

Concepts emerge for a vertical city in the desert

April 23 2015, by Nancy Owano



Can architects and engineers deliver a vertical, sustainable city of distinctive beauty, looking as if the structure is carved from rock, in the

Sahara desert? It could happen. Manal Rachdi Oxo Architectes and Nicolas Laisné Associés have plans for a 450-meter-high city.

What does that mean, *city*? It would be a place with a hotel, housing, shops, meteorological observatory, heliport (the upper levels would have a helicopter landing pad), offices (some 22 percent of the tower's usable floorspace is given over to offices), a museum of the desert, and a panoramic restaurant. This is a vertical city that is "fully autonomous, it's energy self-efficient and has a [vertical farm](#) inside, that makes it more [independent](#)," according to the Oxo Architectes website.

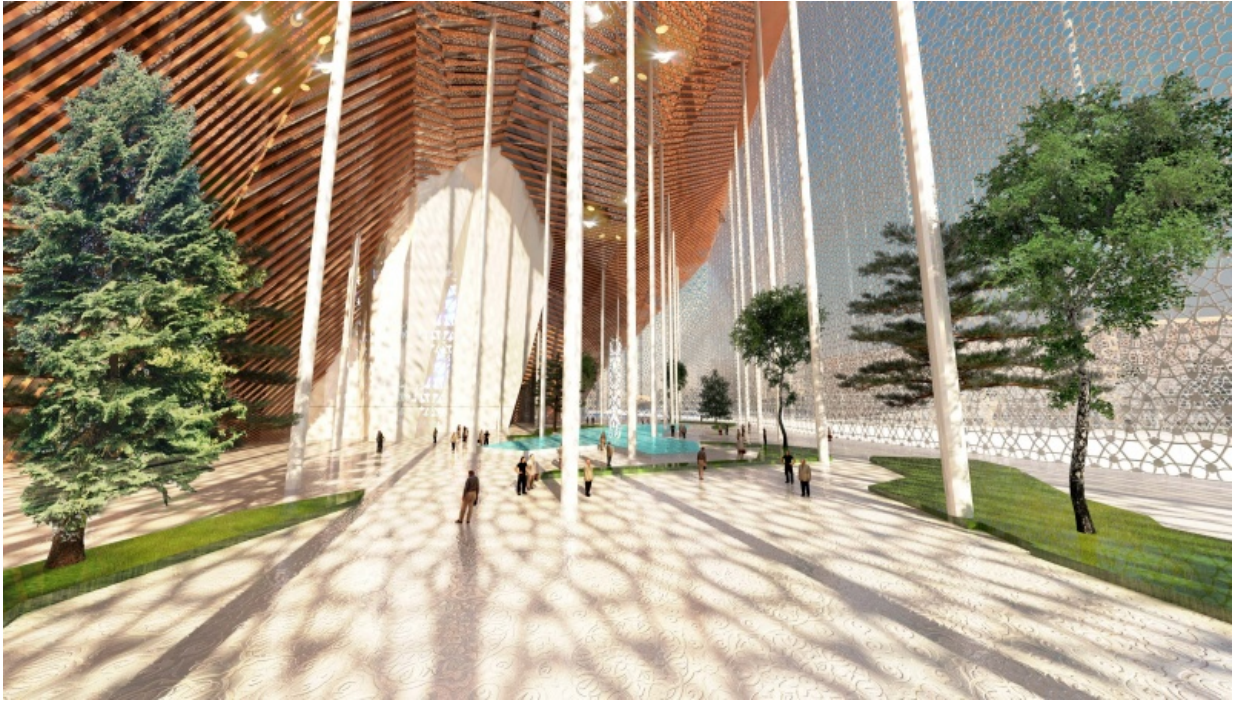
The concept represents a mixed-use program. The total floorspace would be 78 hectares. The location would be Morocco. The *designboom* article about the city takes you through the city-at-first-sight experience. "When approaching the structure, the tower first [appears](#) as a distant rock, before the landscape widens, encompassing a maze of streets" that recall souks. Also talking about the souk-like concept, *Phaidon* said the series of [overlapping](#) canopies at ground level, like the shading achieved in the narrow maze-like streets of souks.



Various spaces to play, swim and pray, said *designboom*, are found at the scheme's upper parts, which offer sweeping panoramic views.

A large central inner tower is covered by vegetation.

What about a water and power system to make the vertical city sustainable in the desert? "The [project](#) would use solar and geothermal power and would collect and recycle its own water," said Joe Quirke in *Global Construction Review*.



"The designers estimate that 45,000 cubic meters of water could be collected each year. This would be funneled 4km underground, where it would be heated to 100°C and could be used to provide energy for the building," he said. Additional power would come from solar panels, and the interior's temperature would be managed via natural ventilation, said Allison Blackburn in *Interesting Engineering*. The brief for the concept stated that work could start on the project in 2025; construction would be [phased](#) over 50 years, she said.

Phaidon noted the very concept of a vertical city appears to be "much loved by architects of skyscrapers." Ben Schiller in *Fast Company* last year said that "there are a lot of towering buildings but also parks, schools, hospitals and restaurants at upper levels, as well. Essentially, it's a vision of a complete ecosystem in the [sky](#)—a place you never have to

leave if you don't want to." Also, the buildings generate their own energy from renewables sources.



More information: www.oxoarch.com/front/project/la-tour-des-sables

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