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The Sustainability Issue

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Gaia







In May this year, NTU Singapore launched 'Gaia' – its eighth zero energy building, and the largest wooden building in Asia, as part of its sustainability efforts.

Named after the Greek goddess of Earth, Gaia is a six-storey development for NTU students, faculty and staff to learn, research, innovate and explore new opportunities for collaboration and discovery.

Gaia represents a bold marriage between Toyo Ito & Associates Architects and RSP Architect Planners & Engineers (Pte) Ltd's (RSP Architects) excellence in design of education environments and sustainable architectural expertise.

Gaia was constructed with Mass Engineered Timber (MET), making the building an effective carbon sink. MET is also a sustainable construction material, where young trees are planted to replace harvested ones. Spread out along the North-South axis, Gaia can capture prevailing winds to enhance cross-ventilation within.



For most of its air-conditioned spaces, Gaia uses the Passive Displacement Ventilation (PDV) system equipped with occupancy sensors that turn off air-conditioning when not in use. Contributing to the building's emission reduction are also photovoltaic cells, built on available roof spaces for generations of green energy and contributions back to the power grid.

Gaia is the eighth building project on the NTU campus that has received the Green Mark Platinum (Zero Energy) – the highest award issued by the Building and Construction Authority of Singapore to recognise buildings that consume as much energy as they produce.

PROJECT DETAILS

PROJECT NAME: Gaia

PROJECT LOCATION: Nanyang Technological University, Singapore

CLIENT: Nanyang Technological University (Office of Development & Facilities Management)

ARCHITECT: Toyo Ito & Associates Architects, RSP Architects Planners & Engineers (Pte) Ltd

GROSS FLOOR AREA: 41,649 square metres

COMPLETION: 2023

PHOTO CREDIT: NTU Singapore

