The original project

The Orthopedic Trauma Center of Florence (CTO) is one of the first specialized hospitals built in Italy during World War II the project Pierluigi Spadolini was designed to accommodate the Orthopedics and Occupational Medicine university clinics with its scientific and educational equipment. Located in the large health district of Careggi, the center consists of two tall five and seven story buildings and a group of lower buildings that house conference rooms. In recent years it has been subjected to a renovation project conducted by the professional studio Study Centre Building Design (CSPE).

The new CTO

He restructuring plan of the CTO provided that the structure would lose its mono specialist vocation to become part of a system dedicated to planned activities. The new building includes the following disciplines: orthopedics, spinal unit, urology and nephrology. It also includes such activities as hemodialysis, rehabilitation, neurology, geriatrics and psychiatry. The existing building has been enlarged and completely renovated to meet modern concepts of hospitality and humanization in hospital environments. Following these guidelines, for example, a new entrance hall was created on three levels, which are the new distribution center and the renewed social care body.

Architectural interventions

In recent years, the CTO has undergone a series of operations: structural analysis for seismic and fire design; functional recovery of the blocks of stay in rooms with one or two places (for a total of 400 beds). In addition space for services, medical technology and information technology were designed. Among the renovations there was also careful design of the ground in front of the blocks that form the structure; this is to allow natural light to illuminate the basement that houses the operating rooms. New areas were designed for outpatient activities: a new multi-story atrium and a new gym. The structure of the cord was reorganized (for patients with paraplegia or tetraplegia) and the emergency room, was changed into a service to the general support of the Department of Emergency and acute Phases (DEA), and activated only in cases of substantial patient influx, or in case of natural disasters.

"The project consists in renovation and expansion of the Orthopedic Trauma Centre (CTO)- says Professor Architect Antonio Andreucci, one of the founders of the CSPE study-. We have completed the first renovations that include a seven-story hospital wing with an underlying block of nine operating rooms, surgery complex and gym service unit cord. The new rooms have one or two beds with their own bathroom and for every two rooms, there is a common area for the nurses. An additional floor is dedicated to the operating room, while in the central part of the two wings is the clinic area."

Maintain and improve the existing high standards

One of the most critical architectural challenges faced by architects was tied to the value of seniority: the quality and the richness of detail and finishes. It was a high goal to be met in times of crisis. The project designed by architect Pierluigi Spadolini has been for years the cutting edge of hospital design culture. When INAIL originally commissioned the project, it was with a disposable income and a wealth of resources that was also reflected in the choice of finishes and material quality. "Dealing with a high level architectural context has not been easy. The biggest challenge was to not only to respect the existing language, but to maintain a high level of architectural quality, even in the choice of finishes," says Antonio Andreucci. A further work has involved the elimination of the straight corridors, replaced with a distribution of more articulated and sinuous ones, a solution that presents a series of advantages. "The morphology and size variation of the fluid spaces softens paths, making it more functional to maneuver moving beds and equipment, and creates a more pleasant environment with a positive impact on users’ wellness," says Andreucci.

The retrofitting

One of the most challenging tasks was the retrofitting of the structure, an intervention that was not expected in the initial bid won by CSPE. "The work is difficult, and it is costly to come from the desire to adapt seismically throughout. This led to return the structure to the bare, that is, to delete all the existing facings and coatings to be able to bind the structural elements using horizontal and vertical carbon fibers. The complexity of the adjustment was the result of a plant reclamation which provided for the removal of all asbestos that had been used in the past," says the architect.

Thanks to a detailed renovation project the CTO of the Tuscan capital will continue to be one of the most progressive Italian hospitals. Mondo made its contribution with flooring solutions that have met all the designer’s requirements.
Colored flooring and original

A part of the renovation covered the floors and walls of the wards and operating complexes. For these essential areas of the building, and most of the remaining building, Mondo surfaces were chosen: *Mondo Idea*, *Punti* and *Mondoflex*. "They were created 'carpets' custom, alternating each room with two types of different designs: flowers and squares. The same thing was done on the walls, under the headboard," says Antonio Andreucci. The design was different for all the patient rooms and that gave a nice customization of the patient space. From several points of view, Mondo rubber flooring met the designers' needs. "The flexibility of rubber is an important feature. The need to adhere onto surfaces with variable curves, and not just right angles, made the ductility of the material important. In addition, the sound absorption is optimal. "Further satisfaction was expressed for the appearance. The latest range of Mondo products has a vast choice of colors and design. The length and width of the material allows for an optimal continuity with fewer seams. Flexibility, choice of designs, and ease of maintenance are the characteristics we most appreciated," says Andreucci.
Focus

PEOPLE - ARCHITECTS CSPE

The (CSPE) founded in Florence in 1975 to develop research, studies, design and consultancy in the field of health and social interventions.
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The Idea of Total Comfort

The floorings of Mondo Idea line are the results of a long experience that allowed Mondo to achieve an optimal synthesis between the needs of economy, even in the long term, design flexibility, and comfort for end users. Mondo rubber flooring can effectively mitigate the noise generated by footsteps and contribute significantly to the acoustic insulation, ensuring a peaceful and relaxing environment. The same properties of elasticity that limit noises offer a very pleasant background for walking, reducing the fatigue of people who spend many hours standing. The outstanding cushioning capacity and the slip resistance also significantly reduce the risk of falls and injuries. Furthermore, the antistatic properties provide protection from annoying “shocks” caused by the buildup of static electricity. Last but not least, the anti-microbial capabilities ensure a perfectly hygienic environment without the need for special chemical treatments. In case of fire, the fumes do not contain any corrosive or toxic gas. A major feature of this floorings is its exceptionally long life and durability. The elasticity, flexibility, scratch resistance, and chemical resistance ensure investment protection and preservation of its original appearance for many years. In addition, the cost of installation and routine maintenance are particularly low. At the time of installation, the dimensional stability makes heat welding unnecessary, except in very exceptional cases. The daily maintenance of the non-porous surface provides excellent stain resistance and perfect waterproofing characteristics that result in ease and speed of cleaning.

Mondoflex

Mondoflex is a calendered and vulcanized sports flooring made of natural and synthetic rubber. Its surface is smooth, non-slip, semi-united and vulcanized to a supporting layer. It is the ideal system for the renewal of gyms and multi-purpose areas. It is a FIVB Approved certified flooring product.

The Punti product range

The range Punti is composed of civil flooring, consisting of synthetic rubber to 100% and not regenerated, calendered, vulcanized and stabilized. In the monochrome base they are inserted granules of identical composition, but in different colors. It is available with a smooth surface and matte finish, non-porous, waterproof. To facilitate cleaning and removal of dirt, the flooring undergoes a natural treatment in the production phase. This flooring complies with EN 1817.