROVEMENT PROJECT

Executed by
Public Universities
and funded by
The World Bank

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Consejo Nacional de Rectores
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ACRONYMS

CONARE	Consejo Nacional de Rectores (National Council of Deans)
UCR	University of Costa Rica
ITCR	Costa Rica Institute of Technology
UNA	National University
UNED	State University for Distance Education
UTN	National Technical University
ES	Higher Education
MDG	Millennium Development Goals
EPT	Education for All
FEES	Special Higher Education Fund
GoCR	Government of Costa Rica
PLANES	National Plan for Higher State University Education
BIRF	International Bank for Reconstruction and Development (World Bank)
OLaP	Employment Observatory of Professions
SIESUE	State University Higher Education Information System
SINAES	National Accreditation System for Higher Education
TCE	Full time
R+D+i	Research, Development & Innovation
IESs	Higher Education Institutions
LC	Liaison Committee
PCU	Project Coordination Unit
CSE	Monitoring and Evaluation Commission
IPCU	Institutional Project Coordination Unit
PMI	Institutional Improvement Project
ODP	Project Development goal
SRP	Pacific Regional Campus
SRO	Western Regional Campus
SRG	Guanacaste Regional Campus
SRC	Caribbean Regional Campus
SRA	Atlantic Regional Campus
CIMOHU	Human Movement Sciences
ICT	Information and Communication Technology
TCU	University Communal Work
CICIMA	Materials Science and Engineering

MAG	Ministry of Agriculture and Cattle
MICITT	Ministry of Science, Technology, and Telecommunications
MINAE	Ministry of Environment and Energy
CENIBiot	National Laboratory of Biotechnological Innovations
SENARA	National Service of Groundwater, Irrigation, and Drainage
A y A	Costa Rican Institute of Aqueducts and Sewers
RIDER	Research and Development Network on Energy Efficiency and Renewable Energy
INIFAR	Institute of Pharmaceutical Research
PEES	Digital Health Platform
SIPPRES	Institutional System of the Budget Plan
CeU	University Center
DTIC	Information Technology and Communication Directorate
VAU	Audio & Video Conference Program
PEM	Electronic Multimedia Production Program
PAL	Online Learning Program
CIDEA	Research, Teaching, and Artistic Extension Center
INCOP	Costa Rican Institute of Pacific Ports
CCSS	Costa Rican Social Security Fund
CERN	European Center for Nuclear and Particle Research
CSO	Occupational Health Council
INS	National Insurance Institute
MTSS	Ministry of Labor and Social Security
AAPIA	Agency for Accreditation of Engineering and Architecture Programs
ACCAI	Central American Accreditation Agency
M&E	Measurement and Evaluation
IFR	Financial Report to the World Bank - Unaudited
MIDEPLAN	Ministry of National Planning and Economic Policy

PRESENTATION

The Higher Education Improvement Project (PMES, in Spanish) enabled four public universities (University of Costa Rica, Costa Rica Institute of Technology, National University, and State University for Distance Education) to develop initiatives aimed to strengthen innovation, scientific, and technological development, and to ensure the quality, equity, and permanence of students in university classrooms, by executing a US$200 million loan granted by the World Bank to the Government of Costa Rica.
This financing strengthened university investment in different areas, to improve the coverage and permanence of students, the quality and relevance in human resource training, the promotion of scientific and technological innovation and development, and the development of the different regions of the country. This benefit goes beyond the university community because it has an impact on the Costa Rican society, following the model of the Public University, as a generator of local and national development.

The success of the project execution is reflected in 55 buildings, benefiting more than 120 thousand students from all regions of the country, with new laboratories, classrooms, libraries, student residences, and high-tech equipment. This infrastructure favors the increase in extension activities, research teams, research networks, and the quality of projects.

Additionally, two cross-cutting aspects were worked and excellent results were obtained: the Indigenous Safeguard, which allowed for a significant increase in the number of students from indigenous territories, and the Environmental Safeguard, which allowed for constructions to be carried out with the project approval process by SETENA, in addition to considering World Bank processes in this matter.
Part of the initiatives of this project focused on strengthening the regionalization and democratization of access to Public Higher Education, a commitment of public universities to contribute to the social mobility of students and their families. The installed capacity supports the articulation of the different academic, industrial, health, and environmental sectors, among others, through scientific and technological development.

Thanks to this investment, scholarship programs for researchers were enhanced, providing the country with human capital trained in the development of knowledge. I hereby express my deep gratitude to the Government of the Republic, to The World Bank for the determined support to public university education, to the CONARE team, headed by the director of the Higher Education Planning Office, Eduardo Sibaja Arias, and the university work teams for what this project represents for the state university system and for the country. All of them are architects of the successful execution and development of the project. In addition, I want to thank and recognize the work of chancellors who were part of the Consejo Nacional de Rectores in the different stages of this Project, namely, the initial negotiation, the approval of the loan contract, and everyone who was part of the execution process.
This project marks a before and after in Costa Rican public university education and on the road toward the development of the country. This way, the commitment of a country that invests in education and development is renewed.

Luis Paulino Méndez Badilla

President | Consejo Nacional de Rectores

INTRODUCTION

The goal of this report on the Higher Education Improvement Project (PMES) is to account for the work and execution carried out by four public universities of the Consejo Nacional de Rectores, beneficiaries of the 200 million dollar loan granted by the World Bank to the Government of the Republic of Costa Rica. The Project was approved by Law No. 9144, published on La Gaceta No. 140 of July 22, 2013, with the aim to improve access and quality, increase investment in innovation and scientific and technological development, and to improve the institutional management of the public higher education system of Costa Rica.
The approval of this loan represented the recognition of Costa Rican public university education as the architect and generator of public value for the well-being of the population and its contribution to the development of the country.

In our current global and national context, where we work to close social gaps, through education as a fundamental tool for thousands of young people to obtain a better future, quality of life for themselves and their families, it is a priority to strengthen state university education and its role in our society.

For this reason, the Costa Rica Higher Education Improvement Project became a transcendental project in the future of university education because it strengthens access by investing in infrastructure for teaching, learning, and research; increases the quality of higher education, and strengthens the management capacity and accountability of public universities. Additionally, the national accreditation system for higher education, the employment market observatory, and the public information system on higher education were strengthened.

The investment made benefits more than 120 thousand students from state universities in all regions of the country, with the construction of 55 buldings, with new laboratories, classrooms, and high-tech equipment, distributed throughout the country. 22 buildings were built on the campus of the University of Costa Rica, 14 at the State University for Distance Education, 11 at Costa Rica Institute of Technology, and 8 at the National University.
In addition, 606 people from public universities benefited from scholarships to conduct internships and doctoral and master's studies. Of them, 60 are from the University of Costa Rica, 307 from the State University for Distance Education, 31 from the Costa Rica Institute of Technology, 208 from the National University.

At the conclusion of this project, I express on behalf of the state university system, my gratitude to the Government of the Republic and the World Bank for their support, as well as a special recognition to the staff of public universities who were part of the negotiation and execution processes of this visionary project, to the members of the Coordinating Unit of the CONARE Project, to the representatives of the National Accreditation System for Higher Education (SINAES), the Employment Labor Observatory (OLAP), and the State University Higher Education Information System (SIESUE) of CONARE, for their performance and the work carried out, which was key in achieving the goals of this project, which represents the strengthening of the State University Education System and contributes to the construction of a more competitive, prosperous, solidary, inclusive, and environmentally-sustainable nation.

Eduardo Sibaja Arias

Director | Higher Education Planning Office

Consejo Nacional de Rectores

HIGHER EDUCATION
IMPROVEMENT PROJECT

BACKGROUND **OF PMES**

The development of Higher Education in recent years has been characterized by the fact that state universities have established mutual commitments between academia and society, in order to strengthen and enhance their contribution, in fulfillment of their social mission for development of the country and in search of the well-being of the population.

From this dynamic, a new concept was forged that defines -in a general way- the multiple relationships that are established among universities and their environments, in response to the growing social demands related to the results of their substantive processes (teaching, research, extension, and social outreach). Thus, the concept of relevance of universities in society arises, where they articulate through joint programs and projects, in collaboration with the State, the rest of the educational system, the productive sector, cultural institutions, and other social sectors.

This concept of relevance also involves the ability of universities to critically take over the challenges that the collective of the society demands, thereby contributing to its transformation. This implies not only economic relevance, but also social and cultural relevance, as well as the active role of state universities as agents of change for new ideas and actions aimed at achieving a better society.

The final communiqué of the II World Conference on Higher Education (Paris, 2009) emphasized that never in history, it has been more important to invest in Higher Education as a major force to build an inclusive and diverse knowledge society and to advance research, innovation, and creativity. The past decade shows that higher education and research contribute to eradication of poverty, sustainable development, and progress towards the Millennium Development Goals (MDGs) and towards Education for All (EFA). Furthermore, it has been clearly established that higher education is "a public social good and a fundamental human right".

Higher education must be a strategic axis in public policy to allow greater achievements in social welfare. Countries expect it to build their technical, professional, and postgraduate (for research, development and technological innovation) human capital; to broaden their knowledge bases through research; to spread knowledge by articulating with companies; to preserve and transmit intergenerational accumulated knowledge; to expertly support problem solving; and to provide a space for informed and pluralistic debates on public affairs. Education, science, and technology depend, more than ever, on the socioeconomic development of countries.

Within this context, the Government of Costa Rica (GoCR) asked the academia to present a project that focused on the development of public higher education, while promoting investment in priority areas of four state universities, namely: University of Costa Rica, Costa Rica Institute of Technology, National University, and State University for Distance Education, which are part of the Consejo Nacional de Rectores (CONARE) within the framework of the Special Higher Education Fund (FEES).

In January 2011, the Financing Agreement for State Higher University Education* (2011-2015), the Liaison Committee indicated that "public universities are one of the vital instruments to promote the economic and social development of the country, thus promoting the generation of knowledge, mobility and social cohesion and the enrichment of the country's cultural identity, facing the challenges and opportunities of the 21st century".

Access to higher education for students who graduate from high school and wish to pursue higher education, is both a right and a necessity for the country in terms of raising the cultural level, knowledge, and technical, professional, scientific, and artistic skills of its new generations.

For this reason and in view of the expiration of the fourth agreement in July 2009 and the 2010 agreement, the Liaison Committee analyzed and discussed the terms of a new agreement to fund state higher university education.

* Financing agreements for state higher university education are the appropriate mechanism to implement the funding commitment stipulated in article 85 of the Political Constitution of Costa Rica.

This process was characterized by the commitment and vision to strengthen state higher education, which was shared by government and university authorities who determined a financing possibility within the fiscal situation of the country and in the context of the different priorities of national development.

This way, article 1 of the first chapter of the Financing Agreement for State Higher University Education 2011-2015 indicated regarding the determination of the annual amount of FEES that, “Given that to reasonably aspire to the funding percentage goal for the FEES will require greater fiscal capacity by the Government, which may take time to materialize, and taking into account the importance of public universities, the Government of the Republic will guarantee a minimum annual growth rate for FEES during the years of validity of this Agreement. This guaranteed rate will not depend on the behavior of either GDP or tax revenue”.

In addition, article 12 of the second chapter, Specific Resources for Strategic Investment, of the Financing Agreement for State Higher University Education 2011-2015 states, "In addition to the foregoing, and with the aim of strengthening the investment processes in strategic areas of the four institutions, the Government of the Republic undertook to fully process and provide funding in favor of the institutions that make up CONARE, through a credit operation for US $200 million.

As agreed by CONARE, these resources would be equally distributed and applied among the four universities, with the aim to provide financial support to build the capacity of these universities to increase their admission of students, expand the quotas in the careers that require it, and strengthen their scientific and technological capacity, expanding physical infrastructure, equipment, scholarships for teachers, and enhancing student services, including residences.

The credit project would be jointly among the universities and the Executive Power, in accordance with the provisions of articles 80, 81 and 84 of the Law on Financial Administration and Public Budgets and jointly negotiated with the financial agency chosen as creditor. Said resources would be executed by the universities and coordinated by CONARE, as of the approval of the credit project by the Legislative Assembly."

The results would be achieved through a combination of this additional investment, management improvements, performance orientation, and accountability in the use of these funds, within the framework of the autonomy of the universities to develop and implement their own plans.

The Multilateral Development Banks, such as the Inter-American Development Bank and the Central American Bank for Economic Integration, have distinguished themselves for having a long history of supporting the Costa Rican higher education sector through loans to different institutions; however, this proposed operation would be the first multilateral loan to support the strengthening of the state higher education system through the coordinated participation of the four CONARE universities, and it would be the first project supported by the World Bank (International Bank for Reconstruction and Development, IBRD) for higher education in Costa Rica.

In the provision of this support and in common agreement with state universities, the Government and the World Bank considered their own recent studies on education and employment, as well as their extensive experience in improving higher education systems in other countries in Latin America and other regions.

The high level goal of the Project that was established was "To strengthen and develop human talent capacities, enhancing knowledge and incorporating science, technology, and innovation in the substantive areas of State Universities to contribute to the construction of a more competitive, prosperous, caring, inclusive, and environmentally sustainable nation".

The negotiation between the Government of Costa Rica and the IBRD concluded with the approval of the IBRD Board of Directors on September 27, 2012 and the signing of Loan Contract No. 8194-CR between the parties on November 06, 2012. As of that time, the project execution term of four years began to run, eventually becoming six years, taking into account the extensions granted.
Despite multiple efforts, it was until early 2014 that a series of requirements were met to make the loan fully operational.

The detail of the process carried out was as follows: The first step to be able to execute the loan was approval in the Legislative Assembly, which although was considered to be expedited, Law No. 9144 was approved until July 9, 2013 and published on La Gaceta -official gazette- No 140 on July 22, 2013.

The second step was to obtain the effective date from the IBRD, which was gotten on July 31, 2013. Also, the total amounts of the loan were incorporated in an Extraordinary Budget, as published on a digital addendum to La Gaceta No. 124 on September 19, 2013.

As an initial counterpart, an amount of $ 48.8 million was established, including contributions from state universities, as well as CONARE's commitment to strengthen actions to support higher education centers.

State universities are a fundamental pillar in the country's social, economic, environmental, and cultural development. They provide high-level professionals to Costa Rica, carry out research for the benefit of the productive and social sectors, improving development, competitive strengthening, and well-being of the entire population. This role played by public universities in Costa Rican society impregnated this contract and the execution of the loan to fund the Higher Education Improvement Project with greater relevance.

PROJECT GOALS, COMPONENTS, AND STRATEGIC AXES

The following objectives, components, and axes were set for the Project.

Project Goals:

High-level Project Goal:

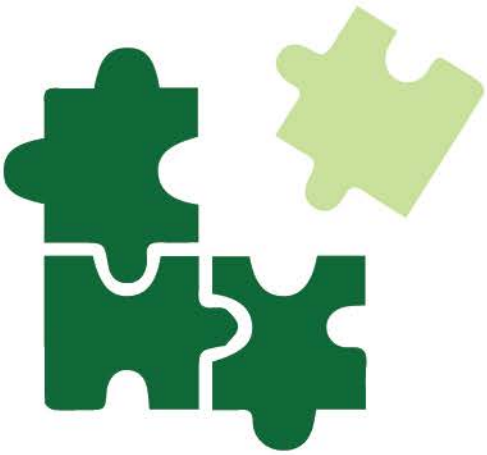
To strengthen and develop human talent capacities, enhancing knowledge and incorporating **science, technology, and innovation** in the substantive areas of State Universities to contribute to the construction of a more competitive, prosperous, caring, inclusive, and environmentally sustainable nation.

Project's Development Goal:

To improve the **access and quality, to increase investments in innovation and scientific and technological development,** and to upgrade institutional management of the public higher education system in Costa Rica.

Project Components:

Component 1: Actions to be carried out by the universities with the loan resources.



Component 2: Strengthening of institutional capacity for quality enhancement. This component has the following sub-components:

- Strengthening of the National System for Accreditation of Higher Education (SINAES) ($14 million)
- Development of the Employment Observatory of Professions (OLaP) and the State Higher Education Information System (SIESUE) ($ 1.2 million)
- Support to coordination, supervision, and evaluation of the Project ($ 2.1 million).

Project Strategic Axes:

For the execution of the Project, four common strategic axes were established to support fulfillment of the indicators of the Project Development Goals:

- Increase in access and retention (access).
- Improvement of quality and relevance of programs and human resources (quality).
- Strengthening scientific and technological development, as well as innovation (innovation and scientific and technological development).
- Improvement of institutional management and accountability (management capacity).

Project Indicators

Four types of indicators were established in the project:

- Project Development Goal Indicators
- Component 1 Intermediate Indicators
- Component 2 Intermediate Indicators
- Outcome indicators of each developed initiative

A brief detail of these indicators is presented next.

Project Development Goal Indicators

The Project Development Goal was established as follows: "To improve the access and quality, to increase investments in innovation and scientific and technological development, and to upgrade institutional management of the public higher education system in Costa Rica", and the following indicators were determined for its measurement:

1) Improvement of access, which was measured by the total enrollment of physical and regular students in the 4 participating universities in the project.

2) Improvement of quality, whose measurement parameter is the total number of accredited careers taught.

3) Increase in investment in scientific and technological innovation and development. The measurement was made by using the amount of resources invested in Research and Development (R&D) in the 4 participating universities in the project.

4) Increase in management capacity, whose measurement was carried out by verifying the annual publication of the "Annual Operating Plan" self-assessment by the 4 participating universities in the project.

Component 1
Intermediate Indicators

1) Total number of first-year students enrolled in a major at the four participating universities in the Project.

2) Total of regular students enrolled in priority areas at the four participating universities in the Project.

3) Total number equivalent to full-time (TCE) faculty members with degrees of (i) Master and (ii) Doctor in the four participating universities in the Project.

4) Full-time (TCE) equivalent faculty members who carry out research activities in the four participating universities in the Project.

5) Officials with scholarships to carry out postgraduate studies abroad from the four participating universities in the Project.

6) Number of publications in indexed journals.

7) Number of graduates from the four participating universities in the Project.

8) Annual web publication of the results of the Institutional Improvement Plan.

9) Percentage of the budget that goes to infrastructure and equipment.

Component 2
Intermediate Indicators

1) Total number of university courses submitted to an external evaluation.

2) Number of trained professionals for self-assessments (for IESs) and for external assessments (for SINAES).

3) Comparable studies to monitor the insertion of graduates into the labor market, using representative samples.

4) Progress in the consolidation of the State University Higher Education Information System.

