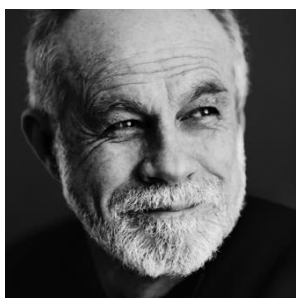


PROFESSOR CARLOS MORENO



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BIOGRAPHY

Summary: ONE MAN, SEVERAL WORLDS

Carlos Moreno is associate professor at IAE Paris Business School - University Paris 1 Panthéon Sorbonne in France, co-founder and scientific director of the ETI Chair "Entrepreneurship - Territory - Innovation". A multidisciplinary researcher with roots in the intelligent control of complex systems, he is a world-renowned scientific personality. He is also known for his pioneering commitment to cities and the pursuit of quality of life. He is one of the architects of a vast international movement to make the smart city first and foremost a human, sustainable and inclusive city.

Carlos Moreno was born in Tunja, Colombia, in 1959. He came to France at the age of 20 as a young political refugee in Paris, where he has lived ever since. He went to university in Paris and never left. He adopted French nationality in 1986 and built his professional and personal life with the aim of giving back to France what it had generously offered him by taking him in. He became a university professor, an expert in innovative technologies and then an international pioneer on cities and territories. He was made a knight of the French Legion of Honour for the 2010 Easter promotion, in the Ministry of Defence contingent. Indeed, after having developed innovations through robotics, in his mixed research unit at the CNRS, he worked for strategic applications in the nuclear and military sector.

This scientist and humanist describes his career as a journey driven by passion: a passion not only for innovation, creativity and exploration, but also for sharing, connecting and bonding with others. His journey has always been illuminated by what he considers his main source of inspiration, the century-old complexity thinker Edgar Morin, of whom he is also a friend.

In line with his thinking, he has always explored diverse disciplines and fields of action in a wide range of domains - education, research and industry - and with the firm conviction that innovation arises from their interaction.

Carlos Moreno is deeply convinced of the urgent need for a new quality of human relations based on otherness, respect, dialogue, exchange, education and benevolence. At the core is the acceptance of difference and non-violence. His week-long meeting in Dharamsala, as part of a group of 40 invited international personalities, with the Dalai Lama's scientific advisor, Samdson Rinpoche, and then with the Dalai Lama himself, in 2018, helped shape his proposals for impact.

Carlos Moreno is now one of the pioneering researchers of smart and sustainable cities who also propose solutions. Since 2014, he has focused on the convergence of the triple zero: zero carbon, poverty and exclusion, following his meeting with Nobel Peace Prize winner, his friend, Professor Muhammad Yunus, who inspired his eponymous text. His research concept, known worldwide, the "15-Minute City", has become a new global urban pathway towards a sustainable, liveable and inclusive city. This concept proposes a new urban and territorial approach in the synthesis of chrono-urbanism, chronotopia and topophilia and a social circularity of the six essential urban and territorial functions.

Carlos Moreno's contributions are internationally appreciated for their originality and are integrated into numerous local governance and urban transformation projects in France and around the world.

Carlos Moreno has been awarded the OBEL Award 2021, a renowned international architecture prize that "*honours recent outstanding architectural contributions to human development worldwide*". It was announced on World Habitat Day, 4 October 2021.

His global initiative "The 15-Minute City" received on the occasion of World Habitat Day, 3 October 2022, the UN-Habitat Scroll of Honour Award 2022, one of the world's most prestigious awards for those working for the well-being of people in cities and territories. He was awarded as the creator of the "15-Minute City" for "*providing a compelling model for sustainable urban development with global reach and for contributing to accelerating the implementation of the New Urban Agenda as a blueprint for recovery after the 19-year crisis*".

1° SCIENCE EDUCATION, RESEARCH AND EXPERIMENTATION

Carlos Moreno is known worldwide today for his reflections, initiatives and applications focused on the smart, sustainable and inclusive city, with the concept of the 15-minute city, but his background is that of a multidisciplinary, passionate and creative teacher-researcher.

