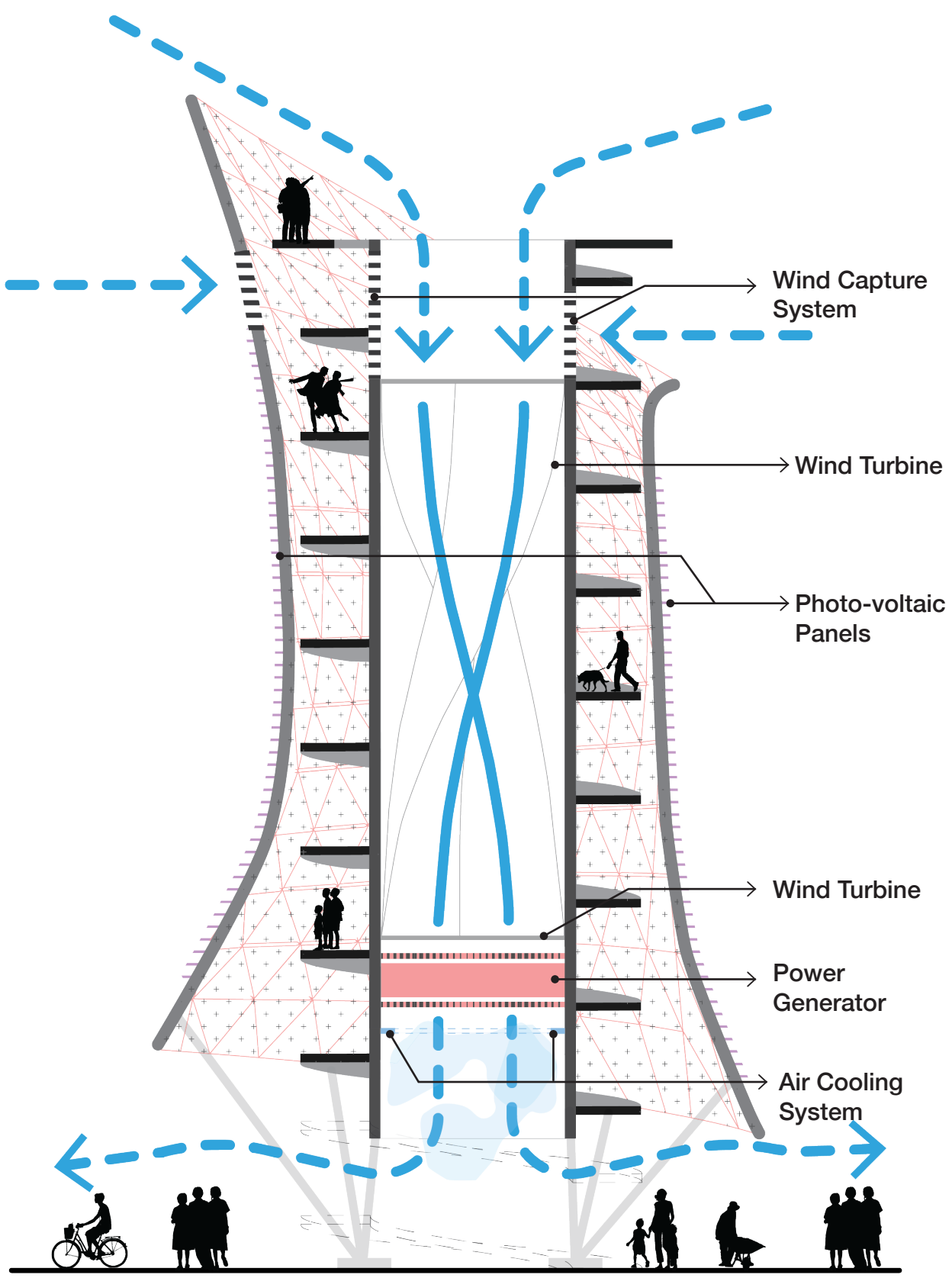


Renewable Energy Technologies

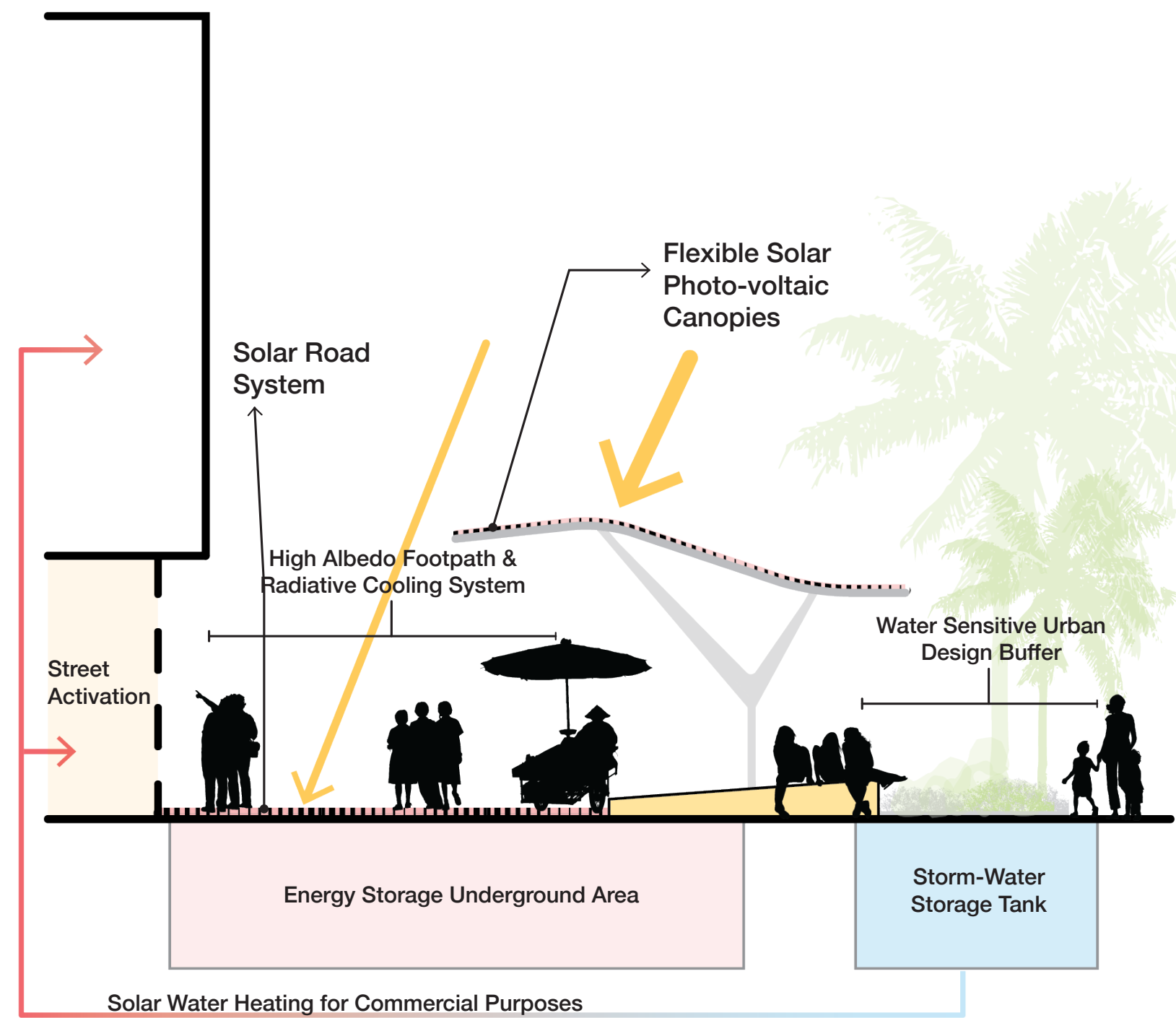
As the main aim of the competition is to develop an urban artefact that is able to generate renewable energy; this proposal is based on the principle to integrate new sustainable technologies that can be adapted into an urban element. This urban element would produce renewable energy but at the same time would define a character for the urban space as defined in the design principles. This proposal explored renewable energy technologies such as Wind and Turbine tower, solar road system, radiative cooling systems, solar flexible photovoltaic modules, public domain energy collectors.

Wind Tower + Turbine + Evaporated Cooling



It will be an important element within the landmark and urban identity combining technology, sustainability, and rejoicing. The tower will capture and convert the wind's kinetic energy into electrical energy through a vertical axis turbine and using the resulting air for an evaporative cooling effect. The tower is connected with the Pedestrian footbridge with an inner spiralling ramp that reaches a 360 degree open-air observation deck, providing multiple viewing experiences at different elevations.