Indicators
by Initiative

Each of the initiatives developed by the Universities was linked to an initiative, a goal, and proposed indicators.

Initiatives | UCR

UNIVERSIDAD DE COSTA RICA

Expansion of access and coverage in engineering areas (electrical and computer and multimedia technology (SRP), civil (SRG), industrial (SRO), electrical, chemical, naval (SRL), and industrial (SRA), as well as in the School of Biology (SRF).

Goal

Increase in biology and in civil, electrical, industrial, and chemical engineering enrollment and in the computer science and multimedia technology majors, both at regional and main campuses. This subproject focused on the development of infrastructure, equipment, and human resources in these disciplines.

Indicators

- Expansion of 5,494 m² in infrastructure.
- Increase in 328 first-time student seats.

Strengthening of the Center for Research in Human Movement Sciences (including the Biomedical Laboratory) (CIMOV)

Goal

To strengthen research in prosthetics, orthopedics, digital processing of biosignals, and medical images, as well as to train professionals and systematize knowledge in human movement sciences, to improve the quality of life of Costa Ricans. This subproject addressed the lack of specialized laboratories, through the creation of laboratories in the areas of controlled air conditioning, exercise physiology, strength, bioelectricity, biomechanics, motor functions, and body composition. This subproject funded the space, equipment, and human resources for the Center for Research in Human Movement (CIMOHU).

Indicators

- Construction of an 816 m² building.
- Procurement of suitable equipment and software for its operation.
- Improvement of the academic qualifications of four faculty members.

Expansion of coverage through the creation of a program that includes **ICTs and the arts,** as well as the strengthening of the **School of Musical Arts**

Goal

To create innovative programs that strengthen creativity and meet the needs of today's labor market. This subproject was based on the development of programs that emphasized problem solving, which generated added value for students. To achieve this, the interaction of a number of disciplines (e.g. graphic design, music, computer science, and collective communications) and the use of information and communication technologies was promoted. This subproject focused on funding equipment and human resources to develop new programs and infrastructure for the new School of Musical Arts.

Indicators

- Construction of a 2,400 m² building for the School of Musical Arts.
- Recruitment of staff equivalent to 4 new full-time teachers.
- Increase of 10 seats in the quota of first year students at the School.

Hydraulics and Mechatronics Laboratory Strengthening

Goal

To develop and strengthen the areas of mechatronics and hydraulics to contribute to greater efficiency and quality of industrial and agro-industrial facilities, the simulation of human movements for prostheses, and the protection of hydraulic, river, and maritime infrastructures.

Indicators

- Addressing the lack of equipment in hydraulic and mechatronic laboratories.
- Improvement of the academic qualification of the teaching staff.
- Development of 12 additional research projects per year.

Strengthening professional training in the food field through: (i) expansion of coverage in the Food Technology program (SRF), (ii) decentralization of the Food Technology program (SRG), and (iii) creation of the 92 Technology Development Center (SRF)

Goal

To encourage teaching and research in the food quality field through the implementation of strategies to strengthen the agri-food sector and to increase its competitiveness and innovation. This subproject included investments in infrastructure, equipment, and human resources for the Food Technology Research Center and the School of Food Technology, as well as for the SRG.

Indicators

- Construction of a 1,700 m^2 annex building.
- Increase of 690 m^2 in the teaching space.
- Increase in 20 student seats (10 in the first year of undergraduate level and 10 in the first year of graduate level).
- Increase in 13 active research projects per year.

Strengthening of the Research Center for Materials Science and Engineering **(CICIMA)**

Goal

This subproject was aimed at strengthening the Materials Science and Engineering Research Center. Funded activities included the execution of civil works for the Center and the purchase of relevant equipment.

Indicators

- Construction of a 1,580 m² building dedicated to research, with adequate equipment.
- Improvement of the academic qualifications of 4 faculty members.

Creation of a Research Network: Laboratories at **SRF, SRO, and SRA**

Goal

To promote sustainable development based on multidisciplinary work. This subproject was aimed at developing the necessary infrastructure, equipment, and human resources for this Network.

Indicators

- Increase in 171 m^2 of laboratory space.
- Development of 8 new research projects.
- Increase in human resources equivalent to 3 full-time teachers dedicated to teaching and research.

Strengthening of the Environmental Pollution Research Center **(CICA)**

Goal

Strengthening research in the fields of water quality, analysis of pesticide residues, air quality, bioassays, metabolism, and biodegradation, in order to help ensure the quality of the environment. This subproject developed the infrastructure at the current Environmental Pollution Research Center.

Indicators

- Construction of a 1,266 m² building.
- 100 percent increase in the number of active research projects -93 per year.
- Increase in qualifications of 12 faculty members, among others.

Creation of the Energy Efficiency Center **(CEETER)**

Goal

To promote innovative research in the fields of renewable energy, energy use and exploitation, returns of traditional fuels, environmental pollution, and transport, in order to contribute to energy efficiency at both the national and regional levels. This subproject focused on the creation of a Center for Energy Efficiency and Renewable Technologies.

Indicators

- 1,000 m² in construction.
- Incorporation to the Center of training and research personnel who currently work at different units.

Strengthening and expansion of training scope of health professionals through Public Health (SRF), Health Technologies (SRF), Medicine (SRF), and Health Technologies (Environmental Health) (SRG)

Goal

The main objective of this subproject was to find solutions to relevant problems in overall health through training, development of technologies, systematic production of scientific knowledge, and dissemination of results, in order to improve the quality of life of the Costa Rican population. This subproject focused on strengthening the schools of Medicine, Public Health, and Health Technologies, through the execution of civil works and the purchase of relevant equipment.

Indicators

- Construction of 5,600 m² in facilities for the different schools involved.
- Hiring of staff equivalent to 4 new full-time faculty members.
- Improvement of academic qualifications for 8 faculty members.
- An increase of 85 seats in the quota of first-year students.

Strengthening of research in atomic, nuclear, and molecular sciences, applied to the health area **(acquisition and installation of a Cyclotron and a PET/CT)**

Goal

To support research in the development of medical instruments for the detection of diseases and their treatment. This subproject strengthened the Research Center for Atomic, Nuclear and Molecular Sciences.

Indicators

- 1,200 m² in construction.
- 316 faculty members and more than 2,600 related students in these areas have benefited.
- Doctoral training for a member of the faculty.

Strengthening of the Pharmaceutical Research Institute **(INIFAR)**

Goal

To support research projects in the pharmaceutical field, in order to improve the safety and efficacy of new drugs, thus contributing to the creation of knowledge and training of professionals. This subproject strengthened the infrastructure and equipment of the Institute for Pharmaceutical Research.

Indicators

- 2,100 m^2 in construction.
- Improvement of the academic qualifications of 3 faculty members.
- Increase from 11 to 13 active research projects.

Creation of the Research Center in **Neuroscience**

Goal

To strengthen research in the areas of neuroscience -neurophysiology, neurogenetics, and cognition-, in order to contribute to the improvement of health and education in the country. This subproject aimed to develop the infrastructure and equipment of the Neuroscience Laboratory.

Indicators

- Construction of 750 m^2 of laboratories.
- Recruitment of staff equivalent to 3 full-time positions.
- Increase from 5 to 11 active research projects per year.

Strengthening of information systems for **decision-making**

Goal

To develop an articulated university management system that allows for faster, more flexible, and efficient processes. This subproject was oriented to the development of the strategic management system, the information system, and the quality management system.

Indicators

- Design, development, and implementation of the System for the Integration of Services for the General Services Office.
- Implementation of the Budgetary Administration and Position System.
- Improvements to Student Systems (Web Enrollment, Socioeconomic Attention System and File), among others.


UNED

Initiatives

Network of University Centers for **innovation and local and national development**

Goal

To provide a series of common services to all the University Centers of UNED to increase access, equity, and coverage, thus contributing to local development and establishing links with society. The common services provided as a result of this subproject are technology rooms, computer labs, science labs, engineering labs, academic resource centers, fiber optic connections at all centers, and an increase in Wi-Fi connectivity.

Indicators

- 15 percent increase in regular students in priority disciplines.
- 100 percent increase, at the end of the Project, in the number of students supported in the laboratory courses.

Center for Change Management and Regional Development:
Cartago University Campus

Goal

To develop the necessary infrastructure for a University Campus that, since its creation in 1978, has had used the facilities of a series of public schools, which did not provide an appropriate teaching environment. With this subproject, new infrastructure was built with a 2,198 m² area, including technology rooms, multipurpose rooms for teaching, computer labs, engineering labs, science labs, and fiber optic connectivity.

Indicators

- 15 percent increase in regular students in priority disciplines.
- 50 percent increase in the number of students in courses that involve the use of laboratories at the Center.

Center for Change Management and Regional Development: Puntarenas University Campus

Objetivo

To develop the necessary infrastructure for a University Campus that, since its creation in 1977, has had used the facilities of a series of public schools, which did not provide an appropriate teaching environment. This subproject funded the construction of a 2,000 m² building that would host technology rooms, computer laboratories, engineering laboratories, laboratory equipment for teaching practice, and an academic resource center for students and training of the members of the Center.

Indicadores

- En promedio 250 estudiantes en los cursos que utilizan los laboratorios académicos en el Centro.

Equity improvement in student access to **online and digital learning resources**

Goal

To increase access and participation in online teaching and academic activities. This was done through the provision of technological devices for students with economic and social difficulties, in order to facilitate their learning process.

Indicators

- From 1,000 to 1,500 students from low socioeconomic levels are expected to have access to mobile devices and the Internet.
- From 800 to 1,000 devices are installed at the academic resource centers of the least socially developed cantons.

Diversification of the academic offer **of engineering programs**

Goal

To develop new engineering programs, with a distance education modality, that meet the needs of the country and contribute to the priorities of the development plans for Costa Rica and Central America. Three engineering programs were created: Industrial, Water and Sanitation, and Telecommunications Engineering. To achieve this goal, this subproject considered the curricular and pedagogical design of courses and programs, the design and production of pedagogical materials of various types, the programming of the self-evaluation and accreditation of those programs, and the provision of necessary infrastructure and equipment, among other actions.

Indicators

- 185 undergraduate students.
- At least 3 publications per year.
- Development of 93 internships and research projects developed in conjunction with the private sector.

Education and training to strengthen the distance education model

Goal

To support teacher education and training to ensure that all other PMI Goals (related to access and quality) are met, specifically by supporting all other subprojects through apprenticeship training and professional training programs, in addition to internships at universities and other public and private institutions.

Indicators

- 362 university officials benefit from this additional training.
- 53 of which would receive postgraduate degrees.

Information system to support decision-making and institutional management

Goal

To strengthen and improve institutional information systems by integrating them and making them effectively responsive to the needs of users. Emphasis was placed on supporting decision making, institutional management and the provision of automatic services in the academic and administrative areas. The subproject funded the necessary technical assistance and the implementation of the required technological infrastructure.

Indicators

- Generation of relevant indicators in support of institutional management and decision making.
- 80 percent improvement in the quality of databases with essential information.
- Provision of 24 new services for students, 16 new services for teaching staff, and 12 new services for non-teaching staff.

Diversification and expansion of **digital, multimedia, and Internet production**

Goal

To increase students' access to teaching and academic support, as well as to promote the interaction of the faculty with colleagues inside and outside the country, in accordance with the technological development of Costa Rica. This subproject led to the acquisition of the necessary equipment for video, radio, and television transmission, as well as training of specialists in design, animation, and broadcasting, among others.

Indicators

- Production of 97 new videos per year and 1,500 hours in digitalization.
- 199 documentaries produced per year.
- Installed capability for streaming video and audio in real time.

Strengthening production, experimentation, and research for technological development and innovation at UNED

Goal

To strengthen the areas of production, research, and scientific development so that they are aligned with global trends in ICT. To strengthen the production of written pedagogical material, multimedia materials, audiovisual materials, videoconferences, and online-learning materials. This is due to the importance of developing "virtual laboratories" (interactive computer devices that introduce the activities to be carried out in a real laboratory) and a research network for the development of knowledge and technological proposals. To achieve the goals of this subproject, a 5,945 m² building was built, which included laboratories, a main center for video-communication system management, a data center, offices for the staff of the ICT Department and the Office of the Vice Chancellor for Research, among others.

Indicators

- Comprehensive and improved ICT systems for the entire University. 30 indexed publications.
- Creation of 5 research networks.
- 18 new researchers with postgraduate degrees.


ELECTRONICA

Initiatives | TEC

Student Residences

Goal

This subproject aimed to eliminate access barriers for students from low socioeconomic levels and address the lack of subsidized accommodation.
A building was built to accommodate students, facilitating a 60 percent increase in the number of students residing at the university.

Indicators

- Increase in 136 students housed at the ITCR residences.
- Better distribution by gender in the allocation of accommodation places.

Student Dining Facilities

Goal

The combination of the location of the ITCR campus with the insufficient supply of food services makes it difficult for students to access food services at the university, which affects their performance and well-being. This subproject promoted the construction of additional facilities for a student cafeteria, thus increasing the capacity of the demand for meals from 45 percent to 60 percent.

Indicators

- Construction of a 1,458 m^2 student cafeteria.
- Provision of the necessary equipment.

Information Technology and Communication Core

Goal

To improve the conditions for developing teaching, research, and extension in the fields of electronic engineering, computer engineering, and mechatronic engineering. To achieve this goal, works (a new building of 4,843 m^2) and investments in equipment were built to significantly improve teaching and research capacities in this area of knowledge.

Indicators

- Infrastructure works (a new 4,843 m^2 building).
- Investments in equipment to significantly improve teaching and research capabilities in this area of knowledge.
- Increase in 72 first-time student seats.
- Continuation of activities for the accreditation processes, among others.

Occupational Safety Integrated Core

Goal

To increase teaching and research capacities in the fields of occupational safety and industrial hygiene.

Indicators

- Construction and equipment for a new 1,179 m² building.
- Improvement of the qualifications of the teaching staff.
- 40 percent increase in first-time student seats.
- 30 percent increase in faculty academic qualifications.
- Maintaining student employability rates at 95 percent.

Environmental Chemistry Integrated Core

Goal

To establish an area for the School of Chemistry and the career of Environmental Engineering. This subproject strengthened the infrastructure (construction of 3,250 m²), equipment and human resources in this area to improve teaching, research, and extension in a field that is critical for the country.

Indicators

- 35 percent increase in the number of students.
- 3 faculty members will be able to get a doctorate degree.
- The time frame for graduation of environmental engineers is improved.
- First-year to second-year retention rate improves from 80 percent to 85 percent.

Academic Training for Faculty Members

Goal

To increase the number of faculty members with doctoral degrees, which would lead to significant improvements in teaching and research and, in the medium term, to establish an own doctoral program at ITCR. This subproject funded scholarships to enable teachers to complete doctoral studies at world-class universities.

Indicators

- Increase in the number of faculty members with doctorates in engineering by 25 professors.
- Increase in the number of research projects by 25.
- Increase in annual publications in indexed journals by 25.

Strengthening of the San José Academic Center

Goal

To adapt the ITCR Academic Center located in the capital city, whose infrastructure is 50 years old, to meet the growing demand and regulations regarding accessibility and security.

Indicators

- Construction of a new building (including 10 new classrooms and a new 500 m² library).
- 20 percent increase in the number of first-time students.
- Offer of a new program.
- Strengthening the relationship with the private sector.

Library Extension

Goal

To increase the library's ability to provide services to its users.

Indicators

- The library's capacity is increased to provide services to its users by a 987 m² area.
- Expansion of operation hours to turn it into a 24-hour library.
- Creating new services in specialized areas.

Strengthening of the San Carlos Regional Campus

Goal

To meet the increase in demand in the San Carlos region, as well as its area of influence, through strengthening the ITCR regional campus and its research area. Specifically, the infrastructure works that were built increased the capacity of the classrooms and research facilities at campus.

Indicators

- Creation of 2 new programs.
- 35 percent increase in student enrollment.
- 20 percent increase in the number of research subprojects.
- 50 percent increase in the number of publications.

Student and Academic Information and Management System

Goal

To design and implement a new computer system to manage academic and student information in a reliable, efficient, and flexible manner. The investment in equipment and system development led to improvements in the areas of student services, academic decision-making, and administrative processes.

Indicators

- Online systems development.
- Process automation.
- Development of integrated user-oriented systems.
- Increase in the use of ICTs in the development of processes for students.
- Development of statistics to support decision-making processes.

Industrial Design Integrated Core

Goal

To improve the conditions for teaching, research, and extension in the field of industrial design engineering. This was done through the construction of infrastructure (1,200 m^2), the acquisition and renovation of equipment, and the improvement of the teaching staff's human capital.

Indicators

- 35 percent increase in the number of students.
- 31 percent increase in the number of faculty members with postgraduate degrees.
- Retention rate improvement from 80 percent the first year to 85 percent the second year.

Initiatives | UNA

Development of entrepreneurial skills in the student and academic communities at the local and regional levels

Goal

This subproject invested in infrastructure (a new building of about 2,000 m²) and in human capital (human resource training and training for faculty members) in order to develop leadership and skills for the creation of companies, by integrating innovation, equity, and competitiveness and being socially and environmentally friendly.

Indicators

- 700 people trained each year in entrepreneurship skills.
- 20 entrepreneurship projects with feasible business plans generated in the local and regional communities per year.
- Provision of 40 training and consulting services for small, medium-sized companies, and other entrepreneurial organizations.

Improvement of Academic Activity Conditions that Favor Creativity and Innovation for the Construction of Interactive Artistic Processes

Goal

To support the reorientation of CIDEA towards the construction of processes that favor the development of interactive arts. It would include self-assessment processes of their undergraduate degree majors, education and training of their faculty members, and promotion of creativity. To this effect, 2 faculty members were trained at the doctoral level, a new 2,600 m² building was built, and laboratories were equipped, among other actions.

Indicators

- 5 percent increase in the enrollment rate in CIDEA careers.
- Enrollment of 500 students per year in CIDEA's pre-university programs.
- Development of innovation, improvement, and accreditation processes for 4 degree programs.
- 2 faculty members at doctoral level.
- Building and equipment of 2600 m² for laboratories.

Creation of a Program in the Field of Supply and Logistics

Goal

To train professionals who can manage the information flow and operations of the logistics chain in a company or organization. Investment was made in the construction of a 500 m² building of classrooms and laboratories, in technical assistance hiring and ensuring postgraduate training for 4 professionals who lead the launch of the program.

