A yacht company has developed a zero-emission floating house that can be moved like a yacht or anchored on retractable stilts.

**Spotted:** Waterstudio design and Miami-based yacht company Arkup have partnered to produce a luxurious and zero-emission floating house. The yacht-villas can be moved like a boat, moored alongside a dock, or raised up from the water on retractable, hydraulic pilings. The floating villas combine all the best attributes of yachts, houseboats and waterfront villas.

The 22-metre long craft offers a smooth, white frame with glass-fibre walls, a retractable terrace and large sliding-glass windows filling on each side of the structure, framing the ocean view. Waterside was inspired by the way flamingos stand in the water, with one leg in the water and the body above the surface, when designing the craft’s stilts.

Once the stilts are lowered, the vessel becomes hurricane-proof, making it ideal for use in areas that are subject to increasing storms from global warming. The floating house also features a solar-powered electric system capable of powering all the operating systems onboard, including air-conditioning and propulsion, and a rain-harvesting and purification system, which allow it to operate off-grid.

The self-propelled house has a total living space of 404 square metres and can theoretically stay afloat indefinitely. According to Waterstudio.NL founder Koen Olthuis, the Arkup represents a way to increase the sustainability of future housing: “Not just yachts but especially floating structures will take advantage of the space on water around our cities. These buildings are portable and can react to known and unknown changes in the demands of near-future society,” he said.

The Arkup floating villa is just one of many innovations we have seen in houses combining sustainability with future-proofing. Other advances that we have recently covered include an
energy-positive hotel in Norway, an entire sustainable neighbourhood and a design for a floating chicken farm.

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Takeaway:

As sea levels rise and climate events become more unpredictable, there will be an increasing demand for sustainable housing that can withstand extreme weather. The COVID-19 pandemic may also have increased the desire for off-grid living. By linking a number of floating houses with docks and walkways, entire self-sufficient floating communities could also be developed, creating new space for housing in areas threatened by sea-level rise and urbanisation.