A political refugee from Latin America during the period of dark dictatorships and violence, arriving unexpectedly from his country in search of protection for his life, Carlos Moreno joined the French academic and scientific community upon his arrival in 1979. In 1983, he became a researcher and professor at the IUT de Cachan of the University of Paris Sud, in the laboratory of informatics and robotics (LIMRO), directed by Professor James Richard. He trained and worked with the pioneers of robotics at the time, a fledgling discipline that draws on mechanics, computer science, electronics and mathematics and studies the adaptive interface between robots and their environment.

Carlos Moreno's work in the field of robotics and artificial intelligence made him aware of two things: firstly, that systems must be conceived in terms of complexity, meaning that an entity can only be understood in the context of its environment and must be studied in the framework of its relationships and its dependence on other factors; secondly, that this complexity can be applied in the real world to create value through innovative services and uses. Moreover, driven by the desire to bring scientific innovations to society, during this period Carlos Moreno contributed to the creation of one of France's first technology transfer centres in the Paris region, the Centre d'Etudes et de Recherches en Mécanique et d'Automatisme, CERMA, in Cachan.

He became one of the experts in the technical secretariat of one of the first scientific, technical and industrial cooperation programmes of the European EUREKA - FAMOS programme, focusing on complex manufacturing methods.

In 1990, after participating in its creation, he started working at the University of Evry, where he became a full professor after obtaining the highest French university degree, the Habilitation à Directeur de Recherches (HDR) in Mathematics - Computer Science, specialising in Robotics. His jury was composed of French robotics pioneer and co-founder of the Académie des Technologies, Philippe Coiffet, Professor Michel Israël, member of the board of directors of the international scientific organisation IEEE, pioneer of computer methodologies and co-design, one of the pioneers of artificial intelligence, and his former professor Patrick Greussay.

Within the informatics laboratory (LaMI - Laboratoire des Méthodes Informatiques), a joint unit of the Centre National de la Recherche Scientifique, CNRS, he founded and led the "Distributed Reactive and Adaptive Systems" team, SYDRA, and developed important links with industry. In the late 1990s, the creation of Genopole, a biotechnology cluster in Evry, gave scientists, research engineers and entrepreneurs from the university the opportunity to work together, despite their different backgrounds and specialisations, an approach that Carlos Moreno has promoted ever since. Carlos Moreno collaborates closely with this programme led by Pierre Tambourin and Gabriel Mergui and for LaMI, professors and colleagues Gilles Bernot, who became a bioinformatician, and Pascale Legall, it was the time of the great epics, the decoding of the human genome and epigenetics.

After developing a set of methods and tools with his team, he has applied them in numerous projects closely linked to the world of innovation. Initially industrial, in various fields, including automotive, but also medical, then nuclear and military. Later, thanks to his research on territorial mutations, he decided to take on the increasingly demanding global urban challenges. Within the framework of the "French Innovation (Allegre) Law" (1998), he created a start-up in his laboratory which became a success. In a pioneering way, he developed the concepts of the "digital and sustainable city" in 2006 (before the emergence of the "Smart City" concept in 2010), to which he preferred the "Human Smart City" launched in 2012, then refined it with the "Living City" in 2014, up to the "15-Minute City" proposed in 2016.

Upon returning from this period of entrepreneurship, in November 2017, Carlos Moreno joined the Paris Business School, the School of Management at the University Paris1 Panthéon Sorbonne. He is co-founder of the Chair "Entrepreneurship Territory Innovation" - ETI, which focuses its research on urban and territorial mutations.

Carlos Moreno offers new perspectives for cities to address the urgent problems of the 21st century. The concept of the "15-minute city" has crossed all borders, regions, cities of all sizes, geographic and cultural zones. Thanks to mayors, international organisations, the media, the private sector and urban ecosystems, it is now a breakthrough that is being applied in many cities around the world.