Indicators

- Establishment of a program that enrolls 40 undergraduate and 15 postgraduate students.
- Establishment of alliances with the public and private sectors to promote the employability of graduates.
- Construction of 50 m² in classrooms and laboratories.

Strengthening of Training, Research, and Innovation in Ionizing and Non-Ionizing Radiation Applications with an Emphasis on Health

Goal

This subproject contributes to meeting the growing demand for competencies in physics applied to the health sector and to promoting the use of 102 ionizing and non-ionizing radiation services in the field of therapeutic and diagnostic applications, by strengthening the Master's Degree in Medical Physics, and the establishment of laboratories (new 500 m² building) for research, innovation, and service provision in the radiation area.

Indicators

- 16-24 students enrolled in the new master's program.
- Development of 3 R&D projects.
- Provision of 10 consulting services for public or private organizations in this field.
- 500 m² building for research, innovation, and service provision.

Creation of a Program for Promotion of Innovation in Pedagogical Management of CIDE and Education Centers for the Comprehensive Development of Quality Education

Goal

To contribute to the development of dynamic, inclusive, and innovative teaching environments that ensure the successful completion of education programs by students. This subproject funded investments in human capital (postgraduate training for 1-2 faculty members) and infrastructure (new 350 m^2 building, including a pedagogical laboratory).

Indicators

- Re-accreditation of 3 programs.
- Accreditation of 3 new programs.
- Creation of an innovation strategy for CIDE's educational offer.
- 750 trained administrators.
- 350 m^2 infrastructure in pedagogical laboratories.

Academic strengthening of new industrial bioprocesses and cleaner production alternatives with environmental, occupational, and social sustainability

Goal

To develop a training program for professionals in industrial bioprocesses (biotechnology and nanobiotechnology), the curricular design of a postgraduate program in this field, the accreditation of the industrial chemistry degree major, and academic development in areas such as ecotoxicology and occupational health. This subproject supported faculty and student mobility activities, the postgraduate training of academics, and the construction of a building for the School of Chemistry and the Regional Institute for Studies on Toxic Substances (4,500 m²).

Indicators

- Enrollment of 40 first-time students in the Industrial Bioprocesses program.
- Development of 4 research, teaching and/or extension projects.
- Development of a postgraduate degree.
- Accreditation of the Industrial Chemistry degree.
- 4500 m² building for the Chemistry School and the Regional Institute for Studies on Toxic Substances.

Permanent Education for Expansion of Training Offer and Updating in Non-Formal Education

Goal

To articulate, integrate, and improve management of existing permanent education programs to ensure their quality and relevance with respect to the educational needs of society in general and the productive sector in particular. To this effect, the subproject strengthened the creation of infrastructure (with a new building of about 2,000 m^2), training of faculty members in permanent education, and academic exchange among peers.

Indicators

- 100 percent increase in the number of people who would benefit from permanent education activities.
- Postgraduate training of 1 faculty member.
- Definition of a strategy for continuous identification of educational needs in lifelong learning.
- Construction of a 2,000 m^2 building.

Strengthening of Majors in Human Movement Sciences, Complementary Health, and Quality of Life

Goal

To renew and strengthen the training of professionals in the aforementioned disciplines. Construction of a new 1,400 m² building for the School of Human Movement Sciences, which included a clinic-school, self-assessment for innovation, improvement, and accreditation of programs.

Indicators

- Enrollment of 200 students per year, training of 100 people through "free courses".
- Developed and/or improved intervention models.
  - 5 research projects.
  - 15 scientific publications.
  - Building for the School of Human Movement Sciences.

Creation of an Observatory on Climate Change and Development

Goal

This subproject created an Observatory on Climate Change and Development, which promotes multidisciplinary approaches to the study of climate change and development. This observatory is supplemented by educational activities for faculty members and society in general, including the training at the postgraduate level of 6 members of the teaching staff, the acquisition of equipment for laboratories, and the creation of a major in Water Resources Engineering.

Indicators

- 10 research projects.
- 10 extension projects aimed at social organizations.
  - 30 new first-year students per year in the Hydraulic Resources Engineering program.
  - 25 scientific publications.

Comprehensive Training Under the Principle of Humanism and Permanence of Students

Goal

To increase permanence of students through the provision of holistic and humanistic training, including comprehensive care for students, actions that encourage high academic performance, and the integration of students in projects and programs, among others. This was carried out by a series of actions of academic mobility, investments in infrastructure (a new Center for General Studies and new residences for students, totaling about 2,000 m^2 in urban restructuring of outdoor areas), and in equipment.

Indicators

- Provision of 211 additional seats for students at residences.
- 15 percent increase in the number of graduates.
  - 25 to 20 percent reduction in dropout rate per class.
  - Annual monitoring of indicators for university life activities.
  - 2000 m^2 Center for General Studies and Residences building.

Articulation of a System of Relevance and Quality of University Work

Goal

To strengthen the modernization and flexibilization of institutional processes that affect quality management and academic relevance, and most especially, to create a system that articulates institutional processes, including evaluation and training of civil officers, curriculum innovation and management, innovation and management of academic programs, projects and activities, planning, information systems, decision-making and accountability, internationalization, and access of society to academic production. This was achieved by executing management activities, academic mobility, hardware acquisition, and software development.

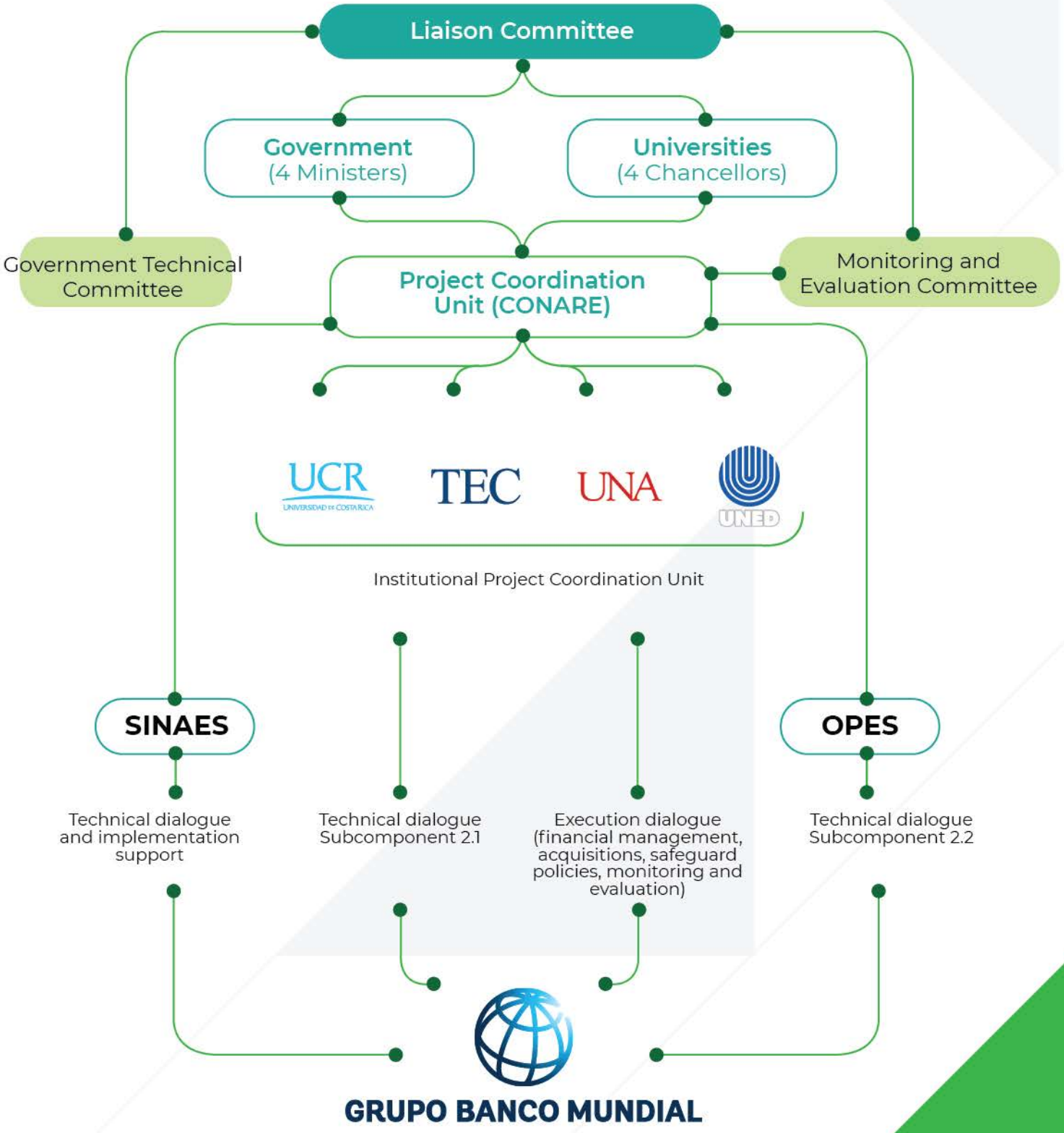
Indicators

- Self-assessment of 80 percent of university programs.
- Accreditation of 13 new programs
- Performance of 10 percent of staff.
  - Development of a quality indicator system.
  - Development of an academic-administrative indicator system.
  - 20 percent increase in the number of indexed publications.

EXECUTION ORGANIZATION CHART

Execution Organization Chart

For the Project execution, the following organization chart was proposed



The established bodies for the Project execution are detailed below:

Liaison Committee (LC)

As established in the Operating Manual, "it is the coordinating body related to the overall implementation of the Project. The LC has an important role in ensuring coordination between universities and the Government for the Project execution, in ensuring supervision, accountability and long-term sustainability. Regarding Component 2, the LC was responsible for ensuring the proper implementation of this component and the achievement of the proposed objectives."

The Liaison Committee is made up of the four chancellors of the participating state universities and by the Government Public Education, Finance, Science and Technology, and National Planning and Economic Policy Ministers.

Project Coordination Unit (PCU)

It manages the Project coordination and general monitoring, and according to the Operating Manual “it is the main interlocutor with the World Bank during the Project implementation. The PCU's responsibility to coordinate the Monitoring and Evaluation including: (i) progress reports for both Components; (ii) support to Bank supervision missions; (iii) being a focal point that collects and consolidates information from the Project Coordinating Units (implementation, financial management, procurement and contracting plans, and Safeguard Policies); (iv) serving as a link between them and the Liaison Committee; (v) acting as facilitator with the executing units in the event of any difficulties in implementation; and (vi) support to activities of the Monitoring and Evaluation Committee (MEC)”.

For the Project execution, each University had an **Institutional Project Coordinating Unit (UCPI)**, which were responsible, among other aspects, for: "(I) representing their university before the PCU as a sub-project technical interlocutor, AOPs and monitoring reports; (ii) managing the PMI sub-projects implementation that are considered ready for implementation, (iv) acting as an interlocutor with the Bank on the PMIs and sub-project execution, particularly regarding no-objection requests and monitoring reports; (v) monitoring of the subprojects and PMIs specific indicators; ... and (viii) managing any other action required for a proper Project implementation."
As per the Bank's request, an external entity with extensive experience in the university sector was hired to monitor the possible impact of the Project, reason for which the Monitoring and Evaluation Committee was created, for which representatives from the University of Salamanca, Spain, were hired, who were in charge of making four reports throughout the Project execution. These reports provided various recommendations and in general, it was stated that the Project was executed in such a way as to generate the expected results of the Project.

The loan had two safeguards that should be taken into account in the actions of the project, an **Environmental and Social Safeguard** through which all the initiatives developed had to fulfill a series of aspects in these topics.

The **Indigenous Safeguard** proposed a planning framework for indigenous peoples, as a plan for them that should be integrated into the different initiatives of the Project.

In Component 2, the execution was carried out by the National Accreditation System of Higher Education (SINAES), whose objective was to follow up on actions aimed at strengthening the national accreditation system for different majors, and the Employment Observatory of Professions (OLaP), and the State University Higher Education Information System (SIESUE) for the Observatory and SIESUE development.

PROJECT OUTCOMES

The execution of the Higher Education Improvement Project has been successful, because of the total executed amount of the loan, the achievement percentage in the set indicators to measure the Project Development Goals -including intermediate indicators-, to finally attain the direct outcomes of the initiatives proposed and developed by the universities, according to the defined goals.

The project outcomes are shown as follows:

a) Financial Execution Summary
b) PDG Indicator Results
c) Component 1 Intermediate Indicator Outcomes
d) Component 2 Intermediate Indicator Outcomes
e) Indicator Outcome Results of each initiative developed by each University
f) Safeguard Outcomes: Environmental and Indigenous
g) PMES and Financial Results
h) Beneficiaries
i) Expansion of coverage of the action areas of the Universities
j) Scholarships awarded and scholarship holders by University and degree

a. Financial Execution Summary

As of June 31, 2020, the universities had executed **US $194.53 million**, representing **97.12%** of the loan by university. The execution and percentages are shown below:

Table No. 1 Execution by university, As of March 31, 2020

	Executed Amount	% Execution
UCR	49,997,502	99.99%
UNED	45,831,403	91.66%
TEC	49,784,825	99.57%
UNA	48,624,520	97.25%
Total	**194,238,250**	**97.12%**

Source: developed in house, based on information from the Universities.

b. Indicator Outcomes Development of PDG

The achievements set for the Project Development indicators are:

Table No 2 Indicators of the Project Development Goals
As of December 31, 2019

Indicator		Line Base	Goal 2019		
			Expected	Achieve	%
Total enrollment of physical and regular students	Graduate	88,017	102,814	106,884	104.0%
	Postgraduate	6,885	7,524	7,117	94.6%
Total number of current Accredited majors		47	84	140	166.7%
Resources invested in Innovation and Development (I&D) (millions of colones)		31,451	14,404	17,123	118.9%
Annual web publication of AOP self-assessment			SI	SI	100%

Source: developed in house, based on information from the Universities.

The Total Enrollment of Physical and Regular Students at Graduate Level indicator has a compliance of **104.0%**

In the case of Postgraduate Enrollment, there is a compliance of **94.6%**

Regarding the number of Current Accredited Majors, the universities exceeded the values obtained with respect to the expected goals. This once again demonstrates the interest and commitment of the universities in achieving the accreditation of their majors, through compliance with **166.7%**

c. Component 1 Intermediate Indicator Outcomes

In the case of intermediate indicators, at the end of 2019, public universities met an achievement percentage equal to or greater than 100% in 10 of the 11 indicators. Only in the case of the total number of first-year students enrolled in majors, the achievement was 90.4%.

Table No 3 Achievement in Intermediate indicators of the PMI
As of December 31, 2019.

Indicator		Line Base	Goal 2019		
			Expected	Achieved	%
Total number of first-year students enrolled in majors.		21,443	26,917	24,326	90.4%
Total enrollment of regular students in priority areas	Graduate	48,70	57,492	62,956	109.5%
	Postgraduate	4,064	4,221	4,384	103.9%
Total number of TCE faculty members with degree:	Master	1,926	2,199	2,880	131.0%
	Doctorate	591	794	1,099	138.5%
Faculty members at TCE performing Research.		581	692	715	103.2%
Officials with scholarships to carry out postgraduate studies abroad.		0	108	141	130.6%
Number of publications in indexed journals.		422	222	339	152.7%
Number of graduates.		10,364	12,055	14,086	116.8%
Annual publication on the website of PMI annual results.		NO	SI	SI	100%
Budget % that is intended for investment in infrastructure and equipment.		7.72%	30.45%	48.54%	159.4%

Source: developed in house, based on information from the Universities.

The set goal was exceeded on the total enrollment of regular students in priority areas, both at the undergraduate and graduate levels.

The indicator related to the total number of full-time equivalent faculty members with a master's or doctorate degree, has exceeded in achievement over what was expected.

Regarding the indicator on Faculty Members who are conducting research, the achievement percentage exceeds the expected.

For the indicator on Officials with scholarships to carry out postgraduate studies abroad, the aggregate of the universities has a compliance of 130.6%.

The indicator of the Number of publications in indexed journals was met, although it is worth mentioning that there are many of the publications that were not taken into account because of being under revision, as part of their corresponding publication requirements.

Regarding the number of graduates, the achievement percentages clearly show compliance with the indicator.

Regarding the annual web publication of the annual results of PMI, it was carried out as expected.

Regarding the budget percentage allocated to investment in infrastructure and equipment, an achievement percentage was 159.4%, compared to the proposed goal. This indicator is the most significant in the last years of the program; however, in 2019 the resources available for this item were reduced because the Legislative Assembly decreased the universities' budget.

d. Component 2 Intermediate Indicator Outcomes

Component 2 considers the actions developed to strengthen three major programs:

- National Accreditation System for Higher Education (SINAES)
- Employment Observatory of Professions (OLaP)
- State University Higher Education Information System (SIESUE)

The summary below presents the achievements.

National System for Accreditation of Higher Education (SINAES)

Table No 4 Achievement in SINAES Indicators
As of December 31, 2019

Indicador		Line Base	2019 Goal		
			Expected	Achieved	%
Increase the number of majors in assessment process.	Graduate	64*	160	294	183.75%
	Postgraduate	0	20	19	95.00%
Increase the number of professionals trained in assessment processes.		100	850	1,107	130.24%

*Total corresponds to accredited majors in the 2000-2012 period. It does not consider CEAB accredited majors.urce: SINAES

Of the three indicators related to SINAES, the table shows that progress was made on the proposed goals.

Regarding the number of undergraduate courses in the assessment process, it was possible to increase the number of courses by 134 over the 160 goal that had been set, which demonstrates the efforts of SINAES to strengthen the national accreditation system.

As for the professionals trained in evaluation processes, it was possible to train 257 people on the goal that had been set.

SINAES made efforts to have a greater number of accredited majors, through the following components:

- Reduced number of Compliance Progress Reports on the improvement commitment.
- Reduced number of peer evaluator reports during the external evaluation visit.
- Elimination of the revision sub-stage from the improvement commitment.
- Reduction of fees, among other activities.

Employment Observatory of Professions (OLaP)

The OLaP achieved the following goals:

Design, development, and dissemination process of the "Employment Opinometer"

Teaching module prepared for vocational counselors based on the “2013 Employers of graduated people from state universities” study.

2013 Employers Study

Presented at the OLaP Network Stakeholders Meeting, attended by 202 people and disseminated in various national media.

Continuity of the field work where the data analysis began

There is progress of about 80% in the preparation of the document, "Monitoring of the employment status of 2011-2013 graduates from Costa Rican universities".

