

# DESIGN FOR HEALTH & SOCIAL CARE

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## BUILDING PROJECTS

### SAMSON ASSUTA ASHDOD UNIVERSITY HOSPITAL ISRAEL

# Citadel of care

A new hospital in a sensitive location in Israel combines a state of the art, wellness-oriented healthcare facility with a design for resilience against attacks. Roseanne Field reports

Situated in Ashdod, a large city in southern Israel, the Samson Assuta Ashdod University Hospital is the first public healthcare facility Israel has seen completed in 40 years.

Ashdod's location just 25 km north of the Gaza Strip means that it's also a potential target for long-range attacks. As a result, the hospital has been designed to be able to continue operation even under rocket fire.

Despite this threat, the population has grown quickly in recent years, with increasing levels of immigration, making Ashdod the fastest growing city in Israel. A major healthcare facility, and one which included an A&E, was desperately required. "There were 300,000 people having to travel 40 minutes or more to get to a hospital," explains Davide Macullo, founder of the Swiss-based architectural practice which bears his name. "It was not possible anymore." The hospital has been planned to serve half a million residents of the city as well as the surrounding region.

The practice was appointed by client Assuta, a subsidiary company of Maccabi Group. They visited another project the architects had worked on – Vimercate Hospital, just outside Milan – and were reportedly "excited" by what they saw. The practice had also worked on various 'health and wellness' hotels.

Given its location, and being the first project of its type built in the country for decades, this project held a lot of significance. "Of course, there were a lot of expectations," says Macullo. "The team that had been appointed for the construction were under pressure, from a point of view of feasibility and time schedule."

According to Macullo, despite the lack of

healthcare facilities in Ashdod, Israel is "very competitive" in the sector, and so the ultimate objective was a state of the art hospital that was a success on all fronts, as he explains. This meant working closely with advisors from all necessary fields and competencies – who would ultimately employ the staff working in the building – and keeping the needs of the patients in mind. Most of the staff didn't join the hospital until it was completed which, says Macullo, was one of the biggest challenges of the project.

This 'advanced digital hospital' has a wide range of departments, in common with many major facilities of its type. There are 12 operating theatres, as well as A&E, ICU and imaging, and eight labour and delivery rooms.

The building, part of Assuta's chain of facilities, includes two 'Centres of Excellence' – a Community Cancer Centre, and a Heart Centre. The former includes advanced imaging, chemotherapy and radiotherapy, IMRT equipment, and outpatient clinics.

The Heart Centre integrates clinical services with ongoing research and education programmes with the aim of promoting disease prevention and rehabilitation in the community. It includes a sophisticated coronary care unit and cardiac catheterisation lab, as well as imaging, diagnostic units, and clinics. As well as being close to the city it serves physically, the hospital also closely integrates research and academics, who have their own facilities on the site.

#### A 'feel good' hospital

Macullo speaks highly of the close-knit team that worked on the project. "It was a





great experience working together,” he says. “We encountered a very clever client, they were very sensitive and from the first concept onwards, every detail that was designed was shared with the whole team and implemented.”

There was a focus on designing a healthcare building that would in itself make people feel good. “We work on the psychology of space, this is our field,” Macullo explains. “Our objective is to build spaces that are balanced and make people feel good.” This objective was shared among the team and therefore carried through right to the end.

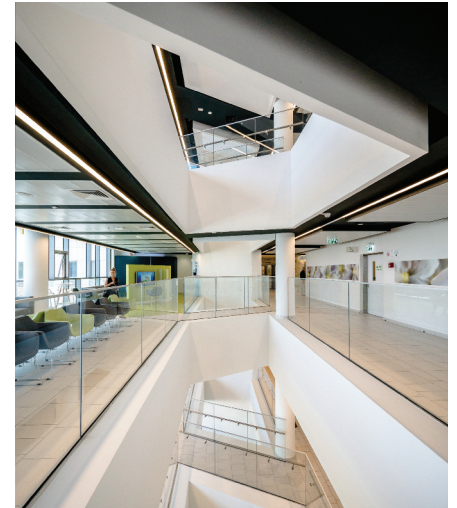
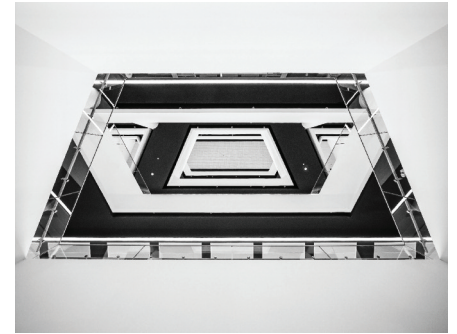
The meetings held throughout the project were attended by a variety of people, including Assuta CEO Rachel Shmueli, chairman of the board Professor Joshua (Shuki) Shemer, Pnina Shleifer (who is in charge of all Assuta’s nurses), two partner architects (Tel Aviv-based Marcelo Brestovesky, and Italian firm Studio Redaelli Vimercate), landscape architect Orit Elhaiany Perez-Haifa, specialist advisor Dan Oppenheim, and a range of nurses and doctors. “In every meeting all these people were interacting and making decisions together, always based on the

psychology of the patients and staff,” Macullo says. “Everyone was so committed to get the best out of this project.”