In November 2019, the Mayor of Paris, Anne Hidalgo, adopted this concept as the centrepiece of her urban strategy. In May 2020, the Mayor of Milan Giuseppe Sala, the epicentre of COVID-19 in Europe and heavily affected by the pandemic. The C40 global network of cities, led by the Mayor of Milan, creates a pandemic recovery task force. In July 2020, C40 Cities adopted it as a strategy for all major cities to address the critical challenges of global warming and the COVID-19 pandemic. In November 2020, together with Pritzker Prize director Martha Thorne, Carlos Moreno signed the Manifesto to mobilise researchers and innovators on the climate and pandemic challenges facing our cities. In December 2020, C40 launched an initiative with 18 partner cities to reinvent proximity: "Student reinventing cities". A global competition that allows students to share their vision for green and thriving urban neighbourhoods. In New York, in September 2022, at the "Climate Week" parallel to the UN General Assembly, New York Mayor Eric Adams, together with C40, UN Habitat, Bloomberg and a Danish partner, announced the launch of a Global 15-Minute City Initiative with new pilot cities. In Buenos Aires, in October 2020, the C40 90 Cities Summit launched a globally structured action for the development of transformative 15-minute city projects, in the presence and with the active participation of Carlos Moreno. This has become a strategic focus for C40 and its allies and partners.

This vision has also been adopted by UN-Habitat and supported by other international organisations, such as the World Health Organisation in 2020, and was also advocated by the IPCC in the April 2022 WG III report.

On 10 October 2020, Carlos Moreno is the French personality taking part, along with 39 other people, in the launch of the global climate initiative "Countdown". Together with Antonio Guterres, Pope Francis, EU President Ursula Von der Leyen, Prince William and actress and activist Jane Fonda, a call was made to step up the fight against climate change. Former US Vice-President Al Gore gave the introduction to present the concept of the "15-minute city", one of the proposed initiatives for cities.

In June 2021, Carlos Moreno was appointed co-president of the French scientific and technical network on architectures in extreme environments, RST ARCHES, of the French Ministry of Culture, together with the academic Jacques Rougerie, the astronaut Jean Jacques Favier and the architect Lina Ghometh.

In June 2022, together with UN-Habitat, C40 Cities, the global network of United Local Governments, UCLG, and other leading international partners, the Global Proximity Observatory was launched. The ceremony took place during the 11th World Urban Forum in Katowice, Poland.

UN-Habitat's World Cities Report 2022, published on the occasion of this event, highlights the 15-minute city as a promising way to address ecological, economic and social challenges. It is one of the six key

recommendations also highlighted by UN-Habitat Executive Director Maimunah Mohd Sharif in her closing speech.

UCLG invited Carlos Moreno to be one of the five drafters of the strategic vision, the "Pact for the Future", which was adopted at the General Assembly in Daejeon (South Korea) in October 2022. He was also made an ambassador of the Jacques Rougerie Foundation, which works for architectural innovation and artistic creation related to the world of the Sea and Space. In 2023, he joined the American Academy of Housing and Communities in recognition of his "great achievements in urban knowledge, wisdom and practice". He was appointed to the jury of the Jože Plečnik 2023 international award, which recognizes quality of life, human scale and harmony with the environment.

2° PARTNERSHIPS WITH INDUSTRY

In 1998, a new law on innovation and research in France (the "Allegre law") encouraged researchers to create their own companies. Professor Carlos Moreno, with the support of his university, was one of the first researchers in France to seize this opportunity to bring together his best PhD students, capitalise on the critical mass of knowledge they had generated and find industrial applications for the knowledge gained from complex intelligent systems. His company, Sinovia, was created in 1998.