Data debugging from the “Monitoring of the employment status of 2011-2013 graduates from Costa Rican universities” study.

The analysis and preparation of the respective report began, and the necessary steps were taken to prepare the Employment Radiography 2.

State University Higher Education Information System (SIESUE)

SIESUE achieved the following goals:

Linkage of websites to the SIESUE system

At four of the five universities that make up CONARE.

New actions and indicators to update system information

It was integrated into the new 2016-2020 PLANES.

Human talent indicators and student scholarships

Documents were prepared and data was collected.

Information on the SIESUE was published

The publication on information of joint work results among participating public universities around the creation and standardization of concepts was fulfilled.
This was done in order to "build, develop, and maintain an information system that provides relevant and reliable information that facilitates decision-making processes in universities of CONARE."

University of Costa Rica

Pacific Regional Campus (SRP): Strengthening the Computer Science and Multimedia Technology major, and deconcentration of the third year of the Electrical Engineering major.

Main achievements

741 m² in Construction
Significant spaces
Significant equipment
2 Master's scholarships

Investments made in US $

Infrastructure	$984,724.81
Equipment	$140,538.06
Total	$1,125,262.87

Impact

- 483 seats for the academic offer at campus, exceeding the expected result.
- 2 classrooms, a computer lab, two network labs, a video studio, an audio studio, a motion, video and photography capture studio, with their respective educational teams.

Western Regional Campus (SRO):
Strengthening of the Industrial Engineering major.

Main Achievements

827 m² in Construction of significant facilities
1 Master's Scholarship
1 PhD scholarship

Investments made in US $

Infrastructure	$1,015,333.80
Total	$1,015,333.80

Impact

- 97 seats in the academic offer of the Industrial Engineering major.
- 4 classrooms, four laboratories (laboratories for thermo fluids, robotics, work design, and metrology and computing) and cubicles for professors.

Guanacaste Regional Campus (SRG):
Deconcentration of the Civil Engineering major and strengthening of the Electrical Engineering major.

Main Achievements

926 m² in Construction
Significant facilities: five modules with two chemistry laboratories and other
significant equipments
2 master's scholarships

Investments made in US $

Infrastructure	$1,132,445.75
Equipment	$479,813.38
Total	$1,612,259.13

Impact

- Deconcentration of the first two years of the Civil Engineering major.
- 31 enrollment seats for first-time students of the Civil Engineering major at campus.
- 31 enrollment seats for first-time students of the Electrical Engineering major at campus.
- Access to education for students from other regions of the area.
- Laboratory equipment for physics, chemistry, and biology.

Caribbean Regional Campus (SRC - Limón): Creation of the Naval Engineering major, deconcentration of the Chemical Engineering major, and deconcentration of the first two years of the Electrical Engineering major.

Main Achievements

900 m² in Construction
Significant facilities: three laboratories, room for scales, reagents and instruments, two classrooms
2 master's scholarships
1 PhD scholarship

Investments made in US $

Infrastructure	$1,602,654.18
Total	$1,602,654.18

Impact

- Deconcentration of the Chemical Engineering major.
- 301 enrollment seats for first year students at campus, exceeding the expected result.

Atlantic Regional Campus SRA): Creation of the Engineering in Sustainable Development major.

Main achievements

750 m² in Construction
Significant facilities: seven laboratories
Significant provisions: 2 master's scholarships
1 PhD scholarship

Investments made in US $

Infrastructure	$803,768.06
Equipment	$170,196.98
Total	$973,965.04

Impact

- Creation of the Engineering in Sustainable Development major.
- 259 enrollment seats for first year students at campus, exceeding the expected outcome.
- Linkage with the Industrial Engineering degree at the Rodrigo Facio Campus, the Western Campus and the Inter-University Campus of Alajuela, boosting the training of students in these two majors.

Strengthening of the Biology School.

Main achievements

Construction 1390 m² in significant facilities.
2 PhD scholarships

Investments made in US $

Infrastructure	$1,944,358.25
Total	$1,944,358.25

Impact

- 70 first-year enrollment seats.
- Expansion of the collection (herbarium) and the auditorium, 30 cubicles for professors, a training and meeting room, dining area, and guest researchers' office.
- 7 Laboratories (Behavior and Bio Acoustics, Morphology and Biological Images, Invertebrates, Applied Biology, Experimental Biology, Molecular Biology, and Molecular and Development Biology), health services, cleaning room, electrical and communications room.

Strengthening of the Center for Research in Human Movement Sciences, CIMOHU (includes Biomedical Laboratory).

Main Achievements

Construction 801 m² in significant facilities: seven laboratories
Significant equipment
3 PhD scholarships

Investments made in US $

Infrastructure	$1,078,581.30
Equipment	$301,705.63
Total	$1,380,286.93

Impact

- 6 research areas covered in CIMOHU projects.
- Ability to implement new research processes and generate knowledge with other research centers and institutes of the University.
- Climate controlled laboratory, exercise physiology laboratory, strength laboratory, biomechanics laboratory, bioelectricity laboratory, motor laboratory, and body composition laboratory.

Expansion of coverage by creating a major that involves ICTs and the Arts, as well as strengthening the School of Musical Arts.

Main Achievements

3,259 m² in construction of significant facilities
3 Master's scholarships
3 PhD scholarships

Investments made in US $

Infrastructure	$3,612,692.73
Total	$3,612,692.73

Impact

- 55 first-year student enrollment seats at the School of Musical Arts.
- Creation of two rehearsal and recital rooms, two master classrooms with capacity for 45 people, and two individual cubicles for teaching instruments.
- Greater promotion of culture in the country through joint work.

Strengthening of the Hydraulics and Mechatronics Laboratories.

Main Achievements

Significant equipment
3 PhD scholarships

Investments made in US $

Equipment	$1,405,962.00
Total	$1,405,962.00

Impact

- 19 current research works per year.
- New links among university schools and also with public institutions.
- Robotic arms, wave gauges and generators, a crane, underwater recorders, and computers.

Expansion of coverage in the Food Technology major at the Rodrigo Facio campus.

Main Achievements

Construction 914 m² in significant facilities: five laboratories
Significant equipment

Investments made in US $

Infrastructure	$1,592,200.30
Equipment	$165,581.44
Total	$1,757,781.74

Impact

- 41 first-year student enrollment seats in the Food Technology major.
- 14 seats for first-time students in the Food Safety postgraduate course.
- Laboratory of Sensory Analysis, Laboratory of Formulations and Shelf Life, Laboratory of Food Chemistry, Laboratory of Food Microbiology, and Laboratory of Thermofluids.
- Activity determination equipment in water, mills, extraction hoods, and incubator.

Deconcentration of the Food Technology major at the Regional Guanacaste Campus.

Main Achievements

690 m² in construction of significant facilities: three laboratories
Significant equipment
2 master's scholarships

Investments made in US $

Infrastructure	$1,285,389.00
Equipment	$31,397.90
Total	$1,316,786.90

Impact

- 33 first-entry enrollment seats in the Food Technology major at Campus.
- Deconcentration of the Food Technology major.
- Chemistry laboratory, microbiology laboratory and sensory analysis laboratory.
- Incorporation of new TCU projects to campus offer.

Strengthen training of professionals in the area of food quality, through the Creation of the **Technological Development Center.**

Main Achievements

930 m² in construction of significant facilities: two laboratories
Significant equipment
6 PhD scholarships

Investments made in US $

Infrastructure	$2,366,600.00
Equipment	$250,812.72
Total	$2,617,412.72

Impact

- 46 current research projects per year.
- Greater capacity for sensory evaluation and chemical evaluation of food.
- Greater research and external linkage capacity.
- Food Chemistry Laboratory and Food Sensory Analysis Laboratory.

Strengthening of the Research Center in Materials Science and Engineering (CICIMA).

Main Achievements

805 m² in construction of significant facilities: seven laboratories
Significant equipment
2 PhD scholarships

Investments made in US $

Infrastructure	$1,363,044.35
Equipment	$1,079,519.67
Total	$2,442,564.02

Impact

- 22 current research projects per year.
- Inter and multidisciplinary links among academic units.
- Specialized microscopes and a computer cluster.

Creation of a Research Network: Laboratories at the Pacific Regional Campus, Guanacaste Regional campus Western Regional Campus, and Atlantic Regional Campus.

Main Achievements

Significant equipment
2 master's scholarships
3 PhD scholarships

Investments made in US $

Equipment	$414,218.60
Total	$414,218.60

Impact

- Equipment for pilot plant, chemistry laboratory, microbiology laboratory, training, and others.
- Improved articulation of the participating regional campuses in the Network.
- Enhancement of multidisciplinary research processes.
- Better use of institutional resources for knowledge generation.

Creation of a Research Network Laboratories at the Guanacaste Regional campus, the Pacific Regional Campus, the Western Regional Campus, and the Atlantic Regional Campus.

Main Achievements

1425 m² in construction of sign. facilities: six laboratories
1 master's scholarship
3 PhD scholarships

Investments made in US $

Infrastructure	$2,473,873.55
Total	$2,473,873.55

Impact

- Six laboratories: Pesticide Analysis Laboratory, Water Analysis Laboratory, Air Analysis Laboratory, Bioremediation Laboratory, Laboratory for Metabolism and Pollution Degradation, Ecotoxicology Laboratory, Water Instrument Room, and Chromatography Room.
- Linkage with external entities: MINAE, State Phytosanitary Service, MAG, SENARA, AyA, CENIBiot, UNA, and ITCR.

Creation of the Research and Development Network on Energy Efficiency and Renewable Energy Technologies **(RIDER).**

Main Achievements

Significant equipment
2 PhD scholarships

Investments made in US $

Equipment	$938,395.94
Total	$938,395.94

Impact

- A network of academic units has been established with physical infrastructure that allows articulating research actions in energy efficiency and making more efficient use of institutional resources.
- Significant equipment
  A wind tunnel and a biodiesel plant.

Strengthening the School of Public Health at the Rodrigo Facio Campus.

Main Achievements

1370 m² in construction of Significant facilities
Significant equipment
2 PhD scholarships

Investments made in US $

Infrastructure	$1,457,300.00
Equipment	$41,391.05
Total	$1,498,691.05

Impact

- 29 first-time student seats at the pregraduate level.
- 42 first-time student seats at master's level.
- Four classrooms, a mini auditorium, study rooms, and computer room.
- Assorted educational equipment for the School.
- Strengthening of research projects and social outreach.

Strengthening of the School of Health Technologies Health at the Rodrigo Facio Campus.

Main Achievements

3000 m² in construction of significant facilities
Significant equipment
1 PhD scholarship

Investments made in US $

Infrastructure	$3,287,807.10
Equipment	$257,081.21
Total	$3,544,888.31

Impact

- 161 first-year student seats.
- Servers and specialized computer equipment.
- Links with other academic units such as CINANUM, School of Computer Science and Informatics, and the Postgraduate Study System.

Deconcentration of the School of Health Technologies (Environmental Health major) at the Guanacaste Regional Campus.

Main Achievements

360 m² in construction of significant facilities
2 Master's scholarships

Investments made in US $

Infrastructure	$428,463.00
Total	$428,463.00

Impact

- 38 first-year student seats
- A classroom, an environmental laboratory, a computer laboratory, and a blueprint laboratory.

Creation of the Diagnostic Center for Cancer, Simulation, and Minimally Invasive Surgery at the Rodrigo Facio campus.

Main Achievements

2850 m² in construction of significant facilities
1 PhD scholarships.

Investments made in US $

Infrastructure	$5,294,000.00
Total	$5,294,000.00

Impact

- 38 Patients seen at the Diagnostic Center.
- A practice room, a bioterium, an auditorium, two practice laboratories, medical offices, a minor surgery room, and recovery rooms.
- High-level multidisciplinary and transdisciplinary research.

Creation of the Research Center in Neurosciences.

Main Achievements

910 m² in Construction
Significant facilities: observation rooms and five laboratories
Significant equipment
1 PhD scholarship

Investments made in US $

Infrastructure	$1,648,943.42
Equipment	$40,153.56
Total	$1,689,096.98

Impact

- 10 current research works per year. 5 research neuroscience-related areas, which are considered in the studies of the Center.
- Electrophysiology Laboratory, Neurochemistry and Histology.
- Laboratory, Surgery Laboratory, Molecular Biology Laboratory, and Behavioral Analysis Laboratory.

Strengthening Atomic, Nuclear, and Molecular Science research, applied to the health area **(acquisition and installation of the Cyclotron accelerator).**

Main Achievements

1250 m² in construction of
Significant facilities
Significant equipment
1 PhD scholarship

Investments made in US $

Infrastructure	$3,000,000.00
Equipment	$6,525,000.00
Total	$9,525,000.00

Impact

- Equipment: Cyclotron, radiopharmacy equipment, and quality control equipment.
- A module below ground level (basement) where the cyclotron will be located inside its bunker, along with the control and maintenance rooms.
- Radiopharmaceutical manufacturing laboratories (radiopharmacy), production modules (hot cells), radiotracer packaging and pre-dispatch area, quality control laboratory, and all their supplementary facilities.
- Rooms for PET/CT chambers and all areas of clinical care.
- Linkage with academic units for development of inter, multi and transdisciplinary research.

Strengthening of the Institute of Pharmaceutical Research (INIFAR).

1,188 m² in construction of significant facilities: pilot plant and three laboratories.
2 PhD scholarships

Counterpart Fund

- A pilot plant and three laboratories: Laboratory of Pharmaceutical Analysis and Consulting, Laboratory of Biopharmacy, and Pharmacokinetics.
- Improvement in the installed capacity of the Institute to provide attention to the pharmaceutical quality assurance processes nationwide.

Strengthening of Information Systems for decision making.

Development and implementation of the PEES
Diagnostic Test Systems in Mathematics.
Implementation of the Budget Plan Institutional System (SIPPRES).

Counterpart Fund

- Electronic Platform System - Health File.
- Development and implementation of the PEES
- Diagnostic Test Systems in Mathematics
- Implementation of the Budget Plan Institutional System (SIPPRES).
- Improvement of institutional capacity for decision making.

State University for Distance Education

Network of University Centers for innovation and local and national development.

Main achievements

Constructions: 490 m² in San Carlos - Laboratory of Physics-Biology. 915 m² in Palmares - Laboratories of Physics, Biology, Engineering, and classrooms. 678.46 m² in Cañas - Physics, Biology, and Engineering laboratories, warehouse, and classrooms. 155 m² in Limón - Laboratory of Physics-Biology. 1,016 m² in Upala - classrooms, administrative area, science laboratory, and technology room. 570 m² in Physics-Biology Laboratories, Technology Room, and classrooms, 570 m2 in Santa Cruz - Physics-Biology Laboratory, Technology Room (Videoconference), and multipurpose rooms. Heredia - Laboratories of Physics, Biology, Chemistry, and classrooms.

Investments made in US $

Infrastructure	$10,243,136.34
Equipment	$5,391,969.66
Scholarships	$178,535.76
Total	$15,813,641.76

Impact

- 8.7% growth in the representation of regular students, in areas relevant to the development of the country.
- 2.2% growth in the number of students served in courses that require the use of laboratories (science, computing, and engineering).
- 53 people trained.
- Student permanence - attraction of new students at university centers, especially in centers outside the central region.

Change Management and Regional Development Center: CeU Cartago.

Main achievements

2844 m² in construction
Significant equipment
5 staff trained

Investments made in US $

Infrastructure	$4,034,409.13
Equipment	$430,837.52
Scholarships	$15,433.09
Total	$4,480,679.74

Impact

- 2 technology (videoconference) rooms, multipurpose rooms, 2 computer labs, chemistry practice laboratory, and physics-biology practice laboratory.
- 0.17% growth in enrollment of regular students in priority disciplines.
- Attention areas for the student population, with an increased in the number of workshops and talks aimed at the student population.
- Greater sense of belonging to the university.

Change Management and Regional Development Center: CeU Puntarenas.

Main achievements

2,038 m² in construction
significant facilities
5 staff trained

Investments made in US $

Infrastructure	$4,125,905.25
Equipment	$502,993.87
Scholarships	$15,504.29
Total	$4,644,403.41

Impact

- 1 technology room, 7 multipurpose rooms, 2 computer labs, 2 science labs -one for Chemistry and another for Physics-Biology.
- 79 students enrolled.
- Spaces for interaction and student life.
- Greater number of university services and greater interaction with the university's teaching sector.
- Greater outreach of the university to the university community, space for a greater number of community actions, and a sense of belonging and university identity by the student population.

Equity improvement in access to digital and online learning resources.

Main Achievements

Significant equipment:
Mobile Devices
1 Master's Scholarship
4 staff trained

Investments made in US $

Equipment	$574,819.25
Scholarships	$9,254.02
Total	$584,073.27

Impact

- 100 students from low socioeconomic levels have access to mobile devices and the Internet.
- 100 devices at the Academic Resource Centers of cantons with less social development.
- Greater confidence and skills in the use of technologies, thus improving the skills of students.

Diversification of the academic offer in Engineering.

Main Achievements

3 doctorate scholarships
9 staff trained

Investments made in US $

Equipment	$1,322,783.37
Scholarships	$240,144.44
Total	$1,562,927.81

Impact

- 375 undergraduate students in Industrial and elecommunications Engineering.
- 10 publications per year.
- 27 internships and research projects developed in conjunction with the private sector.
- Access, coverage and quality for the student population.
- Innovative pedagogical experiences such as the use of virtual laboratories, learning boards, and audiovisual materials.
- Projects at the national level (MICITT) for Internet access, as well as specific projects aimed at indigenous populations around technological access.

Education and Training for strengthening the distance education model.

Main Achievements

5 master's scholarships
21 doctorate scholarships
128 staff trained

Investments made in US $

Scholarships	$1,907,976.41
Total	$1,907,976.41

Impact

- 84.81% in training for university officials.
- 83.02% training programs for university officials.
- New research experiences that strengthen research programs like FabLAB.
- Projects at a national level oriented to children's populations such as autism or premature babies.

Diversification and expansion of the digital and Internet multimedia production.

Main Achievements

1 PhD scholarship
15 staff trained

Investments made in US $

Equipment	$1,940,694.04
Scholarships	$241,744.23
Total	$2,182,438.27

Impact

- 1,117 acquisitions in HD technology - 280 audiovisual materials in various genres.
- 642 technology acquisitions - 187 radio materials.
- 1759 audio and video and audio productions from UNED.
- Review of audiovisual production processes and the need for greater interaction with academic spaces.

Strengthening production, research, and experimentation for technological development and innovation at UNED.