Focusing on the psychology of the patients was particularly pertinent given the location of the hospital. There was a conscious effort to not make the building feel like a ‘bomb shelter,’ despite the fact it’s well protected against any potential attacks – so much so there’s no need to relocate patients or staff in any department in such an event. “It was a balance between being strict and being free,” Macullo explains. “When you look at it from the outside, we took away the tension of the idea of the building being a bomb shelter.” He says he wanted the building to feel like a “contemporary castle” to patients: “The feeling that we give is it’s institutional – it has to be – but it’s like a real castle, if you have the misfortune to go to the hospital, at least it’s not a simple box.”

Outside the A&E department the architects included a 100 metre long, V-shaped canopy in order to create the feeling of a covered courtyard. Macullo says: “It reduces the scale of the space and takes away the shock of going from an urban





environment to inside, you naturally flow into the hospital without changing scale dramatically.” He admits it serves no key practical benefit: “It’s not really necessary, besides the fact it gives a good feeling.”

### Nature inside and out

It was the idea of making people feel good that inspired Macullo to use a botanical theme throughout the hospital, and outside it. To get to the main entrance visitors walk through a large landscaped area, filled with plants and trees indigenous to Israel. This has been continued into the building, with each hospital speciality being assigned its own flower for wayfinding signage, helping make the process more intuitive for patients. “The trees that are outside become flowers inside, reproduced as art,” Macullo explains. “The architecture is a production of the nature.”

The images of flowers – taken by an Israeli photographer – begin with petals only as patients proceed along the corridors, “emphasising that you have movement,” says Macullo. When they reach their department, an image of the entire flower is on display, making it clear they

have arrived. All common areas are represented by lilies. “You can understand just by following the images,” Macullo explains.

The use of colour extends beyond the garden and flowers. The tiled flooring features a subtle pink-coloured sparkle, to add some interest for unwell people who often tend to look down. The visual contrast of the black and white ceiling, says Macullo, “gives you strength.” The flower imagery at eye level, provides a balance between the two.

Accents of yellow have been used subtly throughout, in areas such as the entrance and around windows. “There’s always a shining element everywhere, even in the dark parts of the building – this small yellow stripe, it looks like some life is there.”

### Form & layout

Aside from colour, the other key elements for making people feel good were including as much natural light as possible, and keeping the building layout simple. “When I first visited the site, the project manager said ‘Ashdod has such a beautiful light. We have to build with this light.’” Macullo explains. “The building expresses the strong, beautiful

### LIGHT

The hospital has been designed to allow as much natural light into the building as possible

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#### WAYFINDING

With a nature theme used throughout, flowers denote each speciality on wayfinding to simplify it for patients

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clean air and light of Ashdod.”

The main block of the 70,000 m<sup>2</sup>, 300-bed hospital was designed in an ‘H’ shape, with as much glass as possible in order to maximise on the amount of daylight. The main volumes are linked by an atrium, and “each arm enjoys natural light,” explains Macullo. The north and south facing facades feature extensive glazing so patients and staff have views out over the gardens. “You feel connected to the outside,” he says. “It’s a hospital full of light.”

The hospital, which cost approximately £216m to build, is thought to be unique in its inclusion of a seven-storey “day clinic,” connected to the nine-storey main hospital via a glazed bridge and meaning patients can seek more specialist or urgent care if required without travelling to a different location. “The day clinic has the support of the hospital, it’s very clever,” he explains. “If you need intervention or research then you just go up to the bridge and into the hospital.”

Designing a hospital layout is of course never a straightforward task, and the team’s determination to keep wayfinding as simple as possible caused some headaches. “It was very difficult finding the most efficient way to locate all the departments,” explains Macullo. In the end, they decided to give priority to the maternity and children’s departments, ensuring these were placed closest to the entrance. “The most ‘difficult’ spaces are closest and the furthest from the entrance are the more intimate, less-used spaces.”

One thing Macullo wanted to avoid was long, institutional corridors. “It was very important to take care of what you experience moving from one point to another,” he says. “It affects your senses enormously.” It was also a key aim to help staff to do their job in the most efficient manner.

Parallel walls have been avoided – one is

always at a slight diagonal, changing direction every few metres. “You walk 10 steps then the space becomes larger,” explains Macullo.” There are just two departments on each floor, meaning it’s an easy ‘left or right’ decision for patients.

To help patients feel at home, they used a type of stone commonly found in constructions in Israel (along with the native plants). “The idea is it’s like a house for everyone,” Macullo explains. Although the patients are mostly from Ashdod and its surrounding areas, the city is home to many emigrants from all over the world, so Macullo felt it was important to display elements of Israel in order to make people feel welcome and “give them a sense of belonging”.

The major external shell of the building is formed of concrete, as the major contributor towards its ‘rocket-proof’ credentials, but the practice used terrazzo tiling on the floor, another popular material in Israel, further reinforcing the ‘home-like’ notion for patients and visitors.

To allow for future modifications and upgrades, gypsum board was fixed to a series of pillars internally: “In hospitals there is continuous innovation, so you need to be totally flexible,” says Macullo. This also allowed a certain degree of flexibility during the construction phase. “We were replacing things constantly so things were at their optimum from an operational point of view.”

The hospital, which last year won a WA Award for its design, is the first in a series of buildings that will form a new university campus, and there is already talk of expanding it. The possibility of adding an additional 500 beds via an underground extension has been suggested. It’s had a major impact on the community, and thanks to a strong team effort, says its architect, “you really feel that it has been built with love.” ■