



The world's new largest office building is bigger than the Pentagon



By [Oscar Holland](#), CNN

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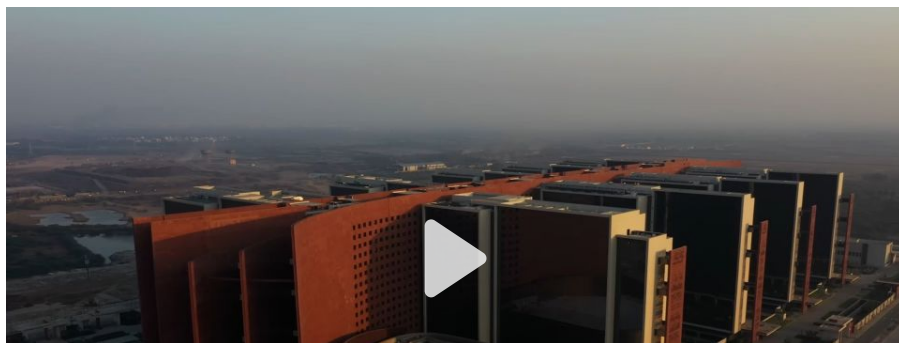


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(CNN) — The Belgian city of Antwerp may be known as the world's diamond trading hub, while most rough stones are mined in Russia or Africa. But some 150 miles north of Mumbai, India, lies a lesser-known gem capital: Surat, where around 90% of all the planet's diamonds are cut.

Now, the city in Gujarat state has a record-breaking building to house its mammoth industry.

The newly-opened Surat Diamond Bourse is billed as a “one-stop destination” for over 65,000 diamond professionals, including cutters, polishers and traders. Featuring a succession of nine rectangular structures spilling out from — and interconnected via — a central “spine,” the sprawling 15-story complex has been built across more than 35 acres of land.





The Pentagon was the world's largest office building for 80 years. This new building just took the title

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The trading center's architects say it comprises over 7.1 million square feet of floor space, which would mean it has surpassed the Pentagon as the world's largest office building.

The project is set to welcome its first occupants in November after four years of construction work, two of which were hampered by Covid-related delays. It is expected to be officially opened later this year by Indian Prime Minister Narendra Modi, who was born in Gujarat and previously served as the state's chief minister.

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New photos, shared exclusively with CNN, offer a glimpse at the marble floors and light-filled atriums connecting over 4,700 office spaces, which can also double as small workshops for cutting and polishing diamonds. The 32-billion-rupee (\$388 million) development also houses 131 elevators, as well as dining, retail, wellness and conference facilities for workers.

According to the project's CEO, Mahesh Gadhavi, Surat Diamond Bourse will save thousands of people from traveling — sometimes daily — to Mumbai by train to do business.



The building's atriums were designed to encourage natural ventilation through the building.

"It's difficult ... (some) people have to spend three and a half to four hours, daily, to come from their homes to their offices and back home again," he said over video call, describing the move to relocate businesses to Surat as a "better option."

'Democratic' design

The building was masterminded by Indian architecture firm Morphogenesis following an international design competition. Surpassing the Pentagon was not part of the competition brief, Gadhavi told CNN. Rather, the project's size was dictated by demand, he said, adding that the offices were all purchased by diamond companies prior to construction.

Morphogenesis said its layout creates a "level playing field" for businesses both small and large. With offices connected by a long central corridor — a configuration reminiscent of an airport terminal — occupants have similarly convenient access to amenities and facilities, according to the architecture firm's co-founder, Sonali Rastogi, who described the design as "democratic."



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Newly-released images offer a look inside the gargantuan building.

Working there is intended "to be exactly the same for everyone," she explained on a video call from New Delhi, adding that no office takes longer than seven minutes to reach from any of the building's entry gates. (Gadhavi, meanwhile, said that a lottery system was used to decide which businesses were given which offices.)

The design was also informed by Morphogenesis' research into how the Indian diamond trade operates. Rastogi drew attention to the series of nine 1.5-acre courtyards, complete with seating and water features, that can serve as casual meeting places for traders. Comparing the landscaped areas to "a traditional bazaar," Rastogi said the firm was influenced by the fact that many informal transactions take place outside the office environment.

"Email orders are probably taken inside, but human-to-human transactions are almost all outside," she said, describing the courtyards "like public parks where we are assuming all these activities will take place."



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The structure's spine flares out at each end to funnel breeze through the building.

Plans for transformation

Aerial images of Surat Diamond Bourse show that the gargantuan building's surroundings are, for now, remarkably low-rise. But this may change should plans for a major redevelopment in the 7 million-person city, dubbed "[Dream City](#)," come to fruition.

The ambitious plan, which has been [publicly lauded](#) by Prime Minister Modi, aims to build a "smart" city across almost 700 hectares (1,730 acres) of south Surat. Gadhavi said the new diamond hub would serve as an "anchor tenant" for the area. Rastogi meanwhile reported that her firm is in talks with potential clients about other projects in the area, including a convention center.

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While the architect admitted that Surat does not possess a "very remarkable architectural language of its own," she expressed hope that sustainable design will shape the future development of a city where [summer temperatures](#) can exceed 110 degrees Fahrenheit.

Morphogenesis claims that its design consumes as much as 50% less energy than the maximum permitted to earn a "platinum" rating from the Indian Green Building Council. The central spine's flared shape was designed to funnel prevailing winds through the structure, the architects say, while "radiant cooling" circulates chilled water under its floors to reduce indoor temperatures.



Construction work on the building completed in April.

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Although individual offices will rely on traditional air conditioning, Rastogi estimates that around half of the building is cooled using natural ventilation, while common areas are powered using solar energy.

"We decided to create something that is iconic, that borrows... from its context and the community we are working (with)," she added, adding its plan for the building was "based on environmental and sustainable design more than a particular architectural language."