Main Achievements

5,864 m² in construction of significant facilities
6 master's scholarships
6 doctorate scholarships
42 staff trained

Investments made in US $

Infrastructure	$7,922,915.65
Equipment	$3,307,366.16
Scholarships	$520,370.09
Total	$11,750,651.90

Impact

- 8 Laboratories: Urban Ecology, Chemistry, Life and Health, Manufacturing, Research and Technological Innovation, Remote Experimentation, Engineering, and Telecommunications. Video Communication Command Center, Data Center, Offices (DTIC, VAU, PEM, PAL, Office of the Vice Chancellor for Research and Office of the Vice Chancellor for Planning), and an active resting space.
- 57 indexed publications.
- 4 Research networks
- 12 new researchers with postgraduate degrees.
- 42 officials with internships.
- 260 technological applications.
- 190 extension activities.

Information System to support decision-making and institutional management.

Main Achievements

1 master's scholarship
2 staff trained

Investments made in US $

Scholarships	$17,154.08
Technical assistance/services	$1,232,621.46
Total	$1,249,775.54

Impact

- 63% in generation of relevant indicators in support of institutional management and decision-making.
- 9 services for the teaching staff.
- 83% new services for non-teaching staff.
- Use of data for decision-making and the improvement of university services.

TEC Costa Rica Institute of Technology

Student Cafeteria.

Main Achievements

- 1,643 m² in construction
- Significant equipment

Investments made in US $

Infrastructure	$2,412,393
Equipment	$145,121
Total	$2,557,514

Impact

- A 1,643 m² student dining room.
- 100% equipped.
- A dining alternative for the south-west sector of the central campus, reducing the waiting time to get the food service.
- It favors a more successful permanence of low economic resource students.

Student residences.

Main achievements

- 3,770 m² in construction

Investments made in US $

Infrastructure	$6,243,968
Equipment	$79,882
Total	$6,323,850

Impact

- Increase in 192 new low-income student places housed at ITCR residences.
- Better distribution by gender in the allocation of accommodation places.
- 31.3% women.
- 68.7% men.
- Commonly used spaces that promote coexistence and development of a series of life skills and values related to solidarity, teamwork, coordination, respect, and tolerance.

Information Technology and Communication.

Main Achievements

5,107 m² in construction
Significant equipment

Investments made in US $

Infrastructure	$7,168,597
Equipment	$1,146,650
Total	$8,315,247

Impact

- Increase in 456 first-time students. All three majors are accredited.
- New lines of research, such as:
  - Photogrammetry by means of unmanned aircraft (Drones).
  - Aerospace systems (Irazú Satellite).
  - Research in Electric Vehicles through the Autotronics Laboratory.
  - Increase of quotas for each course.
  - Increased percentage of students earning a degree since the start of the project.

Job security Integrated Core.

Main Achievements

1,501 m² in construction
Significant equipment

Investments made in US $

Infrastructure	$1,773,968
Equipment	$215,012
Total	$1,988,980

Impact

- 47% increase in first-time students.
- 43% increase in the academic qualifications of the teaching staff.
- 95% ongoing student employability rate.
- Continuing education program for graduates.
- Initiative to enter new fields of research, with electromagnetic fields and entrance into the field of Human Security (2020), with the initiative of Safe and Resilient Universities. (2018).
- Development of the regional SALTRA workshop (Central America) (2018). Development of government activities with the CSO, INS, CCSS, MTSS, and representatives from companies and unions (2019).
- Workshop of the Mesoamerican Chronic Kidney Disease Consortium, held with the school team (March 2019).
- Accreditation with AAPIA (2018-2021), the first one for a four year period and three years with ACCAI (2012-2018).
- Use of facilities with other ITCR schools and departments.
- Supplementary program for undergraduate students in coordination with private companies.
- Using physical equipment with other schools.

Management and Information Systems (both student and academic).

Main Achievements

- Technical assistance/services

Investments made in US $

- Assistance Technical/serv $927,612

Impact

- Online systems development.
- Process automation.
- Development of integrated and user-oriented systems.
- Increase in the use of ICTs in the development of processes for students.
- Preparation of statistics to support decision-making processes.

Academic Training for Professors.

Main Achievements

- Master and Postgraduate Scholarships

Investments made in US $

- Assistance Technical/serv $4,588,850

Impact

- Increase in 12 professors with a doctorate in engineering.
- Increase in 25 research projects and annual publications in indexed journals.
- 29 postgraduate scholarships awarded.
- 2 masters scholarships.

Expansion of Library.

Main Achievements

1,115 m² in construction
Significant equipment

Investments made in US $

Infrastructure	$3,800,803
Equipment	$376,722
Total	$4,177,525

Impact

- Library extension by 1,115 m².
- New services in specialized areas.
- 100% digital library.
- Solidarity and inclusive alternative for low-income students.
- Loaning of laptops to grant access to specialized equipment and digital databases.

Strengthening Academic Center of San José

Main Achievements

1,574.23 m² in construction
Significant equipment

Investments made in US $

Infrastructure	$2,401,460
Equipment	$55,861
Total	$2,457,321

Impact

- 239% increase in the number of first-time students.
- Offer of 2 new programs.
- Strengthening the relationship with the private sector.
- Greater coverage of higher education while meeting a need of the professional production sector for some key majors.

Environmental-Chemistry Integrated Core

Main Achievements

- 4,182 m² in construction
- Significant equipment

Investments made in US $

Infrastructure	$8,620,620
Equipment	$574,602
Total	$9,195,222

Impact

- 44% increase in the number of students.
- 10 members of the teaching staff with a doctorate degree (includes hiring postgraduate teachers and the incorporation of scholarship teachers).
- Impact of the institution on the population, generating greater capacity to serve more students, high-impact research, and strengthening ties with society.
- Increase in networking and internationalization.

Industrial Design Integrated Core

Main Achievements

- 1,310 m² in construction
- Significant equipment

Investments made in US $

Infrastructure	$2,420,681
Equipment	$103,593
Total	$2,524,274

Impact

- 40% increase in the number of students.
- School received accreditation, the installed capacities were improved, thus helping meet the minimum necessary requirements to obtain accreditation.

Strengthening of San Carlos Regional Campus

Main Achievements

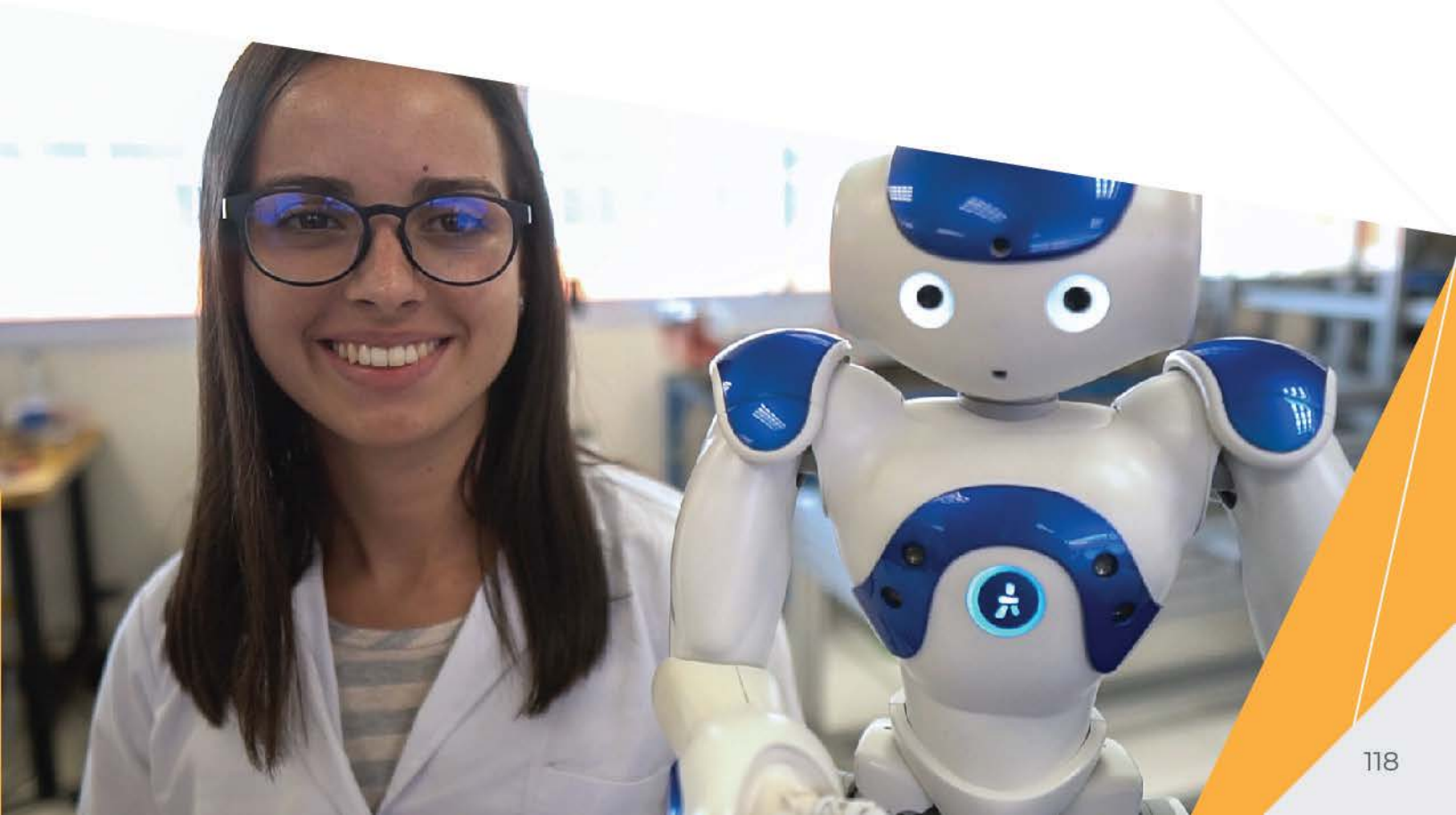
Buildings:
2,404 m² Teaching building
3,769.86 m² Research building
Significant facilities

Investments made in US $

Infrastructure	$6,489,056
Equipment	$82,772
Total	$6,571,828

Impact

- Creation of 2 new programs.
- 144% increase in student enrollment.
- 95.2% increase in the number of research subprojects.
- 270% increase in the number of publications.



UNA National University

Development of entrepreneurial skills in the academic, student, local and regional communities.

Main Achievements

- 2,985 m² in construction
- Significant equipment

Investments made in US $

Equipment	$128,725.30
Scholarships	$62,763.30
Technical assistance/services	$36,936.90
Total	$228,425.50

Impact

- Significant equipment.
- Two postgraduate scholarships awarded. 979 people on average trained annually.
- 6 grants to officials for participation at training activities.
- 8 experts were received as interns.
- 146 entrepreneurial projects on average per year, with feasible business plans generated.
- 122 training services.

Permanent education for the expansion of the training offer and updating in non-formal education.

Main achievements

- 2,985 m² in construction
- Significant equipment

Investments made in US $

Equipment	$176,154.10
Scholarships	$238,828.30
Technical assistance/services	$34,414.50
Total	$449,396.80

Impact

- 10 officials funded for training abroad.
- 5 experts were received as interns.
- 11,483 certificates of attendance or participation.
- 1 PhD scholarship awarded.
- Proposal for a Permanent Education Model and work within the CONARE Qualifications Framework.

Creation of a major in the field of supply and logistics.

Main Achievements

2,985 m² in construction
Significant equipment

Investments made in US $

Equipment	$39,298.30
Scholarships	$484,223.10
Technical assistance/services	$166,174.40
Total	$689,695.90

Impact

- Consulting development by the Georgia Tech Productivity Center in Costa Rica.
- 2 doctorate scholarships awarded.
- First graduation of the Master in Global Supply and Logistics with 6 enrolled students.
- Contact is maintained with union chambers of logistics and international trade sectors and companies (APM Terminals and INCOP).

Strengthening training, research, and innovation in applications of ionizing and non-ionizing radiation with an emphasis on health.

Main Achievements

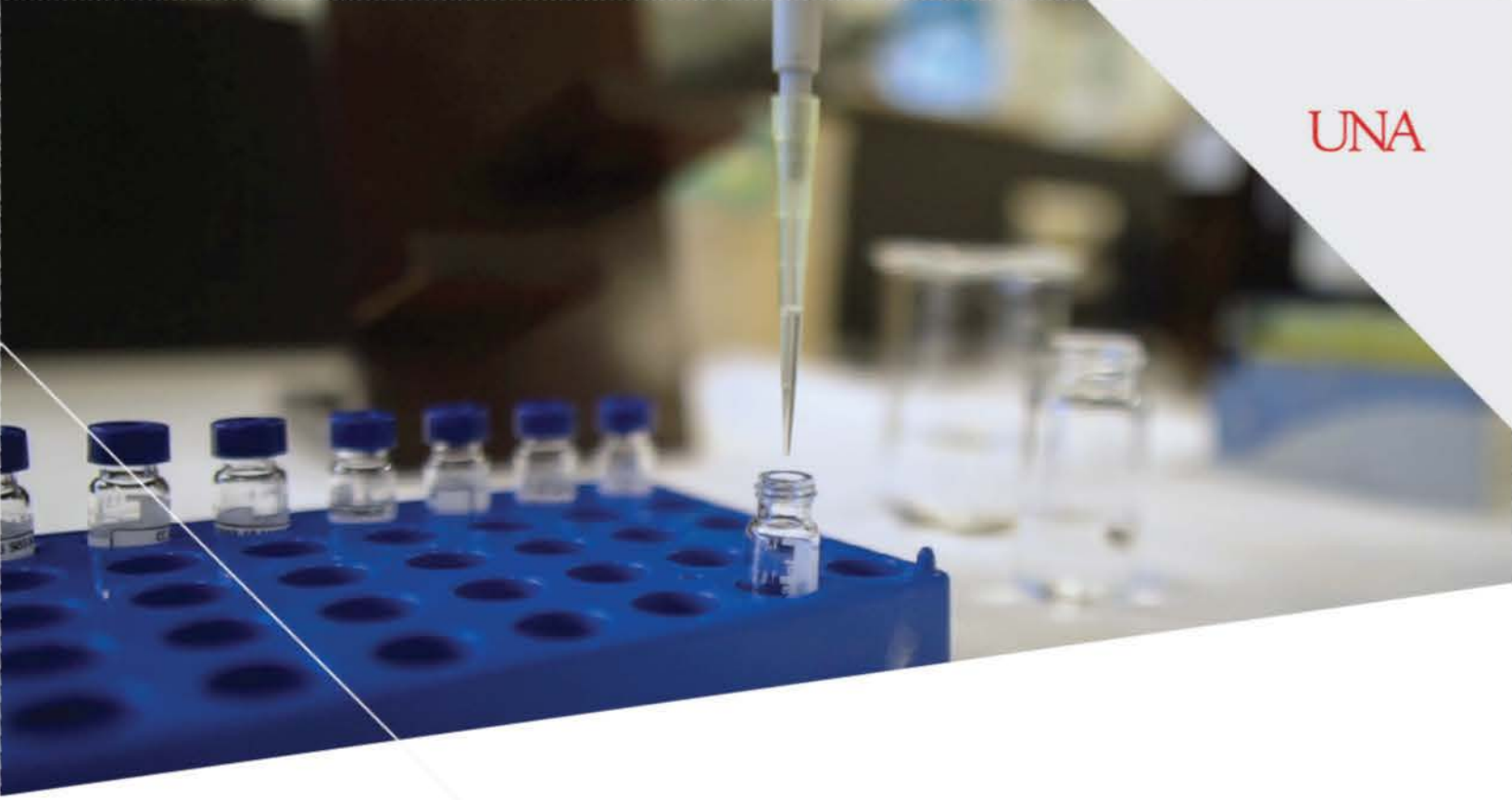
Total construction of 2,251m², including a 1,440m² building.
Significant equipment

Investments made in US $

Infrastructure	$2,139,403.70
Equipment	$572,097.90
Scholarships	$215,638.60
Technical assistance/services	$26,821.10
Total	$2,953,961.20

Impact

- Four graduations of the master's program have been carried out, with an accumulated enrollment of 15 students.
- Development of three projects:
  - Research program in applied Physics.
  - Project "Ecological radio surveys applied to health and environment".
  - Research projects conducive to generating scientific communications, developed in the Radiological Quality and Protection Unit of the CCSS.
  - Association with the European Center for Nuclear and Particle Research (CERN).



UNA

Creation of the Innovation Fostering Program

Main Achievements

7,000 m² in construction
Laboratories/library / specialized rooms

Investments made in US $

Equipment	$49,937.00
Scholarships	$23,749.00
Technical assistance	$88,226.10
Total	$161,912.10

Impact

- A doctorate scholarship was awarded.
- The Bachelor and Licentiate degrees in Orientation (Year 2015) and the Bachelor and Licentiate degrees in Commercial Education (2019) were accredited.
- Seven majors were re-accredited at the Bachelor and Licentiate degrees.
- Self-assessment process for accreditation of three majors.
- Elaboration of 20 designed study plans.
- 33 redesigned study plans.
- 1,210 practicing teachers trained in educational management.

Improvement of academic conditions.

Main Achievements

7.000 m² in construction
Laboratories/library/specialized rooms
Significant equipment

Investments made in US $

Infrastructure	$8,122,642.70
Equipment	$843,697.30
Scholarships	$264,142.30
Technical assistance/services	$65,386.80
Total	$9,295,869.10

Impact

- 3 doctorate scholarships were awarded.
- 9 academic staff trained in centers of excellence.
- 17 interns.
- 6.1% increase in CIDEA enrollment.
- Average of 616 students in pre-university programs.
- The Bachelor degree in Dance (2018) was accredited and two more majors were in the process of being accredited.

Academic Strengthening

Main Achievements

7,820 m² in construction
Significant equipment

Investments made in US $

Infrastructure	$9,544,760.70
Equipment	$4,089,620.30
Scholarships	$1,145,064.20
Technical assistance/services	$40,704.10
Total	$14,820,149.30

Impact

- Equipment with 39 gas hoods and air extraction systems.
- The master's degree in Tropical
- Ecotoxicology was developed.
- 11 projects were achieved.
- 75% of the annual enrollment goal of 40 first-time students in
- Bioprocesses was achieved.
  The Licentiate's degree in Industrial Chemistry was accredited with a side exit from Bachelor's (2019).
  6 graduate scholarships awarded.
- 7 officials funded to develop their capacities.
- 12 interns.

