Los Cobos Medical Center

SCALING THE DIAGNOSTIC IMAGING CARE EXPERIENCE WITH CLOUD TECHNOLOGY.

Technical solutions:

-DeepUnity solutions: PACSonWEB, and RISonWEB

-BI4H

DEDALUS' 100% WEB-BASED CLOUD SOLUTION HAS ENABLED THE INSTITUTION TO OVERCOME THE LIMITATIONS OF ITS PREVIOUS ON-PREMISE SYSTEM.

Los Cobos Medical Center in Bogotá, Colombia, is a renowned private institution offering comprehensive healthcare services through an innovative, patient- and family-centered care model. As a university hospital, education and research are fundamental activities for Los Cobos which, since its opening in 2018, has stood out for its cutting-edge technology and high-quality service, strengthening hospital care in Bogotá.

Its diagnostic imaging department, currently generating an annual volume of over **150,000 exams**, sought to transform the care experience for both patients and medical professionals. This technological paradigm shift aimed not only to enhance service quality but also to ensure information security and optimize the department's operational efficiency.

"Our previous technology had certain limitations that we accepted at the time, but after five years, several functional, technical, and security needs emerged."

Jorge Martínez, Director of Information Technology at Los Cobos Medical Center

TOWARD A NEW MODEL
FOR DIAGNOSTIC IMAGING.

The challenge at Los Cobos Medical Center was primarily to transform its old on-premises PACS-RIS system into a cloud-based PACS-RIS solution that could meet current needs and grow flexibly in line with future demands.

ENHANCED SECURITY

One of the main technical requirements for the new solution was to provide secure access to high-quality medical images from any location and device.
While the institution already had some level of remote connectivity through VPN connections, the pandemic highlighted the complexities and limitations of this type of connection in terms of speed, efficiency and security, especially when the need arose for large-scale remote operations.

"To provide patients with access to their studies through the web during the pandemic, we had to implement an additional platform and carry out internal processes manually to upload the images. The same applied to the reports, as our previous system did not support this operation. We wanted our doctors and patients to have web-based access to studies while ensuring compliance with security standards."

Jorge Martínez, Director of Information Technology at Los Cobos Medical Center

CHALLENGES

EFFICIENCY

The previous technology used by the radiology department at Los Cobos was on-premise, resulting in high infrastructure maintenance and software update costs, regardless of usage volume. The rigidity of the on-premise model did not allow for scalable growth without a significant increase in costs.
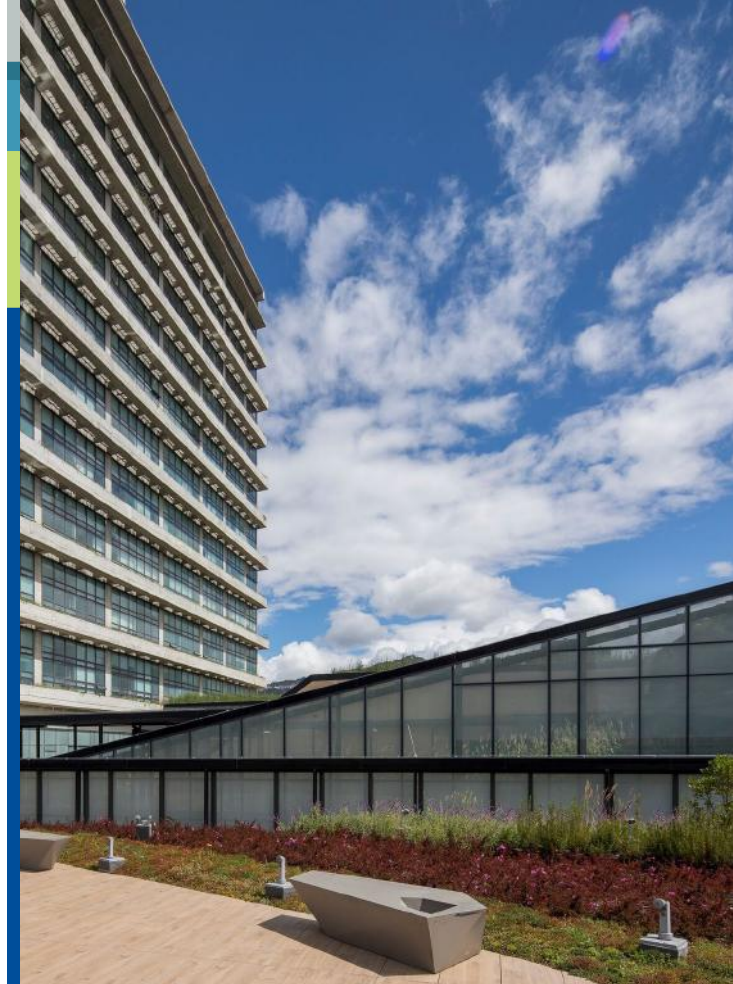
On the other hand, Clínica Los Cobos was delivering an average of **5,000** to **6,000** diagnostic tests on CDs/DVDs per month. However, this procedure significantly extended the waiting time for patients who came to pick up their CDs/DVDs as some medical imaging studies, such as MRIs or mammograms, required a burning process that could take up to fifteen minutes per patient.

