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-premise PACS-RIS system into a cloud-based PACS-RIS solution that could meet current needs and flexibly grow 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 via the web during the pandemic, we had to implement an additional platform and carry out internal processes manually to upload the images, and 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 the 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 costs for infrastructure maintenance and software updates, regardless of usage volume. The rigidity of the on-premise model did not allow for scalable growth without a significant increase in costs.

By the other hand, Clínica Los Cobos was delivering an average of **5,000** to **6,000** diagnostic tests on CDs/DVDs per month.
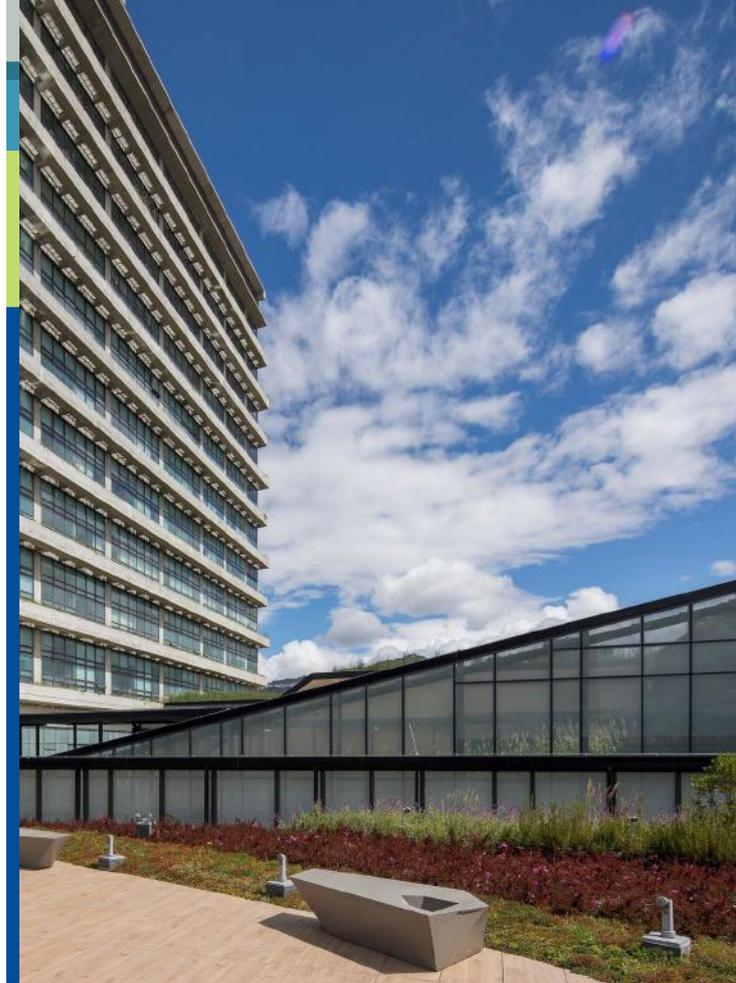
However, this procedure significantly extended the waiting time for patients who came to pick up their CDs/DVDs, as some medical imaging studies, such as MRIs or mammograms, required a burning process that could take up to fifteen minutes per patient.

Beyond the inefficiency of this process in terms of speed of results delivery, it was also ineffective 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, they 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, they 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 analysis 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 establishing 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 origin.

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 Radiological 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.
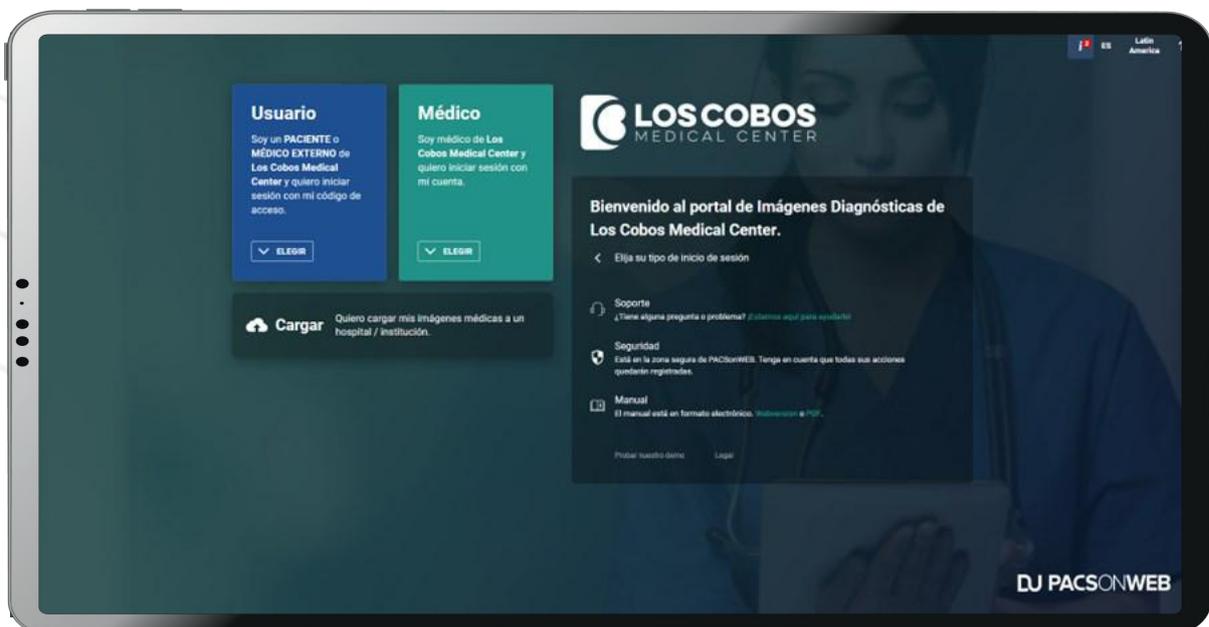
SOLUTION

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 Hospital Los Cobos no longer relies on outdated technology and has achieved improvements in:

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

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

- **Cost-Efficiency**: They only pay for the software based on usage, operating under a SaaS model.

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

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 their daily routines.

- **Patient Experience**: The reliance on CD/DVD for delivering tests to patients has been minimized. Patients now access their images and reports automatically via the web.

- **Security**: They can now ensure that access to information meets all required security standards.
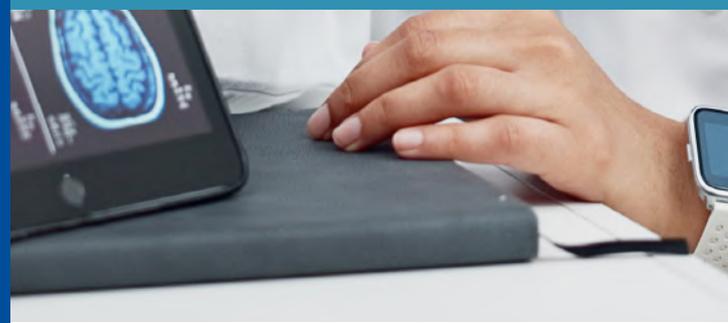
OPTIMIZING
RADIOLOGY PROCESS PERFORMANCE.

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.