Strengthening of human movement sciences, complementary health, and quality of life majors

Main Achievements

- 1,930 m² in construction
- Significant equipment

Investments made in US $

Infrastructure	$2,734,531.10
Equipment	$295,188.40
Scholarships	$137,864.00
Technical assistance/services	$25,038.90
Total	$3,192,622.20

Impact

- Technological equipment such as interactive whiteboards for classrooms and a special screen for the auditorium.
- 304 people enrolled annually in free courses.
- 6 research projects were developed.
- The annual enrollment corresponded to 500 students annually.
- Eight intervention models were developed.
- 16 scientific publications were made.
- 1 academic staff with a postgraduate scholarship.
- 3 interns.

Creation of a Climate Change and Development Observatory.

Main Achievements

- 690 m² in construction
- Significant equipment

Investments made in US $

Equipment	$364,637.00
Scholarships	$920,893.70
Technical assistance/services	$51,886.80
Total	$1,337,417.50

Impact

- 11 doctorate scholarships were awarded.
- 12 training activities received.
- 15 funded internships.
- Major was created and first entry in Water Resources Engineering was an average of 38 students.
- An average of 36 research projects were developed per year.
- An average of 17 extension projects were developed per year.
- More than 50 scientific publications were done.

Comprehensive training under the principle of humanism and permanence of students

Main Achievements

13,756 m² in construction works in Pérez Zeledón, Nicoya, Liberia, Sarapiquí, Coto, and Heredia

Investments made in US $

Infrastructure	$10,992,710.20
Equipment	$899,232.10
Scholarships	$141,315.80
Technical assistance/services	$30,618.00
Total	$11,993,876.10

Impact

- 208 new places at student residences.
- 1 doctorate scholarship.
- Funding of 12 short courses and 2 internships.
- In 2019, 3,778 students graduated, representing a 49.1% increase.
- The dropout rate shows a significant 25% reduction.
- The results of the indicators related to university life activities were analyzed annually.

Articulation of a system of relevance and quality of university work

Main Achievements

3,060 m² construction area of the building of residences (with counterpart funds)
Significant equipment

Investments made in US $

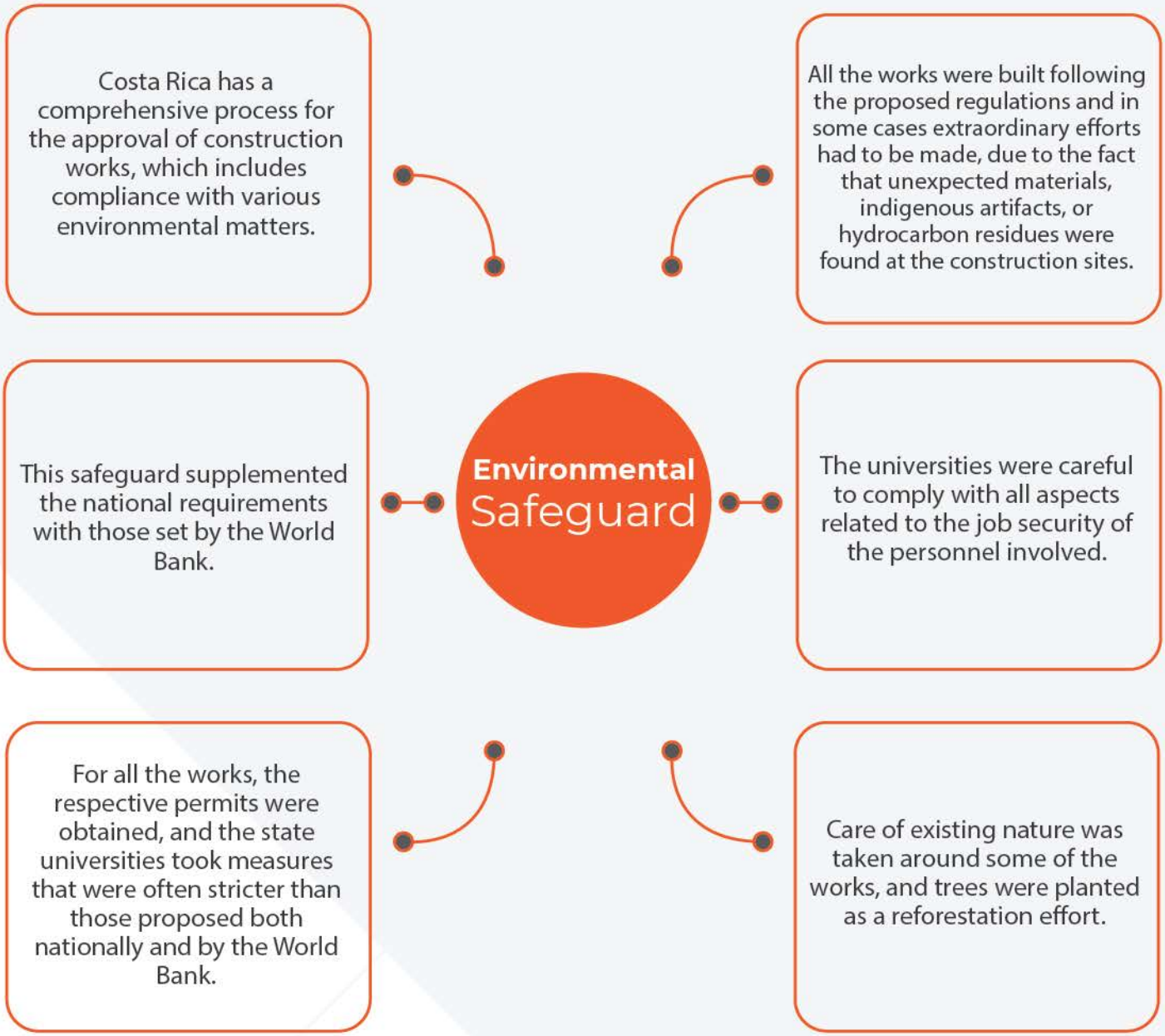
Equipment	$1,619,223.30
Scholarships	$529,086.50
Technical assistance/services	$57,300.20
Total	$2,205,610.00

Impact

- Self-assessment for improvement of 46 programs, while 165 currently implementing their improvement commitments.
- Five officials who got scholarships to carry out postgraduate studies completed their studies.
- 22 short trainings and 6 consultancies.
- 18 accredited programs.
- 17.2% improvement in academic performance.
- 187 publications were published in indexed journals, for an increase of 266.7% with respect to the baseline.

Safeguard Outcomes

The Project had two Safeguards, one on the environmental side and the other with respect to indigenous populations. A summary of the achievements is presented next.


Costa Rica has a comprehensive process for the approval of construction works, which includes compliance with various environmental matters.
All the works were built following the proposed regulations and in some cases extraordinary efforts had to be made, due to the fact that unexpected materials, indigenous artifacts, or hydrocarbon residues were found at the construction sites.
This safeguard supplemented the national requirements with those set by the World Bank.
Environmental Safeguard
The universities were careful to comply with all aspects related to the job security of the personnel involved.
For all the works, the respective permits were obtained, and the state universities took measures that were often stricter than those proposed both nationally and by the World Bank.
Care of existing nature was taken around some of the works, and trees were planted as a reforestation effort.

Indigenous Safeguard

Promoting more students from indigenous territories to enroll in universities, to remain in their majors, that the majors responded to their needs and to achieve graduation is an effort that public universities have been making before the implementation of the Indigenous Safeguard.

- Joint efforts were made by the universities, making it possible to establish better mechanisms for the accounting of people and to strengthen the student body of indigenous populations, among other matters.
- As a result of this effort, the World Bank listed it as **"A Best Practice"** that sets an example for other similar initiatives that are being developed with World Bank resources in other countries.

Main achievements include:

- Increase in the number of students from indigenous territories enrolling in state universities.
- Strengthening of the university movement by creating spaces for meetings, planning, and discussion of priority issues for students from the territories.
- Mentoring support carried out in the schools of the territories aimed at improving the situation of the students to facilitate their access to university studies.
  Creation of an awareness course for teachers and university administrators on indigenous cosmology to facilitate meeting the needs of students.
- Increase in the number of scholarships awarded to this population.
- Five accountability meetings between universities, students and representatives of the territories were held, proving to be a valuable dialogue mechanism for evaluating the results obtained.

All the work carried out has caused a high degree of satisfaction by the participants with respect to the achievements obtained, with a counterpart of US $72.38 million from the public universities and CONARE

g. PMES and Financial Results

As indicated, the loan was executed until December 31, 2019 and had a financial contribution through the World Bank's loan for up to US $200 million, with a counterpart of US $72.38 million from public universities.

Each university executed US $50 million of the loan. The items to which the resources were allocated were infrastructure, equipment, technical assistance services, training, and others. Investment in infrastructure ranks first with 73% of the investment made, followed by equipment with 19% of the loan, training, and scholarships with 6%, and technical assistance and services with 2% of the loan.

External Audit Report

The annual financial statements of the project, prepared by the universities, were audited by External Audit Firms once a year, according to the terms of reference of the World Bank. The audit opinion covered the PMES financial statements that contained references to the eligibility of expenditures. These annual reports were considered by the World Bank to be acceptable in all cases.

Financial Execution, Expenses by Category and by University

The table below shows the performance by each of the categories and by University.

Table No 5 Distribution of investment by expenditure category and university, as of December 31, 2019

	Infrastructure	Equipment	Scholarships	Tech Assist/services	Total
UCR	38,745,373	11,246,180	-	5,949	49,947,502
UNED	26,965,265	14,381,072	3,222,530	1,262,535	45,831,403
TEC	41,461,968	2,788,988	4,603,330	930,539	49,784,825
UNA	34,380,094	9,326,307	4,277,542	640,576	48,624,520
Total PMES	**141,552,701**	**37,742,548**	**12,103,402**	**2,839,599**	**194,238,250**
Percentage	**73%**	**19%**	**6%**	**2%**	**100%**

Regarding the distribution by investment component, as of June 31, 2020, the loan resources were executed as follows:

$141.6 million

were allocated to infrastructure works

$12.1 million

allocated to scholarships and human resource training

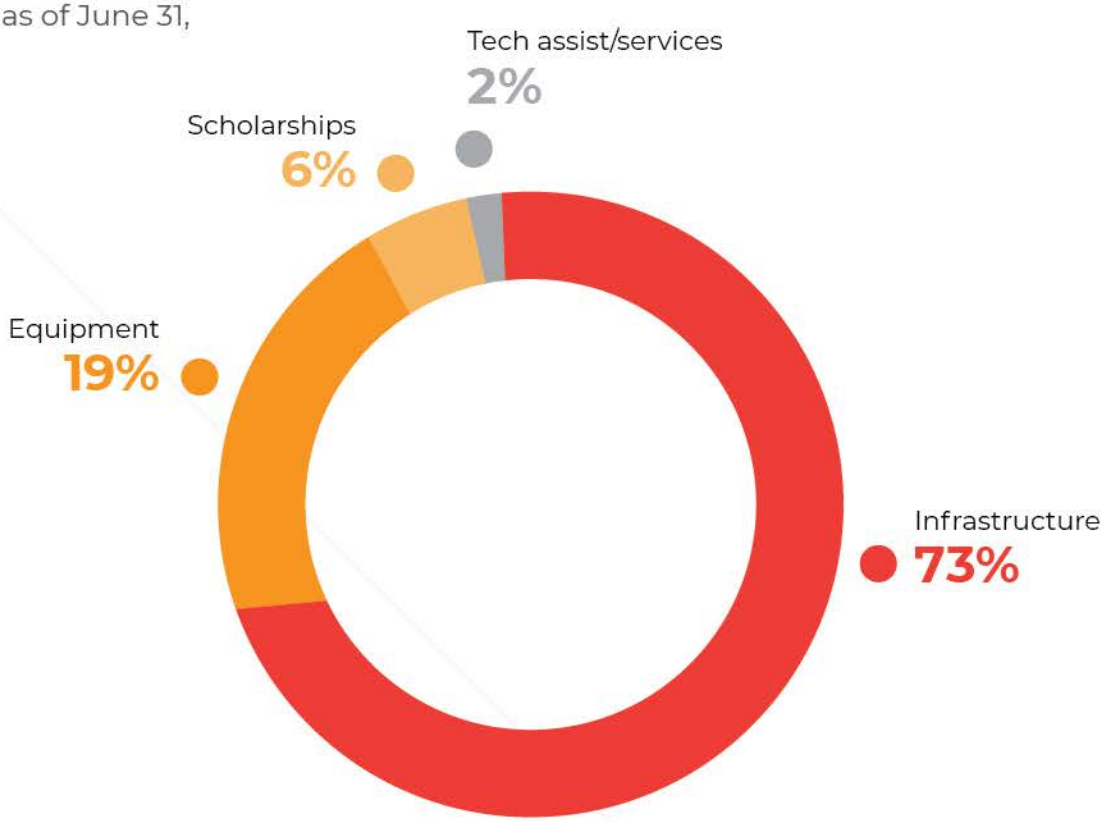
$2.8 million

allocated to technical assistance, services, and training

$37.7 million

allocated to equipment and furniture

Graph No 1 Financial Execution by Investment Component as of June 31, 2020



Source: own elaboration based on information from the Universities.

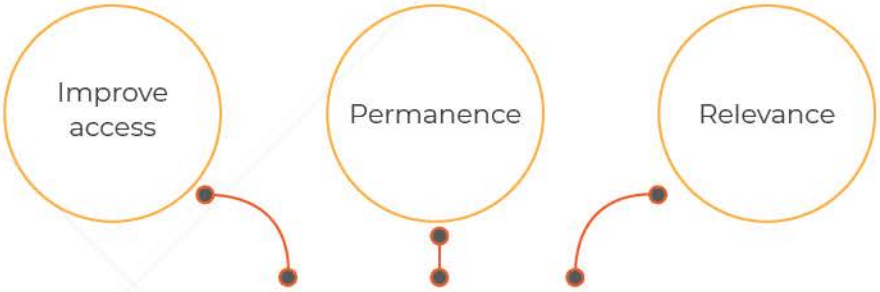
The execution percentages are shown in Graph No. 1, where it can be seen that the most important investment component was infrastructure, which led to the construction of 55 works around the entire country, benefiting in particular various areas far from the Greater Metropolitan Area, where new buildings were built to provide a better service to these communities.

h. Beneficiaries

The direct beneficiaries of this project are the students and professors at the state universities. The following was achieved using loan resources:

- Strengthening the majors offered
- Opening of new offices
- Provision of infrastructure and equipment that allowed improving the academic offer
- Training provided to professors and researchers for them to obtain more advanced knowledge in various areas.

Public universities have always tried to expand access to social sectors that represent lower socioeconomic levels, strengthening their permanence where the studies are pertinent according to the interests of the different groups involved, which is consistent with the purposes of the indigenous safeguard.



From studies in the case of indigenous students
(primary beneficiaries of the project)

Likewise, the Costa Rican business sector will benefit from:

- Having more sophisticated laboratories
- Providing differentiated services
- Increased competitiveness of their products
- Better-trained staff
- Greater support to the productive sector

Small and medium-sized companies in particular benefit from being part of the strategic productive sectors that universities support.

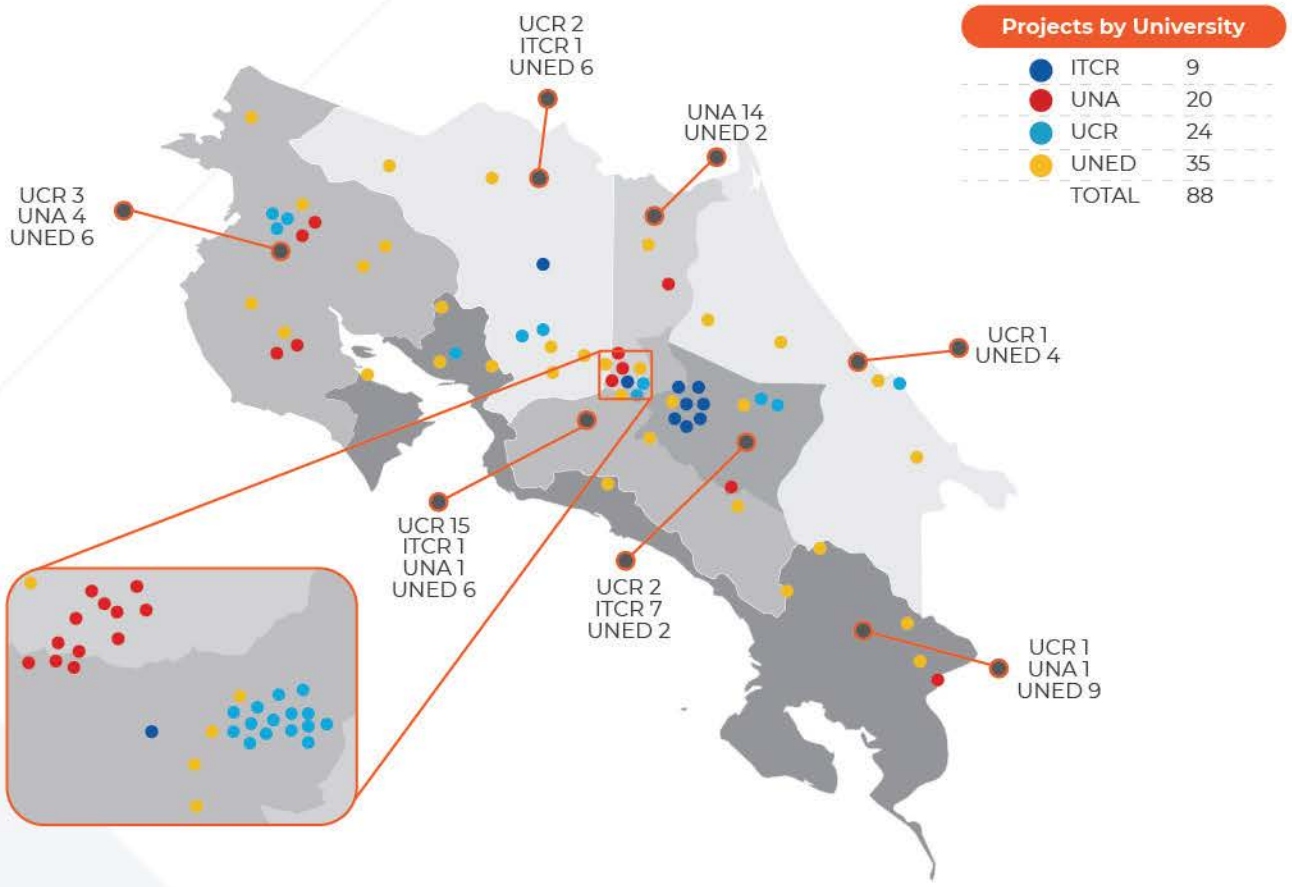
In addition, the secondary beneficiaries are the entire population of the country, since graduates of the universities, as well as the areas of interest, work, and research cover the entire country.