This process was ineffective both in terms of speed of results delivery, and in terms of management, environmental impact and costs.

As a result, the management of the diagnostic imaging department decided to eliminate CDs/DVDs as the primary medium for delivering studies to patients.

OPERATIONAL IMPROVEMENTS

On an operational level, the institution aimed to reduce the time required to access diagnostic images and expedite report generation, as this would enhance productivity in reading and improve turnaround times.

Additionally, the organization wanted to have all information consolidated on a single online platform, to ensure data integrity.

FUNCTIONAL NEEDS

At a functional level, the management of Los Cobos needed to conduct data analyses to generate internal indicators for process improvement. This required software that could integrate natively with the RIS-PACS system.

Another issue they aimed to address was to establish an appropriate workflow prioritization system for worklists and medical specialties, ensuring that radiologists have a worklist tailored to their needs, specialties and reading times. This would also enable the hospital to prioritize result delivery times according to the patient's provenance.

A CLOUD-NATIVE SOLUTION
TO ENHANCE DIAGNOSTIC IMAGING .

To address the client's requirements, Dedalus implemented a solution that integrates the PACSonWEB, RISonWEB, and BI4H software.

- **PACSonWEB, a DeepUnity solution** is the leading cloud-native PACS solution in Latin America. It enables physicians and patients to securely distribute, share and view medical images and reports over the Internet—anytime and from any device. Designed to be compatible and scalable, PACSonWEB helps optimize radiology services by ensuring uptime and seamless operations while providing predictable costs and a lower total cost of ownership. Built on a unique centralized cloud architecture, PACSonWEB uses an imaging system to organize and manage the entire value chain of diagnostic imaging.

- **RISonWEB, part of DeepUnity suite**, is a state-of-the-art Radiology Information System (RIS) designed for seamless integration with DeepUnity's cloud-native PACSonWEB solution.

- **BI4H** (Business Intelligence for Health) is a web-based platform designed for the healthcare sector, allowing service and care institutions to consolidate all data in one place for optimized management and analysis.
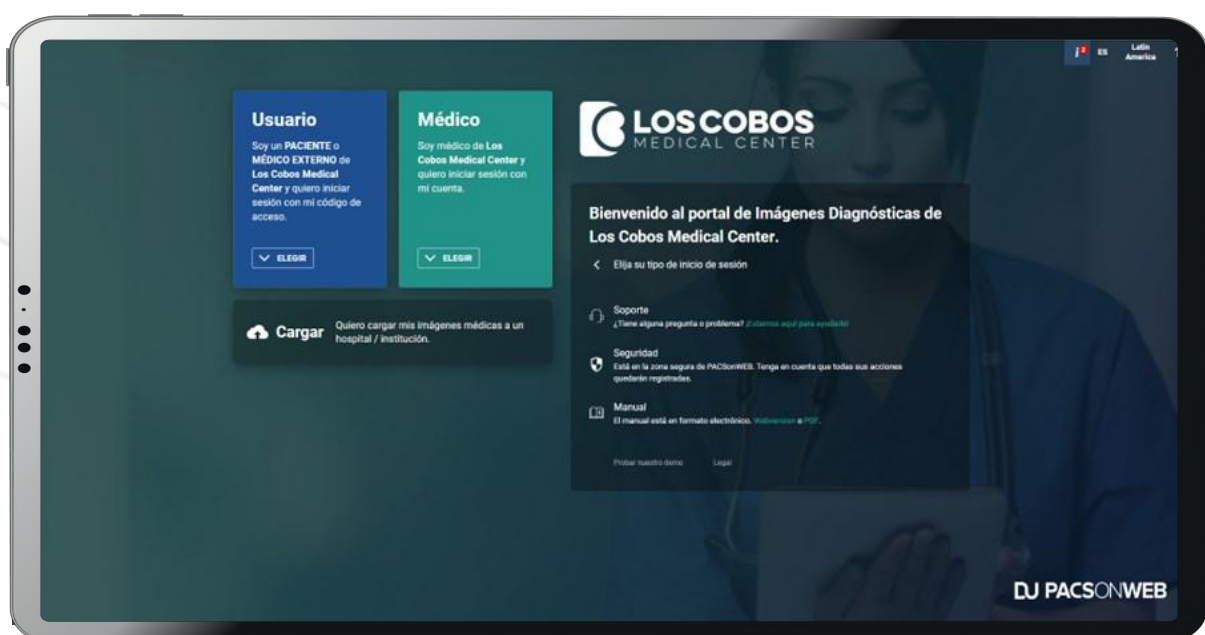
SOLUTION

