

Architecture

Venice Architecture Biennale's Carlo Ratti:

'People talk about mitigating climate change

harm but it's too late'

The curator promises an exhibition on how architecture can offer solutions by adapting itself to extreme conditions

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Carlo Ratti is posing next to a marble statue of a semi-naked Venus in the Ca' Giustinian, one of the last gothic palaces to be built in Venice in the late 15th century. Next he's outside the fancy Hotel Monaco, charming a gondolier into shot for our photographer. Ratti, the curator of this year's architecture biennale, the 19th to be held in Venice, seems more than happy to indulge in the clichés of the city for a fun portrait.

"You could say it's one of the first geoengineering projects ever," says Ratti of the patchwork of land-spattered lagoon that human ingenuity formed into a city, as we settle on the terrace of the Hotel Monaco with an espresso. "This wasn't meant for human living." It is also an example of a place that has dealt with the damaging consequences of that human occupation — the ruinous

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Carlo Ratti

depopulation — and now architecture can offer solutions by adapting itself to offset or accommodate these conditions. Historically, the architecture Biennale has had a tendency to reflect upon the state we're in; Ratti wants to offer ways to move forward in the face of intractable problems.

"Usually when people talk about climate change, they talk about mitigating harm in travel, industry, construction," he says. "But now it's too late for that. The ecological movement thought that adaptation was like surrender, and I understand that. But now it's inevitable. As things become more extreme, we need a new approach, a new level of thinking."



Katangua Market in Lagos, Nigeria, part of an ecosystem of thrift markets and second-hand stalls across West Africa. Ratti's exhibition uses it as an example of what he calls "collective intelligence" © Andrew Esiebo

Ratti speaks fast, in perfect English, though he grew up in Turin, the son of an engineer father. He is 53 but has an indefinable agelessness — his eyes keenly focused behind metal-rimmed glasses, his mind quick, theoretically and scientifically driven.

He studied engineering and architecture at the Politecnico di Torino and the fancy Ecole Nationale des Ponts et Chaussées — one of those Paris institutions for the crème de la crème de la crème. He was swept off to Cambridge to complete an MPhil and then a PhD which he finished at MIT. It was at Cambridge, where he attended the Martin Centre, a research institution focused on sustainable buildings and cities, that he became aware of the value of integrating architecture, biology and just about everything else. “Cambridge inspires inter-disciplinarity, because of the college system,” he says. “You end up being with people from any subject but your own. It breaks the bubble.”

‘Study of mylar and beta cloth space suit’ (2024) part of SpaceSuits.US, a project investigating how building and insulation techniques on Earth can be improved by drawing inspiration from the space suits of astronauts © Image Courtesy of La Biennale di Venezia

Ratti is applying this interdisciplinary approach to his Biennale, which is titled *Intelligens. Natural. Artificial. Collective*. “I thought about calling it *NI* — Natural Intelligence,” he says. “But then I decided that we need to learn from all three types of intelligence.” The exhibition will fill 7,000 sq m of the Arsenale, Venice’s former shipyards and armouries. Ratti is also keen that the national pavilions will fall under his spell as well. These are dotted through Venice’s Giardini, like a 19th-century view of the western world in miniature, while newer arrivals (which this year include Oman and Togo) are to be found in the further reaches of the Arsenale and around the city. “I met with the national participants four times,” says Ratti, who has clearly worked exhaustively on the project with his small team.

“The national pavilions are often good, but a hodgepodge,” he continues. He was part of the 2014 Biennale curated by the Dutch architect Rem Koolhaas, who famously forced countries to march to the beat of his thematic drum: *Absorbing Modernity*. It seems unlikely that Ratti will be able to orchestrate similar conformity. Many teams had embarked on their projects before his own theme emerged. Britain had already teamed up with Kenya, to focus on how to reverse the destruction brought about by the geological extraction exacted by colonial systems. The pavilion of the Nordic countries (Finland, Norway, Sweden) is looking at architecture through the lens of the trans body. Still, his subject — in the face of recent fires in LA and floods in Valencia and Bangladesh — will be on many participants’ minds.

Render of Ratti’s ‘Hot Heart’: heat-storing islands in Helsinki © CRA-Carlo Ratti Associati

Ratti was appointed to the directorship in December 2023, and the fact that he is the first Italian for years to take the role (the last was Massimiliano Fuksas, who directed with his wife Doriana in 2000) has been seen by some as the rightwing government’s determination to Make the Biennale Italian Again and neutralise the event’s perceived leftism. “Ratti doesn’t talk about politics,” says Dario Pappalardo, an editor at the left-leaning La Repubblica. “But his approach is technical, smart, new. It can seem cold in a way. But he’s the most interesting of his generation coming from Italy, and he has an international career.”

In fact, Ratti's range is vast. As well as heading up MIT's Senseable City Lab which he founded in 2004, he runs a busy architectural practice with offices in Turin, New York and London. He has worked on large buildings, introducing lush tropical nature to a 280m tower in Singapore designed with the Danish architects Big, while one of his personal hits is the Makr Shkr, a robotic cocktail dispenser which is a star turn on cruise ships. A project for Helsinki aims to help decarbonise the city's heating system by 2030 thanks to large floating islands that function as thermal batteries.

When it comes to the Biennale, though, he has some tough acts to follow. [Alejandro Aravena](#), a Chilean architect with movie star looks and a fuzzy humanist agenda, created a highly empathetic show in 2016; and [Lesley Lokko](#), a Ghanaian-Scottish architect, educator and novelist, delivered an intriguing and emotional edition in 2023 that turned the (western) world upside down and brought in protagonists from many previously unrepresented countries, particularly African ones.

The bucolic, green interior of Capita Spring, a 51-storey development in Singapore designed by Carlo Ratti © Photo: Finbarr Fallon

Ratti is unperturbed. "Inclusion has many dimensions," he says. "We have many different generations and disciplines involved; maybe the most female participants ever. [American architect] Jeanne Gang is even looking at animals, creating an architecture for them in and outside the Arsenale in which they can thrive."

Perhaps unsurprisingly in his hands, even AI is given a positive role: ChatGPT is being used to create a series of imaginary conversations between living and historical figures that will be published in the Biennale's catalogue. "In one, the head of AI at MIT asks Isaac Asimov how we can be sure that robots won't hurt us," Ratti says gleefully.

There's a switched-on quality to Ratti's wired but tidy mind. His own research underlines the value of real-time data and how it can improve city life. "Even 20 years ago, we didn't have access to this level of real-time information," Ratti says. "Data allows us to understand the urban environment better and create real-time loops, real responses. It can turn a city into a living organism." And then he's off: Bologna, Paris, London, Milan and — after that — Osaka, where his firm has co-designed the French pavilion at Expo 25. He doesn't get jet lag, he says: "It's easy enough not to sleep."

Carlo Ratti in the Ca' Giustinian © Photography by Andrea Pugiotta for the FT.

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