The beneficiaries are also distributed throughout the national geography, since as shown in the following table, with this Project, efforts were made in all provinces for state universities to extend their area of intervention.

The benefited regions are Central, Chorotega, Brunca, Central Pacific, North Huetar, and Atlantic Huetar.

Approximate geographic distribution

Infrastructure and Equipment Projects



Source: Prepared by UNED with information on the loan.

i. Expansion of the coverage area of action of the universities

The first goal indicated in the specific goals of the universities executing the Project, was "to expand coverage, ensure equity in access and permanence of students". With the expansion of coverage, the purpose was to continue the effort that public universities have carried out so that more young people from all areas of the country can access public university education and have quality education.

In this effort, all the socioeconomic regions of the country have benefited, since apart from the Central region with 37 works, infrastructure works were carried out in the peripheral regions, 7 works in the Chorotega region, 2 in the Central Pacific, 1 in the Southern Pacific region, 5 in the North Huetar region, 2 in the Atlantic Huetar region, and 1 in the Brunca region.

PMES, Distribution of infrastructure works

By Regions

Some of the initiatives that were developed in the regions were:

- Pacific Regional Campus: Strengthening of Computer Science and Multimedia Technology majors.
- Guanacaste Regional Campus: Deconcentration of Civil Engineering and strengthening of Electrical Engineering.
- Caribbean Regional Campus:
  - Creation of Naval Engineering and deconcentration from Chemical Engineering. Initiative,
  - Construction of the module for the Limón University Student Center,
  - Construction of the Change and Development Management Center of the University Center of Puntarenas,
  - Module construction for the University Student Center of Liberia,
  - Module construction for the University Student Center of Cañas,
  - Module construction for the University Student Center Santa Cruz,
  - Module construction for the University Student Center of Upala, San Carlos and Limón,
  - University Center of La Cruz and Parrita,
  - Strengthening of San Carlos,
  - Biotec and Protec San Carlos modules, Nicoya
  - Residences and Recreational Works, Liberia
  - Residences and Recreational Works,
  - Sarapiquí Residences.

These investments facilitated access of students from these areas to the state university education. In some cases, new and enhanced laboratories and teaching centers favored better education while promoting research, innovation, and development, which are key for a country like Costa Rica nowadays.

j. Scholarships Awarded and Scholarship Holders by University and Degree (MSC, PhD)

Regarding the scholarships granted through the PMES, a total of 606 people from the four public universities benefited. They carried out internships at other foreign universities and received support to carry out master's or doctoral studies. Furthermore, some consultancies and courses were held, by bringing in a speaker from an international university with the aim of maximizing the training opportunity.

This favored the training of human talent, who are better trained in areas related to the priority areas of the Project, which definitively allows a qualitative leap in the quality of teaching and research at state university centers.

The breakdown of training received is:

Higher Education Improvement Project, Scholarships Awarded by category and university

	Master	Doctorate	Other	Interns	Consulting	Total
UCR	19	41	0	0	0	60
UNED	13	31	172	91	0	307
TEC	2	29	0	0	0	31
UNA	0	33	97	72	6	208
Total Project	34	134	269	163	6	606

Source: developed in house with information provided by the universities.

Within the training process, the category called “Other” also included training for university officials, in the national context, taught by international experts. Through them, greater impact was achieved. The second group in importance corresponds to interns, who are university officials who carry out short apprenticeships in recognized entities abroad. Regarding postgraduate degrees, people who studied to obtain a doctorate degree enjoyed 134 scholarships and 34 scholarships for master's degrees.

Some of the people who carried out doctoral programs obtained a master's degree. This happened in six cases: four from the UCR and two from the ITCR. The above data includes both scholarships per person in the breakdown.

4 PROJECT INITIATIVES
DETAILED BY UNIVERSITY

Initiative	Beneficiaries	Outcome	Impact	Region
1. Regional Campus of the UCR (Pacific, Caribbean, West, Atlantic, Guanacaste and School of Biology). The official name of the initiative is Expansion of access and coverage in the Engineering area: Electrical, Computer Science and Multimedia Technology (SRP), Civil (SRG), Industrial (SRO), Electrical, Chemical, Naval (SRL) and Industrial (SRA), and at the School of Biology (SRF). (SRG) and the creation of the Cancer Diagnostic Center, Minimally Invasive Surgery Simulation (SRF).	This initiative has a variety of support areas, as well as a geographic influence areas, since the project includes the following sub-initiatives: 1) Pacific Campus, Computer Science and Multimedia Technology major. 2) Western Campus, strengthening of industrial engineering. 3) Guanacaste Campus deconcentrating of civil engineering. 4) Caribbean-Limón Campus, deconcentrating of chemical engineering 5) Atlantic-Turrialba Campus, Engineering for Sustainable Development and 6) To expand access to the Biology major.	In each of the aforementioned sub-initiatives, the following were achieved: 1) Construction of two classrooms, computer labs and networks, video studio, and photography 2) 827 m2 in facilities, including thermo fluid, robotics, and metrology laboratories among others 3) 926 m2 in facilities with two chemistry laboratories 4) 900 m2 in facilities, including the chemical engineering laboratory, among others. 5) Construction of 7 laboratories of 750 m2. 6) Construction of a building to strengthen the School of Biology, including 1,390 m2 for an herbarium and various laboratories.	It was possible to expand the number of academic offer quotas in the Pacific to 483; in the case of the Western Campus, the number of Industrial Engineering places in academic offer was 97. In the case of the Guanacaste Campus, 31 enrollment seats. were achieved for both Civil Engineering and Electronic Engineering- At the Caribe-Limón Campus, new majors were created, and 301 first-entry students' seats were achieved. The major of Engineering for Sustainable Development was created at the Atlantic Regional Campus, which allowed 259 first-entry enrollment seats.	Central Pacific, Huetar Atlantic, Central, Central Chorotega,
2. Strengthening of Hydraulics and Mechatronics Laboratories	Students and faculty members who will benefit from acquired technological advances. The manufacturing sector, in particular the sectors of automotive, handling, food and packaging, electronic manufacturing, and industrial processes, as a study determined that 55% of companies want to transform their processes by applying mechatronics.	This initiative trains 9 people with a master's degree and 5 with a doctorate. Robotic arms, wave gauges and generators, a crane, underwater recorders, and computers were purchased. 3 doctorate scholarships were awarded 19 current research works per year.	New links with different teaching and research centers. The acquired equipment allows to improve the development of the research, as well as academic degree and postgraduate projects. To provide trained personnel to the country in critical areas for the Development of Competitiveness, it has been pointed out that 57% of the machinery manufacturing industries use mechatronics in their designs. It has also been pointed out that in Costa Rica there are 55% of companies that want to transform their processes by applying mechatronics.	Central

Initiative	Beneficiaries	Outcome	Impact	Region
3. Fortalecer y ampliar la cobertura en la formación de profesionales en el área de la Salud, mediante: Salud Pública (SRF), Tecnologías en Salud (SRF), Tecnologías en Salud (Salud Ambiental) (SRG) y la creación del Centro de Diagnóstico para Cáncer, Simulación y Cirugía Mínimamente Invasiva (SRF).	Los estudiantes y profesores se están viendo beneficiados con estas edificaciones y los equipos tecnológicos adquiridos, por ejemplo, en la carrera de Salud Ambiental de Guanacaste se contó con 38 cupos de primer ingreso, 161 para la Escuela de Tecnología en Salud y 29 para grado, así como 42 para Maestría de la Escuela de Salud Pública. Además se está beneficiando directamente a pacientes, con un total hasta ahora de 38 pacientes atendidos en el Centro de Diagnóstico.	Construcción de 1,370 m2 para la Escuela de Salud Pública, de 3,000 m2 para la Escuela de Tecnologías en Salud, de 360 m2 para la Carrera de Salud Ambiental de la Sede de Guanacaste y de 2,850 m2 para el Centro de Diagnóstico para Cáncer. Todos los cuales fueron equipados con equipo de punta para servicio de los profesores, estudiantes y el público que se atenderá. Se becaron 4 personas para realizar estudios de doctorado y 2 para Maestría.	En salud pública con lo obtenido se espera la creación de un Doctorado en Salud, y se promueve el fortalecimiento de proyectos de investigación. Para Tecnologías en Salud el fortalecimiento de la Escuela permite encauzar esfuerzos para crear vínculos con otras unidades académicas con enfoque en el diseño de nuevos proyectos de investigación y el primer programa de maestría de la Escuela de Tecnología en Salud. Con la carrera de Salud Ambiental, se amplía la oferta académica de la Sede de Guanacaste, con 38 nuevos cupos de matrícula para estudiantes de primer ingreso. Con el Centro de Diagnóstico para Cáncer se espera realizar investigaciones muldisciplinarias y transdisciplinarias de alto nivel.	Central, Chorotega
4. Fortalecimiento de la investigación en ciencias atómicas, nucleares y moleculares, aplicada al área de la salud - CICLOTRÓN.	La población en general al contarse con un equipo de primera línea tecnológica que permitirá diagnósticos tempranos de algunas enfermedades críticas como es el cáncer. Estudiantes y docentes se verán beneficiados al contar con tecnología de punta de gran utilidad que antes no estaba disponible en el país, lo que beneficiará los programas de estudio, así como la investigación que se puede realizar desde este Centro.	Edificio de 1,250 m2 cumpliendo con los más altos estándares de seguridad que servirá para atención de pacientes, docencia e investigación. Este edificio cuenta con equipamiento de alta sofisticación tecnológica como es un Ciclotrón, que permitirá obtener resultados de casos sospechosos de cáncer entre otras enfermedades. Se financió una beca de doctorado	Poder diagnosticar a pacientes en etapas tempranas de desarrollo del cáncer será un gran impacto de este Proyecto. Vinculación con unidades académicas para el desarrollo de investigación inter, multi y transdisciplinaria.	Central

Initiative	Beneficiaries	Outcome	Impact	Region
1. Network of University Centers for innovation, local and national development (Heredia, Palmares, Cañas, Santa Cruz, Liberia, Pérez Zeledón, and San Carlos) CEUs.	UNED students, the community at large, University Center staff, teachers, and researchers are benefit from having greater inclusion and access. Extent of academic and administrative services. Strengthening of community outreach, research, extension, agreements, and alliances. Reduction of the gap in access and coverage to Costa Rican population, especially the higher education of the vulnerable population.	The University Centers have strengthened their service platforms, particularly science and computer laboratories. Regional student attraction and permanence strategies have been promoted, prioritizing the options and advantages of the distance modality. Bonding processes with the communities have been strengthened by establishing spaces with the centers for the extension and improvement of the population's life quality near these centers.	When analyzing the enrollment of the university centers with AMI and infrastructure investment, effective 2018 investment impact is visualized in terms of its annual growth in the enrollment results obtained. In general terms, the AMI investment has had an impact on student permanence and on the attraction of new students from university centers, especially in centers outside the central region. At 2019, the centers with AMI investment without construction were those which had the greatest student attraction.	Central, Chorotega, Brunca, ans North Huetar
2. Puntarenas CeU Regional Change and Development Management Center.	UNED students, the community at large, University Center staff, teachers and researchers who have wide spaces for the projection of their activities.	Construction of a 2,038 m² building. It is important to indicate that, with the construction and equipment, the center expands its university services with a documentation center, technology rooms, and laboratories.	Having spaces for interaction and student life, which were completely lacking in the previous facilities. On the other hand, the Center offers a greater quantity of university services and with it, a greater interaction with the university teaching.	CentralPacific

Initiative	Beneficiaries	Outcome	Impact	Region
3. To diversify and expand digital multimedia production and on the Internet (Multimedia).	Student population and teachers benefit from the acquisition of highly technological and quality equipment for the audiovisuals production.	The equipment investment allowed the updating of production equipment by allowing a better quality of audiovisuals and greater access for the student population. The acquisition of new technologies provides better visual quality and, in turn, allows audiovisual production specialists to improve the technical and narrative level of audiovisual productions in order to develop more precisely didactic contents.	This allowed the review of audiovisual production processes and the need for greater interaction with academic spaces.	Central
4. Strengthening of production, research and experimentation for technological development and innovation at UNED (R & D)	Researchers, teachers, and students benefit from this building of research, innovation, and development by having workstations for each dependency.	The R&D infrastructure, equipment and training processes allowed the innovation of research lines at the university never developed before, by also promoting articulation and coordination with the academia and an external projection to the university, which has led to: a. Strengthening of centers and laboratories, by developing more than 20 virtual laboratories and 3 technological applications. b. Strengthening online services towards the different institutional populations, promoting access and availability of services. c. Video communication network nationwide	Creation of workspaces oriented to the university substantive axes tasks. Strengthening and innovation of educational resources such as applications and virtual laboratories • To develop projects and research lines linked with extension and teaching. • To create Data Centers. • To develop projects and research lines linked with extension and teaching. • To develop projects and research lines linked with extension and teaching.	Central

Initiative	Beneficiaries	Outcome	Impact	Region
1. Student residences	Students from low-socioeconomic status homes.	Construction of a 3,770 m² building with duly enabled spaces for people with limited mobility, as this expand the accommodation offer for students with these types of conditions.	192 low-income students were offered the possibility of minimizing their rent-related expenses, providing them with a space with all the comforts and services at their disposal, on campus, and offering them greater security. The building allows not only to house students, but also by providing common use spaces that promote coexistence and development of a series of life skills and values related to solidarity, teamwork, coordination, respect, and tolerance.	Central
2. Information and Communication Technology Core	Students Teachers Researchers Socio-productive sector Public sector Society in general.	Construction of a 5,107 m² building. In this project 456 first-entry students have been admitted with respect to what would have been admitted if the enrollment had been equal to the baseline. In addition, the improvement of the facilities has a positive impact on the students and teachers perception about their workplace, given that the majors did not have their own building designed to fulfill it purpose, and had always occupied spaces intended for other use that were not optimal for the equipment location.	Thanks to the project, new lines of research have been proposed and developed, such as: • Unmanned aerial vehicles photogrammetry (Drones) • Aerospace systems (Irazú Satellite) • Electric Vehicles research through the Autotronics Laboratory. Student attention is also benefited thanks to the increase in seats for each course. It should be noted that the percentage of students who obtain their degree has been increasing since the beginning of the project.	Central

Initiative	Beneficiaries	Outcome	Impact	Region
3. Strengthening of the San Carlos Regional Campus, Teaching and Research.	Student population and teachers have benefited from having more available spaces for the successful opening of two new programs, by increasing the enrollment among other activities.	Opening of two new programs, increase in enrollment, in the number of research subprojects and in the number of publications.	The research has allowed the development not only of this type of projects, but the creation of a collaborative environment between the majors that are involved, the integration of students to those projects and therefore, the intra and inter disciplinary teamwork improvement. This is how the initiative has increased access to higher education and thus improving the quality and relevance of scientific and technological development student training and strengthening in the northern region of Costa Rica.	North Huetar
4. Integrated Environmental Chemistry Core	The student population and teachers have benefited from the infrastructure and equipment improvement.	Construction of a 4,182 m^2 building. The development of the project provides a great opportunity for teaching, research, extension, and sale services growth. There are high-tech laboratories that allow students to practice in the chemistry and environmental engineering.	The infrastructure increased the impact the institution has on the population, while generating greater capacity to attend more students, high-impact research, and strengthening ties with society. As well as an increase in networking and internationalization.	Central

Initiative	Beneficiaries	Outcome	Impact	Region
1. To improve academic activity conditions that promotes creativity and innovation for the construction of interactive artistic processes	Directly to students that have a new 7,000 m2 building equipped with state-of-the-art technology and with its own spaces for artistic development. It also benefited the participants in at least 29 training activities.	A 7,000 m2 building duly equipped with high value-added functions for various majors related to interactive artistic processes.	The built and equipped classrooms meet the highest required standards, allowing the improvement of educational and creative processes of students and teachers.	Central
2. Academic strengthening in new industrial bioprocesses and cleaner environmental, occupational, and social sustainability production alternatives	Students who support country's economic development critical sectors, such as biotechnology and nanotechnology. These companies will also benefit from having highly qualified and duly trained personnel to carry out their functions.	The New Industrial Processes Building was built with a construction area of 7,820 m2, which includes the installation of 39 hoods, and gases and air extraction systems among other high-tech equipment. The master's degree in Tropical Ecotoxicology was developed. An average of 11 annual research, teaching and / or extension projects were carried out. The annual enrollment of 40 first-time students was achieved. The Industrial Chemistry major was accredited	For the development of high value-added productive sectors, such as biotechnology and nanotechnology, as well as the creation of technology-based companies, it is necessary trained professionals to develop environmentally and healthy friendly and socially equitable manufacturing processes. With this initiative, industrial bioprocesses professionals are being trained to perform the aforementioned and to support these strategic sectors.	Central

Initiative	Beneficiaries	Outcome	Impact	Region
3. Strengthening human movement sciences, complementary health, and quality of life related majors	Initially, students from the School of Human Movement Sciences who will later provide services to the country. The teachers also benefited from access to training that will lead to a teaching and research improvement at school. On average, the annual enrollment corresponded to 500 students. On average, 304 people were served annually in free courses.	The 1,930 m2 Human Movement building was built, which includes an auditorium for 100 people, rooms, offices, medical offices, among others equipped with technological equipment such as interactive whiteboards and a special screen for the auditorium. One person is doing a PhD program, and the visit of 3 interns was funded. Eight intervention models were developed, and 16 scientific publications were made.	The capacity to respond to the new curricular structure demands of the current programs was strengthened, in the same way, the means and capacities aimed at the creation of new research , teaching and academic extension projects, of the accreditation processes and the management of agreements were strengthened to reinforce the Doctoral program.	Central
4. Student residences and sports facilities at regional campuses	Directly benefits 211 students, 50 students from Liberia, 48 from Nicoya, 36 from Sarapiquí and 77 from Pérez Zeledón, also, a greater number of students who benefit from the indoor sports spaces that were built	Four student residences were built, as well as sports facilities and two more buildings. Which are available to students from the benefited areas	Having residences and sports facilities are considered key elements to ensure the students permanence at the university	Chorotega, Brunca, North Huetar

PROJECT IMPACT INDICATORS

4
PUBLIC UNIVERSITIES BENEFITED BY THE PROJECT

37
CENTRAL REGION

7
CHOROTEGA REGION

2
CENTRAL PACIFIC

55
CONSTRUCTION WORKS

1
SOUTH PACIFIC

5
NORTH HUETAR REGION

2
HUETAR ATLANTIC REGION

1
BRUNCA REGION

22 UCR

14 UNED

11 TEC

8 UNA

55 TOTAL

6
Benefited Country Regions

120,000
Benefited Students from all regions of the country

50
Initiatives developed (16 UCR, 10 UNED, 12 TEC, 12 UNA)

106,884
Physical and regular students enrolled in 2019

140
Accredited majors in 2019

24,326
First-year students enrolled in majors in 2019

67,340
Regular students in priority areas in 2019

62,956
Graduate

4,384
Postgraduate

14,086
Number of graduates in 2019

3,979
TCE professors with a degree in 2019

2,880
Master

1,099
Doctorate

OLaP
Observatorio Laboral de Profesiones

1
Design, development, and dissemination process of the Employment Opinometer

294
Majors under evaluation for accreditation

1,107
trained professionals in evaluation processes

1
Employment Study

606
People benefited with scholarships for internships and/or master's or doctoral studies at the four Public Universities

34 MASTERS

134 DOCTORATE

269 INTERNATIONAL EXPERTS

163 INTERNS

6 CONSULTING

UCR	UNED	TEC	UNA	TOTAL
60	307	31	208	606

Source: Information provided by the Project Coordinating Unit, CONARE.