During the implementation project at Clínica Los Cobos, Dedalus achieved the following key milestones for the client:

- **HL7 Integration** with the Hospital Information System (HIS), paving the way for improved data management and exchange, and facilitating smoother workflows.

- Transition to a **100% cloud-based** solution hosted on Amazon Web Services, including RISonWEB and PACSonWEB (DeepUnity solutions), with a portal for both patients and referring physicians.

- Successful connection of over **20 modalities**.

- Successful **replacement of the legacy** PACS system.

- Implementation of a PACS-centered workflow, with reports generated in PACSonWEB and enhanced by voice **recognition technology for 37 radiologists**.
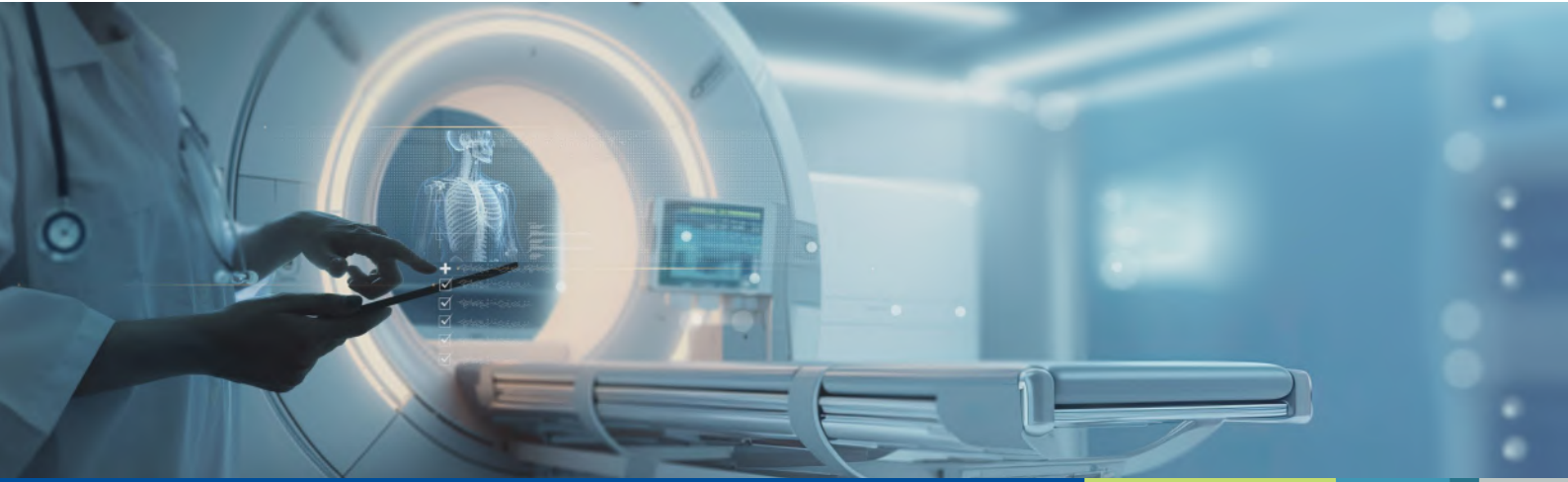
Although the advanced features of the integrated solutions provided by Dedalus were the best fit for the needs of Los Cobos, another decisive factor in the management's choice of Dedalus as a provider was their world-class technology and extensive international experience.

"Their international recognition and functional proposal were two key factors in our decision to choose Dedalus."

Dr. Diana Leal, Head of Diagnostic Imaging at Los Cobos Medical

UNLOCKING ALL THE BENEFITS
OF CLOUD-NATIVE TECHNOLOGY

The diagnostic imaging department at Los Cobos Hospital no longer relies on outdated technology and has achieved improvements in:

- **Flexibility**: The performance of the new software automatically adapts to the hospital's constantly changing requirements.