Based at the Laboratoire des Méthodes Informatiques, LaMI, its university research laboratory, Sinovia focused on the intelligent control of complex systems, with an emphasis on infrastructures. With initial funding from ANVAR (then BPI) to support researchers, Sinovia signed its first partnerships with industrial companies. Subsequently, it received support from business angels and investment funds in four different rounds. All the projects developed by Prof. Carlos Moreno during this period were major technological breakthroughs and revealed his visionary spirit. He was one of the first French researchers to become CEO of a start-up, and subsequently took a leave of absence from the civil service, without leaving research, to fulfil this commitment.

In order to promote the entrepreneurship of researchers and innovators, Carlos Moreno became vice-president of the Richelieu Committee, an association of high-tech SMEs, promoting market access for start-ups and SMEs with the "SME Pact", in the manner of the US Small Business Act. He was in charge of research links and, as such, signed the "Pacte PME Recherche" with OSEO (now BPI) at the time.

Under the impetus of Jean-Jacques Gagnepain, and at the proposal of the National Research Agency (ANR), under the direction of Jacqueline Lecourtier, and with François Goulard as Minister of Research, Carlos Moreno participated in the creation of the French university technology transfer system, the Carnot Institutes, which came into being in 2006. He was a member of the jury for the creation, labelling and monitoring of the Institut d'Excellence en Énergies Décarbonées (IEED), which later became the Institut de la Transition Énergétique (ITE).

Following the launch of the French strategic project of the Grand Emprunt (Rocard - Juppé), under the government of François Filon, at the initiative of Thierry Coulhon, in 2010, under the "Centres of Excellence" programme of the Investissements d'Avenir, of the Commissariat Général à l'Investissement led by René Ricol, Carlos Moreno was a member of the Strategic Orientation Advisory Committee.

At the same time, opening up to new fields, aware of the important role of cities and anticipating their changes in the face of climate change, he has been interested in them as a complex system par excellence since 2004. I developed a synthesis of his work with the concept of "sustainable digital city" by proposing a revolutionary, self-adaptive, incremental, interactive digital platform to optimise, through dynamic mapping, the services supported by the infrastructure necessary for the well-being of a city's inhabitants. In this context, Professor Moreno's start-up has started working with INEO, a subsidiary of the French industrial group GDF SUEZ, now ENGIE, which bought Sinovia in 2010.

Carlos Moreno then became scientific advisor to GDF SUEZ Vice-President Guy Lacroix, President of the FISA business unit, infrastructures and services, and CEO of INEO. For five years, until December 2015 (a period of

changes in the governance and strategy of this group which became ENGIE), he endeavoured to accompany Guy Lacroix, INEO, the FISA BU and the GDF SUEZ group in their strategic programme "The city of the future". He actively participated in its transformation and actively contributed to moving towards new horizons in France and in the world. With a DNA always focused on international and high-level meetings, he created in parallel the "Living in a Living City" forum, bringing together leading world experts (Saskia Sassen, Carlo Ratti, Sunil Dubey, Carmen Santana and many others) to address the challenges of our rapidly changing urban environments.

3° Among Carlos Moreno's contributions in the field of technology with industrial transfer:

- ◇ Assembly systems (automotive industry) - Adaptive robotisation of multi-competent production systems - 1990s
- ◇ Mass market innovation (home automation and assistive robotics) 1995 - including the world's first Hoover in 1997 (not marketed by Rowenta as it was too pioneering and became five of the robots in the football team that represented France at the 1998 Robocup in Paris and 2000 in Stockholm, as well as various home automation assistive devices).
- ◇ Offshore Oil Installations (Intelligent and adaptive laying of pipelines in the North Sea) - 1999
- ◇ Self-adaptive furnace control for the firing of aircraft parts (wings) in composite materials - 2000
- ◇ Multi-technical and multi-service urban resource-sharing platforms (Open Components with three worldwide patents) - 2001
- ◇ Intelligent and adaptive control systems for nuclear reactors (monitoring of steam generators) - All French plants and abroad (using Plug & Net Open Components) -2001
- ◇ Intelligent street lighting systems promoting safety and sustainability (Plug & Net) - 2002
- ◇ Robotics for genetic analysis (in collaboration with the bioinformatics laboratory of Evry and Génomole) - 2003
- ◇ Multi-technical risk prevention on high-risk industrial sites in France (in the framework of the Seveso directive) - Plug & View and development in 2004 of the Alertbox, to alert the population in case of a crisis by means of a device in the home (Innovation Award)
- ◇ Unmanned aerial vehicle programme for the French army (DRAC programme, MALE in particular) 2005
- ◇ Development of city-wide monitoring of complex infrastructures (video surveillance, etc.) - 2006
- Technology transfer to GDFSUEZ (INEO - BU FISA) for the purchase of the start up SINOVI (Plug & Net, Plug & View, Open Component) 2010.

