

CREATE Campus, Singapore

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The CREATE Campus in Singapore is a part of the new University Town, a new expansion of the National University of Singapore (NUS), that received one of the first Singapore GreenMark awards for districts. With its district cooling system, renewable energy, and efficient buildings, combined with a design that maintained much of the natural greenery in the construction, the campus provides many ideas and concepts that can be learned from and built upon.

Akademi Teknik Mesin Industri (ATMI), Jakarta, Indonesia

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The Akademi Teknik Mesin Industri (ATMI) is Indonesia's leading educational institute for manufacturing engineering. The Administration and Mechatronic Study Building houses offices, laboratories, classrooms and student areas.

A competition was held to determine the best design for the facility, and the winning project was carefully assessed together with international specialists. The goal was to adapt the design to respond to the local context of Indonesia as fully as possible.

The four-story building, with a total floor area of 3,700 m², will be the first low energy building in Indonesia. The building optimized in its entire design to share direct sunlight on the façade during the day while capture enough daylight with the perimeter buffer zone. It further involved thermally activated concrete slab in every floor of the building, including the roof.

The butterfly roof will collect rainwater and is able to support over 635 m² of photovoltaic panels. The design also incorporates innovative materials such as locally pressed bamboo, and value-added products such as recycled, self-levelling and raw concretes, using cement containing up to 25 per cent fly ash.

United World College (UWC), Singapore

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The United World College (UWC) of Southeast Asia has two campuses in Singapore. The new campus in Tampines serves as one of the best examples of integrated and appropriate design for the tropics, achieving the GreenMark Platinum award in Singapore. On the other side of the island, the earlier Dover campus shows many great examples of the evolution in school architecture in the tropics over the last 50 years. It is being prepped for major renovations, and the way in which old intelligently designed buildings are maintained, and the new systems and structures are being planned and installed provide excellent insight into the process of effective and sustainable construction.