Sheikh Zayed Desert Learning Center.
Photo, left: Fresh Media FZ LLC
Photos, below: Mrs Antje Hanebeck

Architecture and sustainability
The Chalabi architects' expertise

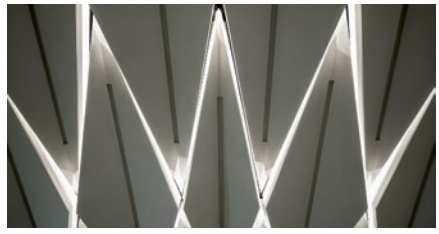
Thinking of sustainability in architecture Talik and Jaafar Chalabi are household names. Working in Europe as well as in the United Arab Emirates they introduce environmental friendly construction into an architecture that orientates towards the context.

TEXT: JESSICA HOLZHAUSEN

The brothers Talik and Jaafar Chalabi have their roots in Bagdad, Iraq, but have been living in Vienna since 1978 where both studied architecture at TU Vienna. Talik Chalabi afterwards achieved a postgraduate master's at Harvard University, his brother Jaafar at the Michigan State University. Since they are two brother designers, they do not have one architectural philosophy. "To use a metaphor, we are rather two foxes who are inspired by many architectural precedents than two hedgehogs who adhere to one big idea," says Talik Chalabi. What unites them is the idea to "create dynamic interior spaces and a distinctive exterior". For 20 years now Talik and Jaafar Chalabi have taken part in international architecture competitions and tenders, gaining a number of prominent commissions or were at least finalists.

Sheikh Zayed Desert Learning Center – a prestigious project

One of their more recent projects is the Sheikh Zayed Desert Learning Center (SZDLC), Al Ain, in the United Arab Emirates, approximately a two hour drive from Abu Dhabi. "The building functions as an educational museum as well as a research centre for desert and environment related issues," explains Talik Chalabi. "Coming from the two metropolitan coastal cities,



Darmstadtium.
Photos: Roland Halbe

Abu Dhabi or Dubai, one is struck by Al Ain as a city of many oases – hence the city's name – developed at the foot of a massive mountain ridge which includes the 1000 metre UAE's highest peak – Jebel Hafeet." This spectacular backdrop was the first inspiration for the design, "while the second inspirational moment was when we noticed a lizard escaping to its burrow as we got closer to it." Twelve international participants took part in a competition; in the end Chalabi architects were chosen to build the centre as lead architects.

The centre is an impressive construction, which integrates into the desert landscape. "It is an accessible sculpture which is inspired by its surrounding rugged landscape. But unlike the flat desert where one experiences only the horizontal flat planes the building offers an array of experiences in the vertical axis." The building structure winds in a spiral around a central courtyard to a high point from where visitors have a gorgeous view over the safari park and towards the mountain ridge. In the other direction the building spirals under the surface "around a funnel-like inverted courtyard space evoking the experience of geological layers and underground water sources." At least a quarter of the building therefore is subterranean but has daylight lighting none the less.

Sheikh Zayed Desert Learning Center focuses on sustainable architecture for example taking measures to save energy and reduce water consumption. Furthermore it was built with local and recycled materials.

Darmstadtium – a sustainable conference centre

Another project of sustainable architecture is situated in the German town of Darmstadt, the Darmstadtium. The Chalabi brothers were chosen from 164 contestants in a European wide process since, at about 70 million Euros, their construction costs were the lowest. Today the Darmstadtium is an architectural milestone and distinctive building in town. It was awarded the DGNB silver certificate for being functional and sustainable at once.

Situated next to the university campus in the city centre and in the direct neighbourhood of the castle, "the Science and Conference Centre integrates the various cam-

pus paths and urban vistas of its context," explains Talik Chalabi. The building therefore links the city centre with the university buildings. The complex is structured in several compact parts, in the western area the two storey seminar building and the small hall frame the inner foyer. In the eastern part, various foyer areas frame the big congress hall. "The main congress hall is designed as a multi-purpose hall which is capable of being subdivided into two or three halls if required."

To guarantee the building's sustainability the architects used energy saving materials for example in the glazing, as well as fast growing raw materials like bamboo for the wall cladding and the floors. For heating and energy the building uses renewable energy such as photovoltaics and a pellet oven. An oblique glass funnel allows natural lighting even in the subterranean garage.

One speciality of the Darmstadtium is that because of monument protection parts of the Middle Age city wall from the 14th century were integrated into the building.

Gebietsbauamt Korneuburg – architecture for administration

Talik and Jaafar Chalabi constructed the administration building Gebietsbauamt in Korneuburg in Lower-Austria as well, with a low cost at 2 million Euros but with high functionality. "The office building is an extension to a campus-like cluster of three storey high buildings from the 1970s." What makes the building different from others is not only its architectural value but the fact that the building is constructed as a low energy house as well. "The new building creates an entrance plaza and a gate situation to the building, the adjacent park and the administrative campus."

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Gebietsbaumamt Korneuburg.
Photos: Rupert Steiner