#TUIDEAESTUER
CENAT

PROJECT MONITORING MECHANISMS

With the aim to ensure the smooth running of the project and the achievement of the planned outcomes, various monitoring mechanisms were established -both internally and externally- with different functions, in order to guarantee the best results.

Internally, it was necessary to create a Project Coordinating Unit (PCU) at CONARE, to be in charge of "the general coordination and monitoring of the Project" and whose functions established that it should be "the main interlocutor with the Bank during the execution of the Project in all M&E (Measurement and Evaluation) matters.
.... The PCU's responsibility for coordinating M&E includes: (i) development of progress reports for both Components; (ii) supporting the Bank's monitoring missions; (iii) being a focal point that collects and consolidates information from the Project coordinating units (implementation, financial management, procurement and contracting plans, and safeguard policies); (iv) acting as a link between them and the Liaison Commission; (v) acting as facilitator with the executing units in the event of any difficulties in implementation; and (vi) supporting the activities of the Monitoring and Evaluation Committee (CSE)."

The Institutional Project Coordinating Units (IPCU) were also created internally at each university and were defined as "those responsible for the execution of the activities, relating directly to the Bank. To promote accountability and strengthen existing management capacity, the current proper-functioning structures in six areas of each university were used for Project implementation: (i) financial management, disbursements, and accounting; (ii) acquisitions and contracts; (iii) infrastructure; (iv) planning, monitoring, and evaluation; (v) management of matters related to environmental Safeguard Policies; and (vi) management of matters related to the Indigenous Peoples Safeguard Policy. "
Externally, ten main World Bank project monitoring missions were received. There were also missions for project financial monitoring and safeguards, five impact evaluation visits by the Monitoring and Evaluation Committee, made up of professors from the University of Salamanca in Spain. The results of all of them were reflected in the drafting of four progress reports.

Regarding the financial evaluations carried out by audit firms, six external audit reports were made throughout the project. Additionally, each semester the interim financial statements (IFR) were consolidated and sent to the Bank, containing at least: i) a statement of uses and sources of funds (with expenses classified by initiative), (ii) a statement of accumulated investments by initiative (with expenses classified by the main budget accounts), and (iii) a report on the physical progress of the Project. All documents were sent, reviewed, and accepted by the World Bank Financial Management Specialist.

Public universities and Component 2 were also monitored on the development of the Higher Education Improvement Project by internal and external audits.

The following annual reporting schedule was followed:

Project Report

Periodicity
Biannual

Addressee
The World Bank

Unaudited interim financial reports

Periodicity
Biannual

Addressee
The World Bank

Interim and final evaluation of the Bank

Periodicity
Twice throughout the project

Addressee
The World Bank

External evaluation (CSE)

Periodicity
4 times throughout the project

Addressee
World Bank Liaison Committee

Registration form update report

Periodicity
Biannual

Addressee
MIDEPLAN

Public Credit Reports

Periodicity
Quarterly

Addressee
Ministry of Finance

External Audit

Periodicity
Biannual

Addressee
University authorities

External Audit

Periodicity
Annual

Addressee
World Bank Liaison Committee

Legislative Assembly

Periodicity
Annual

Addressee
Commission of Control of Income and Public Expenditure


INSTITUTIONAL
LEADERSHIP

Consejo Nacional de Rectores (CONARE)

Name	Project Unit Areas
Luis Paulino Méndez Babilla	President, Consejo Nacional de Rectores
Henning Jensen Pennington	Chancellor, University of Costa Rica
Alberto Salom Echeverría	Chancellor, National University
Rodrigo Arias Camacho	Chancellor, State University for Distance Education

World Bank / ICR Supervision

Name	Project Unit Areas
Marcelo Becerra	Project Leader
Tomás Socias	Senior Procurement Specialist
José Simón Rezk	Financial Management Specialist
Alejandro Caballero	Senior Education Specialist
Robert Hawkins	Senior Operations Officer
Ruth Tiffer-Sotomayor	Senior Environmental Specialist
Janet Entswistle	Senior Operations Officer
Anna Musakova	Senior Program Assistant
Guillermo Toral	Junior Professional Associate
Jimena Garrote	Senior Counselor
Antonio Leonardo Blasco	Senior Financial Management Specialist
Fabienne Mroczka	Senior Financial Management Specialist
Patricia de la Fuente Hoyes	Senior Finance Officer
Maria Virginia Hormazábal	Financial Analyst
María Elena Paz Gutzalenko	Senior Program Assistant
Dianna M. Pizarro	Senior Social Development Specialist
William Experton	Educational Consultant
Luciano Galán Casado	Educational Consultant
Javier Curcio	Consultant
Marcos Zambrano	Consultant
Luis Gutierrez Izquierdo	Consultant Architect

World Bank / ICR Supervision

Name	Project Unit Areas
Isidro Ramírez Araya	Consultant Architect
Carlos Lago Bouza	Procurement Specialist
Daniel Jorge Arguindegui	Procurement Specialist
Sandra Lissette Flores De Mixco	Financial Management Specialist
Fabiola María Lucía Mercado Jaldin	Environmental Specialist
Gerardo Ospina Hernández	Consulting Engineer
Carlos Enrique Arroyave Posada	Consulting Engineer
Sivor Oriana Benavides Rendon	Cyclotron Specialist Consultant
Karina Elizabeth Rodríguez Saenz	Environmental Consultant
Ernesto Laval	Consulting Engineer
Enrique O. Alasino Massetti	Higher Education Specialist
Paula Flores Carrillo	Senior Program Assistant

Monitoring and Evaluation Committee (University of Salamanca)

Name	Project Unit Areas
Joaquin García Carrasco	Team Leader, Expert in Cooperation with Higher Education institutions in Costa Rica
Nicolás Rodríguez García	Expert in University Management of Policies and Higher Education Projects
Fernando C. Rodríguez López	Expert in Higher Education Policies and Projects, with an emphasis on Quality Assurance, Monitoring of Graduates
María José Rodríguez Conde	Expert in Science and Technology Policies and Projects and in Educational Research Methodology
Francisco José García Peñalvo	Expert in University Information Systems Policies and Projects
Javier Jambrina López	Expert in Social Projects

Liaison Committee

Name	Project Unit Areas
Rodrigo Chaves Robles	Minister of Treasury
Guiselle Cruz Maduro	Minister of Public Education
María del Pilar Garrido Gonzalo	Minister of Planning
Luis Adrián Salazar Solís	Minister of Science, Technology, and Telecommunications

Government Technical Commission

Name	Project Unit Areas
Andrea Ocampo Chacón	Representative, Ministry of Finance
José Manuel Barrios Mayorga	Representative, Ministry of Public Education
Maikol Víquez Duarte	Representative, Ministry of Public Education
Antúan Villalobos Alvarado	Representative, Ministry of Planning
Eliana Ulate Brenes	Representative, Ministry of Science, Technology and Telecommunications

CONARE PCU

Name	Project Unit Areas
Eduardo Sibaja Arias	Project General Coordinator
Armando Rojas Esquivel	Technical Coordinator
Billy Hidalgo Díaz	Technical Coordinator
Karol Palma Odio	Project Coordination Unit Assistant
Glenda Hernandez Moscoso	Project Coordination Unit Assistant

COMPONENT 1 - IPCUs at Universities

University of Costa Rica

Name	Project Unit Areas
Kevin Cotter Murillo	General Coordinator, Institutional Project Coordination Unit
Isabel Pereira Piedra	Financial Accounting Officer, Administration Office
Pablo Marín Salazar	Financial Accounting Officer, Administration Office
Kattia Castillo Diaz	Financial Accounting Officer, Administration Office
Alejandra Soto González	Financial Accounting Officer, Administration Office
Guiselle Porras Fonseca	Financial Accounting Officer, Administration Office
Kevin Cotter Murillo	Infrastructure Officer
Jorge Padilla Zuñiga	Procurement and Contracts Officer, Purchasing Office
Ingrid Espinoza Leal	Procurement and Contracts Officer, Purchasing Office
Ana Lorena Mata Barrantes	Procurement and Contracts Officer, Purchasing Office
Walter Bustillos Sequeira	Procurement and Contracts Officer, Purchasing Office
Gabriela Morales Valverde	Procurement and Contracts Officer, Purchasing Office
Carolina Calderón Morales	Planning, Monitoring and Evaluation Officer
Johnny Méndez Vargas	Planning, Monitoring and Evaluation Officer
Carlos Granados Hernández	Planning, Monitoring and Evaluation Officer
Johnny Arias Aguilar	Responsible for Safeguarding Indigenous Peoples
Euclides Hernández	Responsible for Safeguarding Indigenous Peoples
Emilia Marten Araya	Responsible for Environmental Safeguarding

Costa Rica Institute of Technology

Name	Project Unit Areas
Luis Paulino Mendéz Badilla	General Coordinator
Grettel Castro Portuguéz	IPCU Assistant
Madelaine Campos Valerín	IPCU Assistant
Silvia Watson Araya	Financial AccountingOfficer
Roy D'avanzo Navarro	Financial AccountingOfficer
Aarón Román Sanchéz	Financial AccountingOfficer, Budget Manager
Fabio Ramírez Rojas	Financial AccountingOfficer, Accounting Manager
Steven Montero Mora	Accounting Finance Manager, Accounting Manager
Saúl Fernández Esponiza	Infrastructure Officer, Manager
Luis Guillermo Araya Segura	Infrastructure Officer, Engineer in charge of works
Alejandro Badilla Vargas	Infrastructure Officer, Engineer in charge of works
Roberto Yglesias Cuadra	Infrastructure Officer, Engineer in charge of works
Aarón Mesén Bonilla	Infrastructure Officer, Engineer in charge of works
Juan Carlos Fonseca Fonseca	Infrastructure Officer, Engineer in charge of works
Katthya Calderón Mena	Procurement and Contracting Officer, Manager
Evelyn Bonilla Cervantes	Procurement and Contracting Officer
Walter Sequeira Fallas	Procurement and Contracting Officer
Danilo May Cantillano	Attorney
Tatiana Fernández Martín	Planning, Monitoring and Evaluation Officer, Manager
Fabiola Arias Cordero	Monitoring and Evaluation Officer
Gilberto Salas Leiva	Monitoring and Evaluation Officer
Diana Segura Sojo	Responsible for the Indigenous Peoples Safeguard, Manager
Johanna Campos Coto	Social Worker
David Benavides Ramírez	Responsible for Environmental Safeguard, Manager
Marianela Rojas Quirós	Environmental Engineer
María Gabriela Hernández Gómez	Security Engineer

National University

Name	Project Unit Areas
Javier Rodríguez Ramírez	General Coordinator, Institutional Project Coordination Unit
Lorena Jiménez Paris	General Coordinator, Institutional Project Coordination Unit
Francisco Sancho Mora	IPCU Liaison Officer
Christian González Hernández	Financial Accounting Officer
Sergio Fernández	Financial Management Program
Victor Hidalgo Solís	Infrastructure Officer
Francisco Miranda Muñoz	PRODEMI Infrastructure Officer
Diana Alvarado Jiménez	Procurement and Contracting Officer
Nelson Valerio Aguilar	Institutional Procurement Officer
Luz Paulina Torres Mora	Responsible for the Indigenous Peoples Safeguard
Gabriela Pino Chacón	Responsible for the Indigenous Peoples Safeguard
Yadira Cerdas Rivera	Responsible for the Indigenous Peoples Safeguard
Mario Cordero Alfaro	Responsible for Environmental Safeguard

State University for Distance Education

Name	Project Unit Areas
Heidy Rosales Sánchez	Director, Institutional Project Unit, IPCU-AMI
Yelitza Fong Jiménez	Technical Coordinator, Institutional Project Unit, IPCU-AMI
Alberto Cordero Fernández	Financial Management Area Coordinator, Disbursements and Accounting
Luis Paulino Calderón Sibaja	Financial Management Area Coordinator, Disbursements and Accounting
Olga Montoya Rodríguez	Financial Management Area, Disbursements and Accounting
Pablo Navarro Fallas	Financial Management Area, Disbursements and Accounting
Saray Pérez Montero	Financial Management Area, Disbursements and Accounting
Elian Valerio Valerio	Financial Management Area, Disbursements and Accounting
Katherine Abarca Castro	Financial Management Area, Disbursements and Accounting
Kenneth Robles Zúñiga	Financial Management Area, Disbursements and Responsible
Walter Vargas Ortega	Infrastructure Manager
Federico Arce Miranda	Infrastructure Officer
Rolando Bustamante Madrid	Infrastructure Officer
Andrés Jiménez Rodríguez	Infrastructure Officer
Mariela Navarro López	Infrastructure Officer
Roxiris Delgado Rodríguez	Infrastructure Manager
Yirlania Quesada Boniche	Procurement and Supplies Area Coordinator
Johanna Monge Ramírez	Procurement and Supplies Officer
Iliana Sánchez Cambronero	Procurement and Supplies Officer
Giovanni Sibaja Fernández	Procurement and Supplies Officer
Rocío Arce Durán	Planning, Monitoring and Evaluation Area Coordinator
Ligia Bermúdez Mesén	Planning, Monitoring and Evaluation Officer
Juliette Masís Abarca	Planning, Monitoring and Evaluation Officer
Cristina Sibaja Fernández	Planning, Monitoring and Evaluation Officer
Joselyn Zúñiga Meléndez	Environmental and Social Management area Coordinator

State University for Distance Education

Name	Project Unit Areas
Pamela Rodríguez Bolaños	Environmental and Social Management Area
Paola Quesada Herrera	Environmental and Social Management Area
Mónica Escalante Casco	Environmental and Social Management Area
Wendy Sanabria Martínez	Environmental and Social Management Area
María Sofía Chacón Sánchez	Indigenous Peoples Management Area Coordinator
Andrea Parajeles Reyes	Indigenous Peoples Management Area
Lenin Mondol López	Indigenous Peoples Management Area
Joliem Figueroa Siles	Indigenous Peoples Management Area
Jessica Umaña Méndez	Indigenous Peoples Management Area
Shirley Ramírez Picado	Indigenous Peoples Management Area
Gerardo Valerio Araya	Indigenous Peoples Management Area
Jenipher Granados Gamboa	Responsible IN1. Network of University Centers for Innovation, Local and National Development
Kenneth Robles Zúñiga	Responsible IN2. Regional Development and Change Management Center: Cartago University Center
Roxiris Delgado Rodríguez	Responsible IN3. Regional Development and Change Management Center: University Center of Puntarenas
Silvia Barrrenechea Azofeifa	Responsible IN4. Equity Improvement of Student Access to Online and Digital Learning Resources
Maribel Jiménez Fernández	Responsible IN5. Diversification of Engineering Academic Program
Alfredo Solano Alfaro	Responsible IN5. Diversification of Engineering Academic Program
Marianela Salas Soto	Responsible IN6. Education and training to strengthen the distance education model "
Ivannia Villalobos Vindas	Responsible IN7. Diversify and expand production digital and Internet multimedia
Diana Hernández Montoya	Responsible IN8. Strengthen production, research and experimentation for technological development and innovation at UNED
Francisco Durán Montoya	Responsible IN9. Information system to support decision-making and institutional management

COMPONENT 2 - SINAES-OLaP-SIESUE

National System for Accreditation of Higher Education (SINAES)

Name	Project Unit Areas
Rosa Adolio Cascante	Executive Directorate
Juana Castro Tato	Research Officer
Gilberto Alvarado Varela	Executive Directorate
José Miguel Rodríguez García	Executive Directorate
Laura Ramírez Saborío	Executive Directorate
Pablo Madrigal Sánchez	Administration
Manuel Masís Jiménez	Administration
Denis García Aguinaga	Administration

State University Higher Education Information System (SIESUE)

Name	Project Unit Areas
Nancy Rodríguez Ramos	Interuniversity Planning Division
David Hernández Hernández	Information Technology and Communications Officer

Labor Observatory of Professions (OLaP)

Name	Project Unit Areas
Ilse Gutiérrez Coto	Interuniversity Planning Division
Olman Madrigal Solorzano	Interuniversity Planning Division
Cinthia Azofeifa Ureña	Interuniversity Planning Division
Cinthya Picado Madrigal	Interuniversity Planning Division
Karen Corrales Bolivar	Interuniversity Planning Division
Katherine Sandí Araya	Interuniversity Planning Division
Cristian Marín Alvarado	Information Technology and Communications Area
David Guerra del Rio	Information Technology and Communications Area
Danny Silva Bermúdez	Information Technology and Communications Area
Karla Quesada Seas	Information Technology and Communications Area
Robert Castro Cortés	Information Technology and Communications Area
Jorge Adolio Cascante	Information Technology and Communications Area
Vanessa Astúa Alfaro	Information Technology and Communications Area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2018 - 2022

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/Consejo Nacional de Rectores

www.conare.ac.cr 2519-5700

1.3 km north of the United States Embassy.
Pavas, San Jose, Costa Rica.