

CHALLENGER



SOLVER



PREPLEX

Automated System for Prediction and Planification of Clinical Appointments.

Innobuyer collaborated with public institutions (challengers) to identify their unmet innovation needs and select suitable SMEs (solvers) to address them. The matched teams co-created pilot solutions over a 10-month period. Following successful pilots, challengers received support from Innobuyer and experts to design simplified ToR. Each project was backed by €100,000 in financial support—€41,500 for the challenger and €58,500 for the solver.

THE NEED

The Hospital Universitario del Sureste is a public hospital in the Community of Madrid, Spain, serving around 200,000 people. Like many hospitals, it schedules outpatient appointments using fixed time slots assigned to different departments and patient priorities. However, these slots were set without taking actual patient demand into account. This led to some departments facing long waiting lists, while others had unused appointment times. To improve this, the hospital set out **to make outpatient scheduling smarter**—using data to manage appointments more efficiently, reduce waiting times, and improve patient care. Their goals were:

1. To predict how many patients would need appointments in the coming months.
2. To propose an optimal use of available resources based on that forecast.

THE IMPACT

- The demand forecasting model reached an accuracy of 90–95%.
- The hospital discovered that up to 12% of appointment time in some areas was going unused—highlighting the need for more flexible scheduling.
- Hospital managers appreciated the system's potential to improve long-term planning.
- Administrative teams noticed a clearer match between appointment availability and patient demand.
- Medical staff reported **more structured and predictable schedules**.

THE SOLUTION

Technology company Graphenus **created and trained an algorithm to support both clinicians and administrative staff in planning appointments**. The system uses demand forecasts and takes into account scheduling rules and medical priorities to recommend the most efficient appointment slots.

The tool integrates directly with the hospital's existing Health Information System, making it easy to use. The pilot focused on three specialties—Dermatology, ENT, and Radiology—which involve complex scheduling due to surgery times and coordination between services.



THE PROGRAM POSITIONS OUR COMPANY AS A LEADER IN LEVERAGING BIG DATA FOR PREDICTIVE HEALTHCARE SOLUTIONS, STRENGTHENING OUR MARKET DIFFERENTIATION AND TECHNOLOGICAL EXPERTISE. BY DEMONSTRATING THE EFFECTIVENESS OF OUR PLATFORM IN ADDRESSING CRITICAL HEALTHCARE CHALLENGES, IT ENHANCES OUR REPUTATION AND OPENS OPPORTUNITIES FOR COLLABORATION WITH HEALTHCARE PROVIDERS, RESEARCH INSTITUTIONS, AND POLICYMAKERS.