Public Domain Sustainable Features



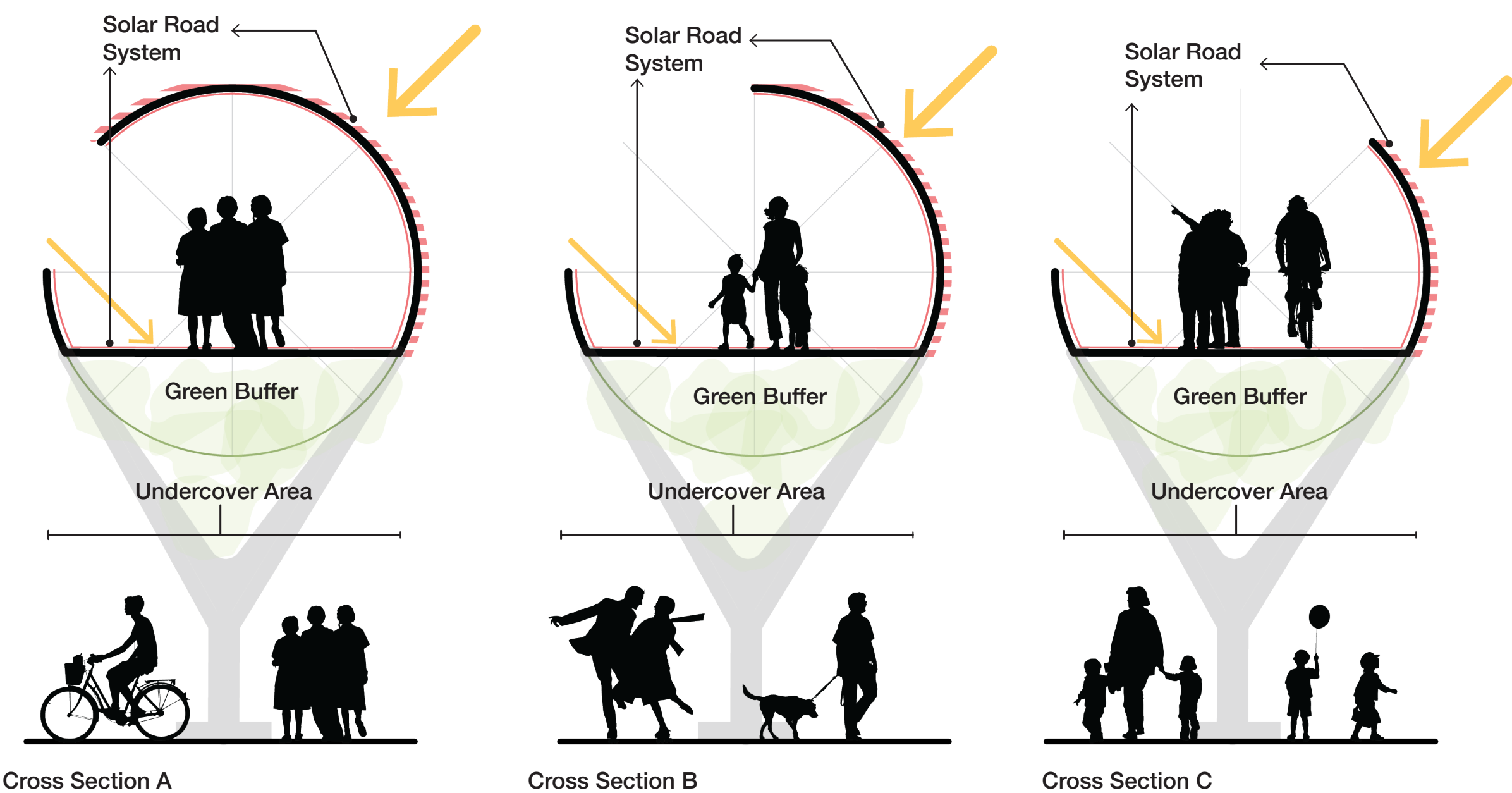
Membranes and Canopies

The flexible solar photovoltaic modules combine crystalline silicon cells with lightweight and flexible encapsulation printed materials. This technology will be located along the membranes covering the public space and the canopies. Together with the proposed native tree species, it will provide more than 60% of shading spaces in the competition area.

Public space and energy Storage

The public space will serve as an important element to regulate pedestrian temperature, micro-climates, and experience. Therefore, it will collect and store solar energy (Lithium-ion Batteries) and water, it will provide hot water for the commercial spaces, it will hold charging stations and will use high albedo materials and radiative cooling systems.

Pedestrian Footbridge Sustainable Features



The pedestrian footbridge was conceived as a piece of urban art that collects energy on its surfaces and propose an overlooking experience. Throughout its persuasive coloured skin redefines the aesthetics of solar energy and provides a highly contemporary urban space used by cyclists and pedestrians. During the night, with its 500 LEDs, informs if the energy consumption is too high (Turning completely red)