4° KNOWLEDGE SHARING

Throughout his career, Professor Carlos Moreno has worked to create links between worlds. His extensive work building bridges between public entities, large companies and SMEs in the high-tech sector is driven by a strong belief in the importance of working together and a desire to cultivate collective intelligence. He also plays an active role in public and private initiatives focused on innovation and research partnerships. As a scientific expert, he has participated in numerous governmental committees, working groups and public service missions. As a lecturer and science populariser, Carlos Moreno is constantly in demand by the media in France and internationally to disseminate his work on science, technology and the city. His TEDx "Contdown", the 15-minute city, has been translated into 14 languages and has almost 1.5 million views.

Carlos Moreno also initiates multiple projects that bring together experts from all over the world, allowing him to test his concepts for real application. His activities thus benefit from the contribution of a broad national and international ecosystem.

In 2020, the Observatory published its multilingual e-book (FR EN ES IT PT) "Urban life and proximity in the Covid-19 era" (July 2020) and its book "Droit de cité, de la ville-monde à la ville du quart d'heure" (November 2020). Since 2021, "Droit de cité, de la ville-monde à la ville du quart d'heure" has been translated into different languages and launched in different countries.

Carlos Moreno was named Knight of the Order of the Legion of Honour in April 2010 by the French Republic at a ceremony held at the Maison de la Recherche. The award was presented to him by Jean Jacques Gagnepain, then president of the Academy of Technologies, now deceased.

In 2019, he received the Prospective Medal 2019 from the Academy of Architecture (France).

In 2021, he received the OBEL AWARD 2021 in Paris by the Henrik Frode Obel Foundation (Denmark), as well as the Leadership Award, Smart City Expo World Congress (Barcelona).

In 2022, he received the European Congress of Local Governments Award (Poland), the FIABCI Global Pioneers Awards for Building Better Lives, alongside academics Jacques Rougerie, Thomas Pesquet and Bertrand Piccard, and the Spanish International Award for Innovation in Sustainable Mobility.

The renowned international organisation World Resources Institute, WRI, based in Washington, D.C., has selected the 15-minute city as one of five finalists for the Ross Center 2022 Award for Cities. The winning initiative will be announced at the end of October and the official ceremony for the five winners will take place in New York on 1 December.

As the creator of the global initiative "the 15-minute city", Carlos Moreno has been awarded the UN-Habitat Scroll of Honour 2022, one of the world's most prestigious awards for those working for sustainable urbanisation.

The official ceremony took place on 3 October 2022, during the celebration of World Habitat Day in Balikesir, Republic of Turkey, and was received by Executive Director Maimunah Mohd Sharif.

Carlos Moreno advocates a profound transformation of our lifestyles and urban spaces, proposing solutions to the problems of cities, metropolises and territories.

Its contribution is recognised worldwide for providing a compelling global model for sustainable urban development and for helping to accelerate the implementation of the New Urban Agenda as a blueprint.



UN-HABITAT Scroll of Honour - 2022
 Dalai Lama Prix Nobel 1989
 Muhamad Yunus Prix Nobel 2006
 Samdong Rinpoche – Conseiller scientifique du Dalai Lama
 Edgar Morin