- **Availability**: The hospital is no longer dependent on operating system updates, antivirus or patches, as the PACS is always up to date. The team has access to the latest functionalities as soon as they become available.

- **Cost-Efficiency**: hey only pay for software on a pay-per-use basis, work on a SaaS model and have gone from burning 6,000 CDs/DVDs per month to only 300

- **Accessibility**: The organization has further enhanced collaboration, without altering the radiologists' workflow.

Additionally, thanks to the functionality and speed of the PACS in generating reports, radiologists and physicians can now deliver results more swiftly and spend more time with their patients.
The ability to access studies from any location and device, view high-quality images and provide preliminary reports is another feature of the solution that enhances clinical efficiency in daily routines.
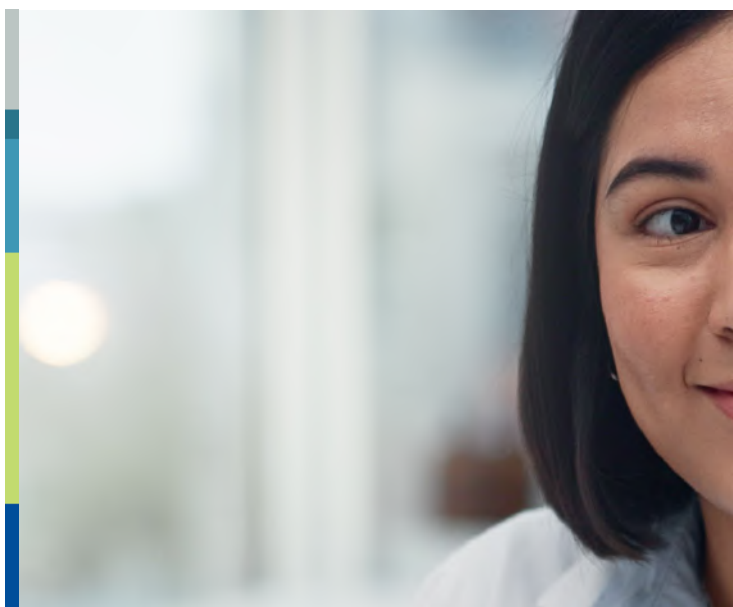
- **Patient Experience**: Patients no longer have to wait for their tests and reports, as they access via the web anytime, anywhere and on any device.

- **Security**: The organization can now ensure that access to information meets all required security standards.

BENEFITS

OPTIMIZING
RADIOLOGY PROCESS PERFORMANCE.

At Los Cobos Medical Center, they wanted to implement analytical methodologies to enhance decision-making based on relevant insights derived from data. With Dedalus' 100% web-based Business **Intelligence 4Health (BI4H) solution**, they have achieved:

- **Efficient Information Management**: With a centralized data system, they can now extract crucial information to support decision-making:

  - From any location and device.

  - By identifying areas for improvement to make processes more efficient.

  - By analyzing historical and current trends.

  - Moving from reactive to proactive strategies.

- **Data Quality Assurance:** BI4H is a world-class solution where information is certified and its consistency guaranteed by Dedalus.

- **Report Generation Based on Key Indicators:** The ability to export reports in formats such as PDF, CSV, XLS, or PNG helps streamline the bureaucracy required for accreditations.

- **Continuous Improvement of Service Quality**: The solution allows them to explore their organization's key performance indicators (KPIs) more quickly and effectively.

"This allows us to track whether there are delays in the timeliness of emergency reports, which is a vital aspect for us, and this will likely extend to outpatient and inpatient settings as well. But in practical terms, today, this indicator for managing the timeliness of reports has been implemented, making data analysis much easier."

Dra. Diana Leal, Head of Diagnostic Imaging at Los Cobos Medical Center .

DEDALUS

Dedalus is the leading company in digital health and clinical diagnostic solutions in Europe and ranks among the top three worldwide. With an innovative approach based on comprehensive, process-oriented solutions, Dedalus supports the digital transformation of national health systems across the globe, providing end-to-end support for the entire digital patient journey.

Dedalus serves over 6,700 public and private healthcare institutions in 40 countries with more than 7,700 highly specialized professionals, 38% of whom are dedicated to R&D. Our goal is to help healthcare professionals deliver better care to the communities they serve. This is our mission, and we are all proud to work with healthcare organizations to improve patient health outcomes.