

Medtronic

Integrated Health SolutionsSM

Case study: Improving diagnostic capacity through a design and construction project

Hospital Clínico Universitario de Santiago, Spain



Many hospitals seek innovative ways to provide value to their various stakeholders. They must prepare for future care challenges and find ways to operate more efficiently while delivering excellent health outcomes. This requires adequate infrastructure, state-of-the-art technologies, and efficient process coordination.

Medtronic Integrated Health SolutionsSM (IHS) makes this possible through a customized, fully integrated design and construction solution. Hospital Clínico Universitario de Santiago de Compostela in Spain (CHUS) can attest to the related impact.

The challenge

One of the leading centers in Spain, CHUS is recognized internationally for its clinical cardiology activities, education, and research. There are currently four cath labs and 39 cardiologists at the hospital.

The Cardiology Department wanted to improve its diagnostic and therapeutic capacity while increasing its operational efficiency and healthcare processes.

The department aspired to be the reference center in advanced cardiac imaging (CT and MRI) while promoting teaching and research. However, this was previously unrealistic as CT and MRI resources within the hospital were limited due to the lack of specific equipment for cardiac tests.

This mainly caused long waiting lists and delays. Also, due to the unavailability of CT, tests couldn't be performed on urgent patients from the chest pain unit.

After a review period, it became evident that additional MRI and CT scan equipment was needed. However, there wasn't adequate space.

Hence, the department sought to work with a partner who could provide design and construction expertise while also incorporating new medical technology.



To address this challenge, the hospital and Medtronic IHS embarked on a **four-year partnership** agreement that will impact some

14,000
patients



The solution

Customization
is **key to the
success of**
Medtronic's design
and construction
projects.



For CHUS, the Medtronic IHS team conducted an internal review and carried out research. Based on these findings, the team prepared a layout and design concept, considering all technical equipment requirements. The plan was shared with the multiple stakeholders involved in such an important project. This included the original equipment manufacturers, architects, engineers, the hospital technical department, IT, infrastructure, and physicians, among others. Everyone weighed in to provide the optimal patient experience.

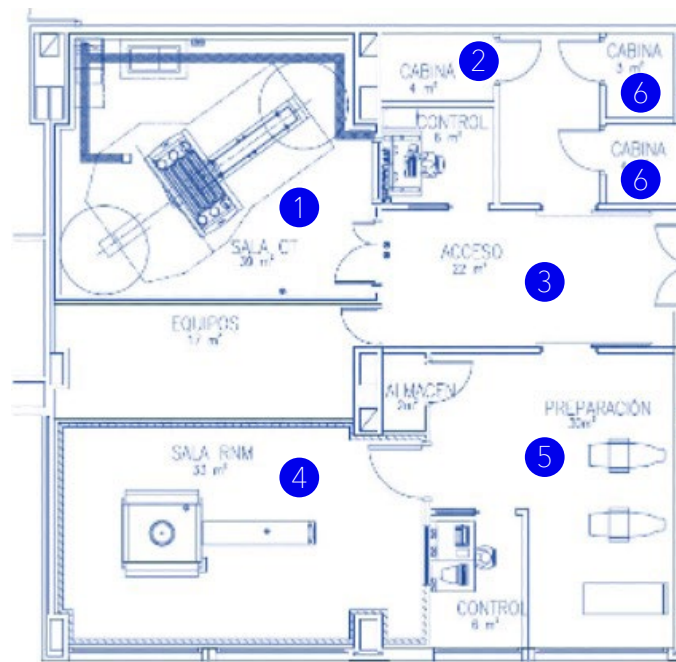
The stakeholders ultimately aligned on a plan that involved implementing tone CT machines and tone MRI machines and expanding the space by 200 square meters. Medtronic IHS then worked with the hospital to secure construction permits. The actual construction and equipment installation was finalized within six months of starting, while keeping sustainability in mind.

Very specific installations, such as structural reinforcements to support the weight of the machines, were required. Medtronic IHS helped the hospital overcome the technical difficulties of installing machines in complex spaces. In addition, Medtronic IHS worked to consider the patients' wellbeing by providing comfortable spaces, natural light, indirect lighting, and backlit panels that include visually comforting images to help the patients relax. The solution met the hospital's requirements and was delivered on time and within budget.

// This new unit has made the delivery of high-standard cardiac care possible, as tailored advanced cardiac imaging can be used to assist in complex cardiovascular procedures and help with the diagnosis of our patients.

//

Dr. Ana García Campos, Advanced Cardiac Imaging Unit



Key

- ① CT room
- ② Technical room
- ③ Corridor
- ④ MRI room
- ⑤ Preparation & recovery
- ⑥ Patient changing room

The impact

There has been an increase in diagnostic reliability with the latest generation equipment providing high-quality and very precise imaging. After one year of implementation, there was an astounding...



↑
158%
increase in
CT scans

↑
9.5%
increase in the second
year compared to the first

↑
120%
increase in MRIs after one year
of the project's completion

Waiting list times within
the first year

↓
84%
reduction for
CT scans

↓
93%
reduction
for MRIs

This outcome has been appreciated by patients, as evidenced by a survey in which **98% of respondents** said they were completely satisfied with the experience.

// I am pleased with the experience, and the staff were very professional and attentive. //

Patient

From a research perspective, the department is now participating in clinical trials, engaging in multi-center studies at national and international levels, and serving as a training center for specialists from other hospitals. As a result, the hospital has emerged as a regional reference center for advanced cardiac imaging.

Medtronic IHS is working with other hospitals in the EMEA region to deliver similar design and construction projects customizable to the organization's particular challenges and goals.

About Medtronic IHS

Integrated Health SolutionsSM builds on Medtronic's unique combination of capital resources, process optimization expertise, and therapy knowledge. In cooperation with medical institutions, IHS develops innovative services and solutions to improve efficiency, reduce costs, facilitate patients' access to different types of treatment, and improve outcomes.

To learn more about how IHS can help your hospital reduce costs, unleash capacity for growth, and deliver superior patient and staff experience, visit our [website](#), reach out to your Medtronic contact, or email us at: integratedhealthsolutions@medtronic.com.

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